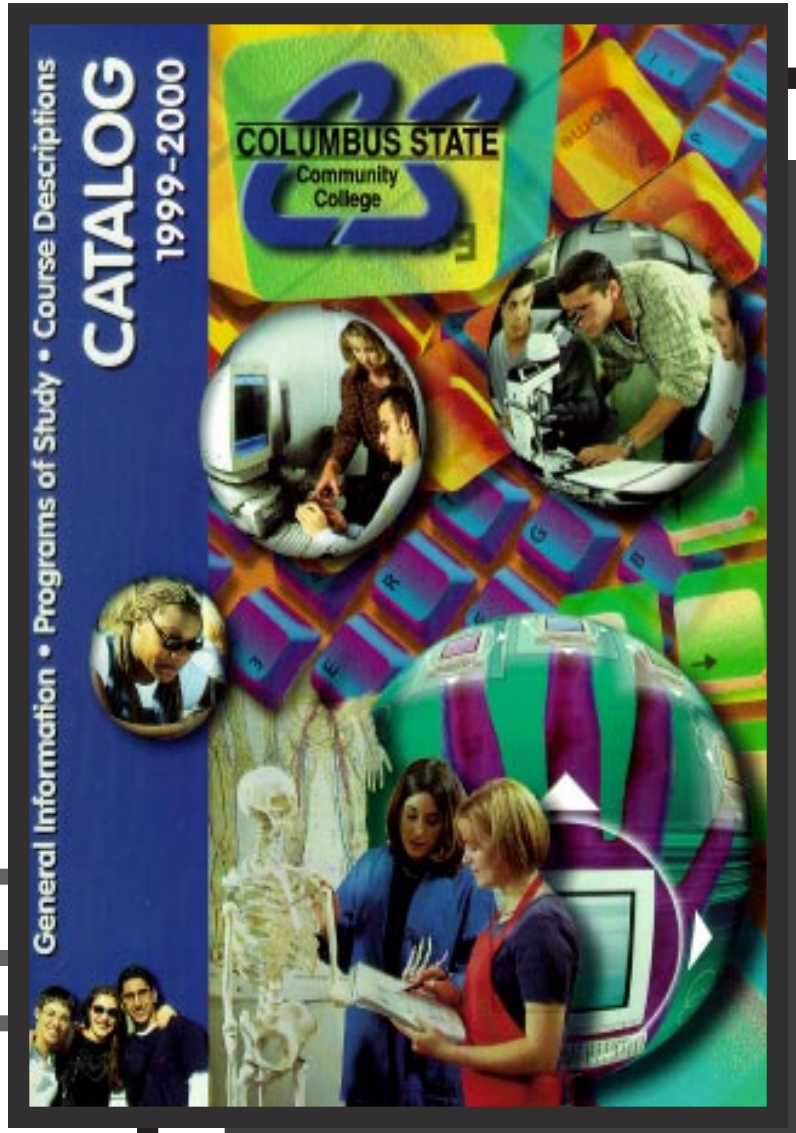

Columbus State Community College

1999-2000 Catalog

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Table of Contents

The Columbus State Community College *Catalog* contains current information regarding the school calendar, admission, degree requirements, fees, regulations, and course offerings. Columbus State Community College reserves the right to make changes in any material contained herein, as deemed necessary.

For specific information on any changes, please contact Columbus State at 287-2453 or 1-800-621-6407 if calling long distance.

Nondiscrimination Policy

It is the established policy of Columbus State Community College not to discriminate against any individual or group of individuals for reasons of race, color, religion, ancestry, national origin, sex, disability, or veteran status. The college is fully committed to providing equal opportunities in all employment-related activities, educational programs, and other activities of the college. The college promotes equal opportunities through a positive and continuing Affirmative Action Program. Columbus State Community College will fully comply with all federal, state, and local laws and regulations to guarantee equal opportunities.

Reasonable Accommodations

It is the Columbus State Community College policy to provide reasonable accommodations to students with disabilities. If you would like to request such accommodations because of a physical, mental, or learning disability, please contact the Department of Disability Services, Franklin Hall, Room 228.

Accreditation

Columbus State Community College is accredited by the North Central Association of Colleges and Schools. (North Central Association of Colleges & Schools, 30 N. LaSalle Street-Suite 2400, Chicago, Illinois 60602-2504, (312) 263-0456 or (800) 621-7440.)

Columbus State Community College Mission

The mission of Columbus State Community College is to provide quality educational programs that meet the lifelong learning needs of its community. Through its dynamic curriculum and commitment to diverse learners, the college will serve as a catalyst for creating and fostering linkages among the community, business, and educational institutions. The college will proactively respond to the changing needs of our community and its role in the global economy through the use of instructional and emerging technologies.

(The two degree programs specifically designed to enable transfer to a four-year institution for completion of a baccalaureate degree in an additional two years of full-time study are the Associate of Arts and Associate of Science degree programs. The College's technical degree programs are designed to prepare students for immediate employment in technical occupations upon graduation.)

Institutional Goals:

(1) To recognize, develop, and support excellence in both learning and teaching.

(2) To provide a learner-centered environment that provides the support services which assure that learners attain their educational goals.

(3) To provide relevant, thorough, state-of-the-art technical education and job training that prepare learners to prosper in the world of work.

(4) To provide course work leading to an associate's degree and/or lower-division preparation for college/university transfer.

(5) To provide educational, cultural, economic, social, recreational, or aesthetic programs and services to meet the changing needs of individuals in a multicultural community.

(6) To provide lifelong educational programming for personal and professional growth, cultural and recreational enrichment, and international education.

(7) To foster an environment that values an understanding and appreciation of diversity.

(8) To develop and strengthen partnerships with industry, primary and secondary education, business, labor, community organizations, and government to enhance economic development of our service community.

Cover designed by Columbus State student Kandee Grady. Kandee is enrolled in the Multimedia Technology Program.

General Information

General Information

Columbus State in Brief

For more than thirty-five years, Columbus State Community College has been meeting the diverse educational needs of the community and is proud to be an important contributor to the growth and change of Columbus and central Ohio.

In 1963, the Columbus Board of Education created the Columbus Area Technician School, and the Board designated an area of Central High School to house this new school for two-year, post-secondary technical programs.

Rapid growth in enrollment during the initial two years caused the Board of Education to purchase the Columbus Aquinas Parochial High School property and move the Technician School to a permanent campus. On May 25, 1965, the Ohio Board of Regents gave approval to a proposal from the Columbus Board of Education to create the Columbus Technical Institute District, and the Columbus Technical Institute was granted a charter effective July 1, 1967.

As a state-assisted college, Columbus Technical Institute provided technical programs which prepared students for immediate employment. From the first graduating class in 1965 through today, more than 24,000 students have earned associate degrees in 40 technical fields and transfer programs. The success of the College is reflected in the many accomplishments of these graduates and the many other students who have completed courses to improve and enhance their skills.

On July 1, 1987, Columbus Technical Institute was rechartered as Columbus State Community College by action of the Ohio Board of Regents. This significant change was a result of careful study of the educational needs of Columbus and central Ohio. The resulting findings supported the establishment of a comprehensive community college to provide additional educational opportunities to area residents.

As a comprehensive community college, Columbus State has a strong commitment to technical education, offering the Associate of Applied Science and the Associate of Technical Studies degree programs in Business, Health, Public Service, and Engineering Technologies to prepare graduates for immediate employment. The transfer programs, Associate of Arts and Associate of Science, meet the majority of freshman and sophomore course requirements of bachelor's degree programs offered by four-year colleges and universities in central Ohio and throughout the state. Specific transfer agreements with area colleges and universities have also been developed.

In addition to courses offered on the main campus, classes are offered at six off-campus locations throughout central Ohio. The College's Business and Industry Training Department also offers customized training programs for local employers on campus or at the business site.

Columbus State's main campus is centrally located on approximately 75 acres near downtown Columbus. The campus currently has 20 buildings that house classrooms, laboratories, and offices of the College. Also part of the College's main campus is the Educational Resources Center which provides materials and resources for students. In addition to the main campus, the College operates a facility for the Aviation Maintenance Technology at Bolton Field Airport.

Columbus State Community College serves Franklin, Delaware, Madison, and Union Counties. A nine-member Board of Trustees is appointed by the Governor. Columbus State is accredited by the North Central Association of Colleges and Schools, and many of the College's degree programs are accredited by professional associations and agencies.

Buildings

AQUINAS HALL - Converted in 1965 from a parochial high school to a college classroom facility, this historic structure houses the Arts and Sciences Division, Public Safety Department, and a student lounge. This building is also used for general classrooms.

MADISON HALL - This building is currently undergoing renovation to accommodate a streamlined Enrollment Center, and is scheduled to re-open during Fall Quarter 1999.

EIBLING HALL - Named after former Columbus School Superintendent Dr. Harold Eibling, this five-story structure houses business and engineering technologies and the Data Center. The building is also used for general classrooms and the Culinary Academy.

RHODES HALL - A complete renovation was completed in 1999, with many student services and offices relocating there from the lower level of Madison Hall. Rhodes Hall is now home to the Cashier's Office, Financial Aid and Veterans Services, Human Resources, the Grants, Contracts and Loans Office, Purchasing and Accounts Payable, Business Affairs and Facilities Planning.

COLUMBUS HALL (ERC/ Library) - This building contains approximately 25,000 catalogued items and comfortable seating for 500 people. Columbus Hall also offers a full range of electronic and print educational media, a microfilm collection and a two-story television studio.

UNION HALL - The six-story building at the west end of campus houses many of the health, human service and public service technologies, plus the Student Success Center (counseling, placement testing), and the College Health Office. Also located in this building are general classrooms and the newly remodeled cafeteria.

DELAWARE HALL - Located in Delaware Hall are the Automotive Technology lab, the College Bookstore and the Recreation and Fitness Facility, which includes a gymnasium and weight room. The building also houses general classrooms and faculty offices.

FRANKLIN HALL - Franklin Hall houses the Disability Services Department, administration offices, the Office of Multicultural Affairs and Community Outreach, and the Developmental Education Department. The building is also used for general classrooms and has three lecture halls on the ground floor.

NESTOR HALL-This five-story academic center houses 48 classrooms, 9 laboratories, faculty offices and a 400-seat auditorium. Named after the late Columbus State President Harold M. Nestor, this building also features 16,000 sq. ft. of student study and lounge areas, the Placement and Career Services Office, and Student Activities Office.

ACADEMIC CENTER B - Opened in 1997, this academic facility houses classrooms and labs for engineering technologies, the mathematics department, the Learning Systems Office, Teaching Learning Resource Center, and Office of the Provost, and student lounge areas. A pedestrian bridge connecting the new parking garage across Spring Street is currently under construction.

CLEVELAND AVENUE (289, 295, 297, 303) - These facilities house several Community Education & Workforce Development offices, the Business and Industry computer lab, the Basic Skills Department and general classrooms. 303 Cleveland houses the Center for New Directions and the A. Robert Kent Real Estate Resource Center.

CLEVELAND AVENUE (339) - This facility houses The Business and Industry Training Department, as well as classrooms and other office space.

MT. VERNON AVENUE (396) - This building houses the Child Development Center. The Center offers its services to the infant and preschool children of students, staff, area residents, and other downtown working parents.

N. GRANT AVENUE (375) - Remodeled in 1996, this facility houses new laboratories, offices and classrooms for the Emergency Medical Services Technology, as well as a patient care laboratory for the Nursing Technology.

N. GRANT AVENUE (192) - Another newly remodeled building, this facility houses the Engineering Division's Solar Car lab.

TELEPHONE INFORMATION CENTER - This building houses the telephone information operators.

AVIATION MAINTENANCE FACILITY - This facility is located at Bolton Field Airport in southwest Columbus and houses classrooms and laboratories for the College's Aviation Maintenance Technology. It is used for general classes during evening hours.

PARKING GARAGE - Opened in early 1998, the new four-story garage offers parking for more than 1,000 cars, and is designed with safety in mind, including glassed-in, lighted stairwells, and a connecting pedestrian bridge across Spring Street, currently under construction. You may park free in the garage with your current student parking sticker.

Campus Tours

Tours are offered Monday-Friday, at 10 a.m. and 2 p.m.; Saturday at 10 a.m., and Monday-Thursday at 6:30 p.m. during Summer Quarter. Arrangements for campus tours may be made by calling (614) 287-2453 or toll-free at 1(800) 621-6407. Please make an appointment at least two weeks in advance.

Admissions Office

The Admissions Office is open Monday through Thursday from 8 a.m. to 7:30 p.m. and 9:30 a.m. to 4:30 p.m. on Friday. Saturday hours are from 9 a.m. to 12 noon, and 9 a.m to 3 p.m. on the Saturday before the first day of class. The Admissions Office will not be open on Saturdays during a holiday weekend. If you wish to make an appointment with an Admissions Counselor, please call the Telephone Information Center at 287-2453 or (1-800-62l-6407 if calling long distance).

Off-Campus Centers

Dublin Center
6190 Shamrock Court
Dublin, Ohio 43016
Hours: M - F, 8 a.m. -10 p.m. Sat: 8 a.m. - 4 p.m.
Sun. 12:30 p.m. - 4:30 p.m.
Phone: 761-2800 Fax: 761-1531

Gahanna Centers
445 Havens Corner Road
Hours: M - F, 4:30 p.m. - 10:30 p.m.
Phone: 476-4711 Fax: 476-4764 **and**
200 South Hamilton Road
Gahanna, Ohio 43230
Hours: M - F, 8:30 a.m. - 10 p.m. Sat: 8 a.m. - Noon
Phone: 475-7866

Marysville Center
800 Amrine Mill Road
Marysville, Ohio 43040
Hours: M - TH, 5:00 p.m. - 9:00 p.m.
Phone: 937-644-1616
Fax: 937-644-1663

Southeast Center
4449 Professional Parkway
Groveport, Ohio 43 125
Hours: M - F, 8 a.m. - 10 p.m. Sat: 8 a.m. - 4 p.m.
Sun: 12:30 p.m. - 4:30 p.m.
Phone: 836-9434 Fax: 836-9127

Southwest Center at Bolton Field
5355 Alkire Road
Columbus, Ohio 43228
Hours: M - F, 5 p.m.-10 p.m. Sat: 9:00 a.m. - Noon
Phone: 878-1094 Fax: 878-0729

Westerville Center
7233 Northgate Way
Westerville, Ohio 43082
Hours: M - F, 8 a.m. - 10 p.m. Sat: 8 a.m. - 4 p.m.
Sun: 12:30 p.m. - 4:30 p.m.
Phone: 882-2016 Fax: 898-9655

Senior Citizens "Good as Gold Educational Program"

As a community service, Columbus State offers senior citizens who are 60 years old or older and fully retired, the opportunity to enroll in credit courses, tuition free, on a space-available basis. To register for credit courses applicable to an Associate Degree, senior citizens pay an application fee of $10.00, course lab fees, and the cost of books.

Senior citizens are also admitted to special courses on a tuition-free, space-available basis once the course is financially self-supporting. Lab fees, books and instructional supplies are assessed to senior citizens as required by other students. Courtesy parking permits are provided at no cost to senior citizens. Student rates to concerts and student activities are available to enrolled senior citizens. A "Good as Gold Educational Program" identification card is issued to all enrolled senior citizens upon request. For information regarding programs and services, please call 287-2453 (or l-800-621-6407 if calling long distance).

Admissions, Fees & Financial Aid

Admissions

Admission Policy

Columbus State Community College is committed to the principle of providing each student the maximum opportunity to develop and learn. Regular admission to the College is offered to applicants who are high school graduates or possess G.E.D. equivalency. Other applicants over 18 years of age may be admitted as a regular or conditional status student based upon placement test results.

Admission to the College does not assure admission to a particular program of study. Many technologies, including Nursing, have established additional requirements that must be fulfilled prior to acceptance. All prospective applicants are encouraged to contact the Admissions Office for specific information.

For some students additional (prerequisite) coursework in science, mathematics and English may be needed prior to enrollment in certain courses and programs. While all degree programs can be completed in two years of full-time study, it may take longer for some students. This is particularly true if the student is attending on a part-time basis, if the student needs to take developmental courses, or if the student is also working.

Application Procedure

High school graduates:

- Complete the application for admission and pay the $10 non-refundable application fee.
- Submit, to the Records and Registration Office, a final official high school transcript verifying graduation, if required for admission to your chosen program of study (check the Specific Program Admissions Information in the Programs of Study section of this catalog for further details).
- Complete placement tests.

G.E.D. Recipients:

- Complete the application for admission and pay the $10 non-refundable application fee.
- Submit a copy of your G.E.D. **scores** to the Records and Registration Office.
- Complete placement tests.

Applicants over 18 who possess neither a high school diploma nor certificate of G.E.D. equivalency (conditional admissions):

- Complete the application for admission and pay the $10 non-refundable application fee.
- Complete placement tests. The test results will be used to determine admission status. Students admitted conditionally may be required to complete selected courses during their first term of enrollment.

Applicants who have attended another college:

- Complete the application and pay the $10 non-refundable application fee.
- Submit G.E.D. scores or if applicable, a final official high school transcript.
- Submit an official transcript of prior college work from each previous institution attended. (The College reserves the right to request that official copies be mailed directly from the former college.)
- Complete placement tests. This requirement is waived if the student has previous college-level coursework in English and mathematics.

Transient students: (students attending another college who plan to enroll for one or two quarters and transfer the credits back to the other college)

- Complete the application and pay the $10 non-refundable application fee. -
- Submit an official transcript of prior college work to the Records and Registration Office.

High school student post-secondary enrollment options (concurrent enrollment):

High school students interested in enrolling in college classes while still in high school should contact the Columbus State Counseling Center for a Post-Secondary Enrollment Options Program packet. Prospective students and their parents are encouraged to schedule an interview with a counselor before submitting an application for admission to this program.

After meeting with the high school guidance counselor, students should:

- Complete the student section of the Post-Secondary Enrollment Options Program application.
- Submit the above item to the high school counselor. The counselor will complete the rest of the Post-Secondary Enrollment Options Program application and will send it to the College with the high school transcript.

After the College receives the applicant's file, the student will be notified of admission status.

International (foreign) students:

- Complete the application for admission and pay the $10 non-refundable application fee.
- Submit Test of English as a Foreign Language (TOEFL) or Michigan Test of English results.
- Submit both official copies and certified translation copies of the secondary school transcripts and, if applicable, official college transcripts.
- Submit the Declaration and Certification of Finances.
- Submit a report from the International Student Advisor of last U.S. college previously attended.
- Complete a Health Statement, available from the College Health Office, prior to scheduling for the first quarter
- All required documents must be received at least 60 days prior to the start of the first term of intended enrollment.

Returning Students

Students who have not taken classes at Columbus State for more than two years, and would like to return to the College, should contact the Records and Registration Office at least one week before the quarter begins to update the academic record. The student should also request official transcripts from any other college they attended during their absence from Columbus State.

General Admission Information

High School Transcript/G.E.D scores

All students should provide the College with a final official copy of their high school transcript, if required for admission to their chosen program of study, and/or a copy of their official G.E.D. scores. Please check the Specific Program Admissions Information in the Programs of Study section of this catalog to determine if your high school transcript is required for admission to a particular program of study.

The official transcript and/or G.E.D. scores are to be mailed from to Columbus State Community College, Student Records and Registration, 550 East Spring Street, P. O. Box 1609, Columbus, Ohio 43216-1609. All information submitted to the College relative to admission and academic status becomes and remains the property of the College.-

College Transcript

An official college transcript is requested of applicants who have attended other colleges and/or universities. An official transcript from each college attended is required of all who are seeking transfer credit or who have completed prerequisite coursework at another institution. The transcript is to be mailed from the other college(s) to Columbus State Community College, Student Records and Registration, 550 East Spring Street, P. 0. Box 1609, Columbus, Ohio 43216-1609. All information submitted to the College relative to admission and academic status becomes and remains the property of the College.

Identification Number

The College uses the social security number as the student identification number. This number is not released by the College to anyone. (Please see the Family Education Rights and Privacy Act information on pages 27-28 of the Catalog for further information on the release of student records).

Students who have not been issued a social security number or would prefer not to have the College use this number as an identifier, may request a student identification number be assigned. This request must be made in writing to the Director, Records and Registration. The student identification number must be obtained in person with a picture identification card (to maintain the confidentiality of the number).

Health Statement

Each student accepted for Veterinary Technology, Dental Hygiene Technology, Dietetic Technician Program, Emergency Medical Services Technology, Health Information Management Technology, Medical Assisting Technology, Medical Laboratory Technology, Multi-Competency Health Technology, Nursing Technology, Radiography Technology, Respiratory Care Technology, Sports and Fitness Management Technology, Surgical Technology and Early Childhood Development Technology must submit a statement of health prior to attending technical classes. A health statement form will be provided from the College Health Office or department coordinator. Students in certain health care technologies will be required to have a physician's examination and might be required to have immunizations and laboratory blood studies. Applicants to other technical programs who are or recently have been under a physician's care, should contact the College Health Office as to whether or not a health form should be submitted. All international students are required to complete a health statement, available from the College Health Office, prior to scheduling their first quarter of classes.

Placement Tests

The COMPASS Placement Testing Lab offers computerized placement testing for new students to identify the appropriate starting level for reading, writing, and math courses. Developmental education courses may be required to maximize the student's opportunity for academic and personal success. After a student completes the COMPASS test, an advisor will assist them in first quarter course selection.

Placement testing is required for the following students:

* All students who plan to register for a course with established reading, writing, and math prerequisites;
* All students who register for 12 or more credit hours during their initial quarter at the College;
* All part-time students who will register for their 12th accumulative credit hour; and
* All high school students intending to take classes.

Students with transfer credit in college-level composition and math from an accredited institution are exempt from this requirement. These students should contact an advisor in Counseling and Advising Services (Union 048, (614) 287-2668) for course selection and registration information.

COMPASS testing is done on a walk-in basis; appointments are not needed. A photo ID is required. For more information, contact the COMPASS Placement Testing Lab in Union Hall, Room 035a, (614) 287-3602.

Scheduling

Approximately seven weeks prior to the start of classes, students will be informed of the dates and times for scheduling. Advisors and counselors will be available to assist students with course selection. All student schedule changes are to be processed by CATS (Computer Automated Touchtone System) at (614) 287-3900, through the SITE (Student Information Terminal) system, by telephone with a representative at (614) 287-2666, by the Records and Registration Office, or at one of the off-campus centers. Course additions or section changes seven calendar days after the start of the quarter will be permitted only with the instructor's approval.

Students who wish to register for 22 or more credit hours in a quarter must have the permission of their academic advisor.

Cross-Registration at Other Institutions

The Higher Education Council of Columbus (HECC) is an association of colleges and universities in Central Ohio, established to develop programs which benefit its member institutions and the community at large.

As a service to students, HECC member institutions have approved a system of cross-registration for regularly enrolled, full-time undergraduate students at the following colleges and universities:

Capital University
Central Ohio Technical College
The Columbus College of Art and Design
Columbus State Community College
DeVry Institute of Technology
Franklin University
Mount Cannel College of Nursing
Ohio Dominican College
The Ohio State University
Otterbein College
Pontifical College Josephinum

Cross-registration is limited to one course per term (Autumn, Winter and/or Spring only), with a maximum of three cross-registered courses during a student's academic experience. The course taken must be an enrichment class to the student's program of study at Columbus State. To participate in cross-registration, a Columbus State Community College student must be in good academic standing, and maintain full-time status during the quarter he or she is requesting permission to participate in cross-registration. The Columbus State student does not pay tuition to the host institution, but may be charged other enrollment-related fees, such as laboratory or parking fees. A grade for the course taken at a host institution will be posted only on the student's Columbus State transcript.

A Columbus State student interested in cross-registering for a course must obtain approval from the Records and Registration Office, and from the host institution's registrar. It is the student's responsibility to make certain that the host institution's calendar, course schedule, course content, and credit are compatible with his/her goals and Columbus State Community College requirements. Each institution has established cross-registration deadlines which must be met to participate.

For more information, please contact the Records and Registration Office.

Selective Service System Registration

Under the provisions of Section 3345.32 of the Ohio Revised Code, a male student born after December 31, 1959, who is at least 18 years of age and who is classified as an Ohio resident for fee purposes by the state-assisted college or university he is attending, is required to be registered with the Selective Service System or be charged a tuition surcharge equal to that charged a non-resident student.

Students are exempt from registration with the Selective Service System on the basis of one of the following criteria:

- Female;
- Under 18 years of age;
- 26 years of age or older;
- Currently on active duty in the Armed Forces of the United States. NOTE: Training in a Reserve or National Guard unit does not constitute active duty;
- A non-immigrant alien lawfully in the United States in accordance with Section 101 (a) (15) of the Immigration and Nationality Act, U.S.C. 1101, as amended; or
- A permanent resident of the Federated States of Micronesia, the Marshall Islands or the Republic of Palau.

Note that Selective Service System registration compliance must take place before disbursement of any federal financial aid funds, or the Ohio Instructional Grant, or before the institutional section of a Guaranteed Student Loan or PLUS application will be certified.

If you are a male who is within 30 days of becoming 18 years of age or between 18 and 26 years of age and have never applied for a Selective Service number, registration may be processed online at www.sss.gov or through a local post office. You may also contact the Selective Service System at (847) 688-2576 to retrieve your Selective Service number. When you receive your Selective Service number, please report your number to Telephone Registration at (614) 287-2666.

Change of Name/Address/Phone Number/Program of Study

Any change in your name, address, phone number, or program of study must be reported to the Records and Registration Office so the academic record may be updated.

Name changes require submission of official documentation such as a marriage license, court decree, etc. Address and phone number changes may be made on the SITE system or by calling Telephone Registration at (614) 287-2666 as well as in the Records and Registration Office. Each student is responsible for complying with any official communication sent to the last reported address.

Program of study changes may be made in the Records and Registration Office. Students may also call the Telephone Information Center, at (614) 287-5353, to change their program of study if the new program of study does not have a separate application procedure (such as many of the health related fields).

Army Reserve Officers Training Corps (ROTC)

Qualified students interested in obtaining an officer's commission in the United States Army, Ohio National Guard, or Army Reserve may enroll in Army ROTC classes through a contracted agreement between Columbus State Community College and the United States Army.

Training consists of a combination of classroom and outdoor instruction. Freshman and sophomore students may enroll in the four-year program consisting of the two-year general military course and the two-year professional officer course. There is no military obligation for students in the first two years of the program.

Students with a minimum of 2.50 cumulative grade point average may apply for Army ROTC scholarships. Applications for scholarships are normally made during the fall semester and must be completed by January 30.

Additional information may be obtained by contacting the Program Chairperson for Military Science, (614)236-7101 or 236-7114.

Fees

One-Time-Fees

Application Fee (non-refundable) $10
Matriculation Fee (non-refundable) $35
(Payable when the 12th hour of credit is scheduled)

Matriculation Fee

The one-time non-refundable $35 matriculation fee covers the cost for establishing and maintaining a perpetual student record. The matriculation fee will appear and be due for payment on the schedule and fee statement for the academic quarter in which the student schedules his/her 12th hour of credit course work.

Instructional and General Fees

The resident credit hour fee of $61 is based on a $53 instructional fee and a $8 general fee. The general fee covers expenses for registration, counseling, placement, graduation, health services and other activities and services. Fees for non-Ohio residents and international students reflect a similar prorated instructional and general fee amount. All fees are subject to change.

Quarterly Academic Fees

OHIO RESIDENTS

Ohio residents are charged a combined instructional and general fee of $61 per credit hour to a maximum of $732 per quarter for students scheduling 12 through 18 credit hours. Students scheduling more than 18 credit hours will be charged an additional $61 per credit hour.

NON-OHIO, U.S. RESIDENTS

Non-Ohio, U.S. residents are charged a combined instructional and general fee of $134 per credit hour up to a maximum of $1,608 per quarter for students scheduling 12 through 18 credit hours. Students scheduling more than 18 credit hours will be charged an additional $134 per credit hour.

INTERNATIONAL STUDENTS

International students are charged a fee of $162 per credit hour up to a maximum of $1,944 per quarter for students scheduling 12 through 18 credit hours. Students scheduling more than 18 credit hours will be charged an additional $162 per credit hour.

Lab Fees

Lab fees are charged to cover the cost of consumable materials used by the student. The cost of student liability insurance, required in certain health technologies, will be included in the lab fee.

Fee Payment

At the time of registering for classes, the student will be given a combination class schedule and fee statement. Fee payment deadlines are included on this schedule. Fees will not be accepted after the deadline date. Upon payment of fees, the cashier will issue a PAID fee receipt which is the student's verification of having paid fees and permission to enter scheduled classes.

Late Registration Fee

Currently enrolled students who are planning to continue their studies during the following quarter must schedule by the end of the tenth week of the quarter to avoid the late registration fee. This fee is $10, plus $2 per weekday up to a maximum of $20. Please check the College calendar or with the Records and Registration Office for specific dates each term.

Late Payment of Fees

Students who have not paid their fees before the first day of the quarter are subject to being charged a late payment penalty. Fees, including any late fees, must be paid in full within the first eight calendar days of the quarter.

Student Health Insurance

Columbus State Community College offers low-cost group accident and sickness insurance. All full-time students are eligible for the plan. Coverage is world-wide, 24 hours a day, at home, at school or while traveling. The fee provides coverage for the entire 12-month period. Extended coverage for family and dependents is also available at an additional cost. For more details, request a student insurance program brochure from the Cashier's Office in Madison Hall or the College Health Office, 007 Union Hall.

Non-Traditional Credit Fee

Students with life experience that has provided learning similar to academic course outcomes may request a review of that experience by the appropriate academic department chairperson. A non-refundable $50 fee is charged to review the information and/or portfolio.

Proficiency Examination Fee

Students who believe they possess the knowledge contained in a course may request of the academic department to take a proficiency examination. A non-refundable $50 fee is charged for each proficiency examination to be taken and is payable to the Cashier's Office prior to taking the exam. Information concerning proficiency examinations may be obtained by contacting the chairperson of the department offering the course for which the exam is to be taken.

Transient Student Fees

Transient students (those who are taking one or more courses to transfer back to another college or university) complete a regular application and pay the one-time $10 application fee. The regular instructional, general, lab and appropriate residency status fees shall be charged for courses taken. A $35 matriculation fee will be charged upon scheduling the 12th credit hour. It is recommended that transient students receive approval from their home institution to take specific Columbus State Community College courses to assure transferability/applicability of the credit at their home institution.

Release of Records and Transcripts

Columbus State Community College will not release a copy of the student's official records to individuals and organizations outside of the College without the student's written permission, except when required by law. Students may request that a copy of their official Columbus State transcript be sent to organizations and individuals outside of the College by completing the transcript request form available in the Records and Registration Office or by sending a written request with signature to that office. Students wishing to take a copy of their transcript with them will be required to present a picture identification card.

The Family Education Rights and Privacy Act of 1974, as amended, governs the maintenance and release of records. A copy of the regulations is available in the Records and Registration Office, or by sending a written request, including the student's signature to that office. There is no charge for an official transcript. (See pages 27-28 of the Catalog for a summary of the Act.)

Refunds

The quarterly instructional, general and lab fees are refundable for student-initiated withdrawals in accordance with the following schedule:

The first through the eighth calendar days of the quarter - 100%

The ninth through the fifteenth calendar days of the quarter - 50%

The sixteenth through the twenty-second calendar days of the quarter - 25%

The twenty-third calendar day through the end of the quarter - 0% (no refund)

Short term and flexibly scheduled course fees and laboratory fees are refundable on a prorated basis. Please check with the Records and Registration Office for these deadlines.

A total refund of quarterly fees is made when a program is cancelled or closed and the student does not elect or is not permitted to enroll in another program.

Resident Non-Resident, and International Student Status for Tuition Purposes

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; 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.

In determining whether an enrolled student is an Ohio resident, the College shall make a determination of fact in accordance with the above standards.

General Residency for Tuition Surcharge Purposes

The following persons will be classified as residents of the State of Ohio for tuition surcharge purposes:

A. Dependent students, at least one of whose parents or legal guardians has been a resident of the State of Ohio for 12 consecutive months or more immediately **preceding** the enrollment of such student in an institution of higher education;

B. 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** 12 consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.

C. A 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 employment and established domicile in the State of Ohio for reasons other than gaining the benefit of favorable tuition rates.

Documentation of full-time employment and domicile shall include both of the following documents:

I. A sworn statement from the employer or the employer's representative on the letterhead of the employer or the employer's representative certifying that the parent or spouse of the student is employed full time in Ohio.

II. A copy of the lease under which the parent or spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential real property located in Ohio of which the parent or spouse is the owner and occupant; or if the parent or spouse is the not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that the parent or spouse resides at that residence.

D. Persons who live 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 will be considered residents of Ohio for these purposes.

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. 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. (See C.I. and C.II. above.)

4. No persons holding a student or other temporary visa shall be eligible for Ohio residency for these purposes.

5. 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 one academic degree program.

6. 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 item (3).

7. Any person once classified as a non-resident, upon the completion of 12 consecutive months of residency in Ohio for all other legal purposes, may request reclassification as a resident of Ohio for these purposes. 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. (Exceptions: non-immigrants.) Evidentiary determinations under this rule shall be made by the College, which may require, among other things, the submission of information regarding the sources of a student's actual financial support to that end.

8. 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.

9. A person who is transferred by his employer beyond the territorial limits of the fifty 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.

10. 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.

For further information on residency for tuition purposes, please contact the Records and Registration Office.

Parking Regulations

All motor vehicles including motorcycles, parked on campus must be registered with the Public Safety Department. Permits can be purchased from the Cashier's Office located on the ground floor of Madison Hall. Hours are Monday - Thursday 8 a.m. - 7:30 p.m.; Friday 8 a.m. - 4:30 p.m. To purchase a permit you must have:

- Paid your tuition fees
- Know your license plate number

Parking fee for one vehicle is $15.00 per quarter. You must purchase parking **each quarter.** Additional vehicles can be registered for $15.00 per quarter.

Parking Permit Location

1. Parking permit must be affixed to the outside of vehicle on the right rear (passenger) side of the rear window or bumper.
2. Permits are to be displayed so all information including permit number is clearly visible.

Temporary Permits

1. Temporary permits are available to those who need to park an unregistered vehicle on campus. Temporary permits may also be issued for special needs such as temporary handicap parking with a doctor's letter.
2. Temporary permits are available from the Public Safety Department at no cost. The temporary permit will be issued for up to 2 weeks, providing verification of the purchase of a regular permit.

Replacement Permits

Replacement permits can be purchased from the Cashier's Office for a $15.00 fee. To prevent unauthorized use, the replaced permit will be invalidated and placed on a tow list.

Misuse of Permits

All parking permits are nontransferable. Any person who gives, sells, lends, or otherwise transfers a permit to another will forfeit their campus parking rights.

Public Safety/Police

The College's Police officers are commissioned by the State of Ohio and meet all standards of the Ohio Peace Officers Training Council. The officers provide the following services:

- Patrol of campus lots and buildings;
- Investigation of threats, harassment, disruptive or offensive actions and disorder;
- Investigation of forced entry, theft or vandalism;
- Escort service;
- First aid to injured or ill people;
- Explaining of Ohio laws and the College policy and rules to employees and students.

The department works closed with the State Highway Patrol, the Franklin County Sheriff and the Columbus Police. The department also has a working relationship with other university police departments.

The Public Safety department has 23 officers and 4 full-time support staff members to serve the Columbus State campus community 24 hours a day, 7 days a week. Many of the officers are also trained as bike patrol officers, increasing visibility and improving student assistance. The Public Safety Office is located in Aquinas Hall, Room 026, and can be reached by telephone at 614-287-2525.

Financial Aid

Financial Aid

Financial Aid is available in four forms: grants, loans, part-time employment and scholarships. The chart entitled "Financial Aid Programs" (FAP) indicates the major types of financial aid that are available from the usual state and federally subsidized sources. Scholarships are much more specialized and are applied for separately from the types of aid appearing on the "FAP" chart. In general, the amount of assistance that a student may receive depends upon the established financial need of the student. This need is determined through the Central Processing Service and is based on the information submitted in the Free Application for Federal Student Aid (FAFSA). Financial Aid is to be used for room, board, fees, books, and commuting expenses. For more information please *see* the *High Finance Publication* (available from the Financial Aid Office).

For all federal financial aid programs, regular admission status and U.S. citizenship (or permanent residence status) is required. Only those who have declared an intent to pursue a degree and are taking related courses are eligible. Persons with bachelor's degrees are not eligible for grants, but may apply for loans and work study.

Application Procedures

Application materials are available in the Financial Aid Office, Madison Hall, Room 118. Students can apply electronically through the Internet at **www.fafsa.ed.gov.** Students may also request information by calling (614) 287-2648. You must apply for financial aid each year, after January 1. Applications are accepted throughout the academic year. Campus-based funding is awarded on a first-come, first-awarded basis.

How Do I Apply?

1. Apply for admission to Columbus State Community College
2. Complete the Free Application for Federal Student Aid (FAFSA) application and mail to the processing agency. (Be sure to list Columbus State as the school you plan to attend by denoting **school code 006867** on Section H in the FAFSA.)
   - You will receive a Student Aid Report (SAR) as a result of your FAFSA application in 4-6 weeks. Be sure to review these results. If corrections are necessary, you may bring them to the Financial Aid Office and corrections may be made electronically.
3. Once the Financial Aid Office has received the above materials, we will review your file. Once your file is complete, you will be sent a Financial Aid Award letter that explains what financial aid you are eligible to receive.

For those students who want to apply for a Federal Stafford Loan an additional application is required. The Federal Loan Request Form is mailed with your award letter.

Basic Eligibility Requirements

Eligibility for most federal student aid programs is based on financial need. In addition, the federal student aid programs require that the student recipient:

- Not possess a bachelor's degree (for Pell and Supplemental Grant only);
- Be a United States citizen, eligible non-citizen, U.S. National, or permanent resident;
- Have a valid social security number;
- Have a high school diploma, G.E.D., or recognized equivalent. **Proof of passing GED scores MUST be on file with the Office of Records and Registration before your application can be processed.** Students without a high school diploma or G.E.D. may establish eligibility under the *Ability-to-Benejit* regulations by passing a test approved by the U.S. Department of Education. The Compass placement test is the approved test available at Columbus State through the Counseling Center, Union Hall, 048. To qualify for consideration students must have the following scores: Language - 31; Reading - 60; Math - 21.
- Have complied with current selective service registration regulations. For more information on selective service requirements, contact the Financial Aid Office or our web page.
- Be a regularly admitted student, enrolled in an eligible program, working toward a degree or certificate;
- Not be in default, or owe a refund on any type of federal financial aid.

Verification

Verification is the process through which the federal government requires confirmation of the accuracy of the information reported on the Free Application for Federal Student Aid (FAFSA). If you are selected for Verification, you must provide clear evidence that the information you reported on your FAFSA is true and correct. The Financial Aid Office will contact you regarding specific requirements pertaining to your application if you are selected. Generally, signed IRS Income Tax Returns, Verification Worksheets, and documentation of Untaxed Income received are required.

Satisfactory Academic Progress

Federal regulations require that Columbus State Community College monitor the academic progress of students who apply for and/or receive federal financial aid. These regulations apply to each financial aid applicant, regardless of whether a student has ever previously applied for or received financial aid. To receive any form of federal financial aid, students must maintain satisfactory academic progress toward a degree or certificate. For additional information refer to the *High Finance Publication* available from The Financial Aid Office. **Failure to maintain satis-**

factory academic progress will result in funds either being terminated or withheld until eligibility is regained.

Transfer Students and Financial Aid Transcripts (FATs)

Students who have attended other colleges, universities, business colleges, or other post-secondary institutions during the current academic year are required to have Financial Aid Transcripts on file from the institution attended, whether or not financial aid was received from that institution. Federal regulations require Columbus State to receive and review those FATs prior to processing your financial aid application.

Scholarships

A scholarship is financial assistance awarded primarily on the basis of scholastic achievement. Like grants, they generally do not have to be repaid.

The Columbus State Community College Development Foundation, Inc., provides scholarships based upon availability of funding. These scholarships are established by private donors, professional organizations, and the College. Eligibility varies for each scholarship program. Students may apply for these scholarships by completing the Application for Privately Funded Scholarships available in the Financial Aid Office. In general, these scholarships are based on variable criteria including, but not limited to, technology, financial need, credit hours earned, and academic and individual achievement. Scholarship applications are available in the spring for the upcoming fall quarter.

Additionally, the Financial Aid Office has scholarship resource texts available which students may review to locate sources for additional consideration outside the College. Students can view scholarships electronically at www.fastweb.com, this site can be visited from Cougarnet, any CSCC Lab or the Financial Aid Office Computer Lab..

If you have been awarded a scholarship from an outside agency or organization, you will be responsible for notifying the Financial Aid Office of this award. The organizations from which the award was made will need to provide, in writing, verification of what school-related expenses may be covered, and/or any requirements for the scholarship. This information is required prior to the release of any scholarship award.

Refunds and Repayments

If you withdraw from a class and financial aid has been applied toward your tuition and fees, any refund due will be paid to the financial aid program(s) and not to the student. In the case of a Stafford or PLUS Loan, the refund will be made directly to the lending institution.

Students who receive financial aid over and above their tuition and fees (i.e., receive a cash disbursement) and subsequently withdraw from a course(s) during the first three weeks of the quarter, may be required to repay to the College, all or part of the cash disbursement.

Ohio Instructional Grant (OIG) recipients dropping below twelve (12) credit hours during the 100% refund period will be required to repay the entire amount of the grant, minus any funding through the Part-time Instructional Grant Program.

Veterans Services

Columbus State Community College is approved for the training of Veterans and other eligible persons. Students eligible to receive VA educational benefits must register with the Veterans Services Office in order to receive their benefits.

To apply for VA educational benefits, students must have completed the College Admissions Application and paid the application fee. Students should contact the VA Coordinator at least six weeks before they plan to attend to start applying for the benefits.

Each applicant will be provided with a copy of the Standards of Satisfactory Academic Progress for VA Recipients, current VA guidelines, and pay scales.

To request an application or to receive more information about VA benefits, contact the VA Coordinator at (614) 287-2644.

Information and Services

The Financial Aid Office is located in Rhodes Hall, Lower Level. Our customer service technicians are available to answer your questions and direct you. Additionally, you may also speak with a financial aid representative by calling our office.

Telephone Numbers

Financial Aid Representative ..... (614) 287-2648
Toll Free Number..... 1-800-621-6407
VA Coordinator..... (614) 287-2644

Customer Service Hours

Financial Aid Office

Monday - Thursday ..... **8** a.m. - 7:30 p.m.
Friday..... 9:30 a.m. - 4:30 p.m.
Saturday ..... 9 a.m. - 12 noon

Veterans Services Office

Monday, Wednesday, Thursday ..... **8** a.m. - 4:30 p.m.
Tuesday..... 11 a.m. - 7:30 p.m.
Friday..... 9:30 a.m. - 4:30 p.m.

Financial Aid Programs

Program	Source of Funding	Minimum Cred. Hrs	Approximate Annual Amts.	Application Forms	Comments
Federal Pell Grant	Federal	1	up to $3,000 for FT attendance	• FAFSA[1]	Provides financial assistance based on federal formula. Student receives an eligibility report called Student Aid Report (SAR). Federal Pell Grant eligibility must be determined before student loans are processed.
Ohio Instructional Grant (OIG)	State	12	up to $1,866	• FAFSA	Provides financial aid to help pay tuition and fees only. Award information is sent directly to CSCC from the Ohio Board of Regents. Must be Ohio/ Pennsylvania resident.
Part time Ohio Instructional Grant	State	1	Not to exceed OIG eligibility	• FAFSA	Provides part time financial aid students with funding to pay tuition and fees only. PTIG awards are put on the student's account the 5th week of each quarter. Award information is sent directly to CSCC from the Ohio Board of Regents.
Federal Supplemental - Educational Opportunity Grant (FSEOG)	Federal	6	Awards usually do not exceed $1500	• FAFSA	Must demonstrate exceptional need as determined by the FA0.[2] Notification of award forwarded to student from FAO.[2] Priority given to students who have been awarded maximum Pell Grants and is awarded to students on a first-come, first served basis.
Federal Work Study (FWS)	Federal	6	Awards usually do not exceed $3,000	• FAFSA	Provides part-time employment for both on and off campus to assist with college expenses for students with financial need.
Federal Family Educational Loan Program Stafford Loan (Subsidized)	Federal	6	$2,625 maximum for 1st year $3,500 maximum for 2nd year	• FAFSA *Federal Loan Request Form	Federal government pays interest on loan while student attends school. Student eligibility is determined from Student Aid Report. Variable interest rate is capped at 8.25%. Repayment begins six months after leaving school. The amount of payment dependent upon repayment plan chosen by student. Pell grant eligibility must be determined before loan application processed.
Federal Family Educational Loan Program Stafford Loan (Unsubsidized)	Federal	6	Dependent - same as subsidized Independent - same as subsidized plus an additional $4,000	• FAFSA *Federal Loan Request Form	Variable interest rate capped at 8.25%. The interest is paid by borrower while still in school, unless a deferment is granted. Student eligibility is determined from Student Aid Report.
Federal Parent Loan for Undergraduate Students	Federal	6	Up to the cost of education	• FAFSA • Plus Loan Application	Variable interest rate capped at 9%. Monthly payment must begin within 30-60 days after disbursement.

[1] *FAFSA - Free Application for Federal Student Aid* [2] *FAO - Financial Aid Office*

Student Services & Student Life

Student Services & Student Life

Bookstore

The Columbus State Bookstore provides service to students, faculty, staff and alumni of the College. Available in the bookstore are new and used textbooks and supplies required by the academic departments for use in the classroom and laboratory. Students may also purchase software, calculators, clothing, New York *Times* Best Sellers, trade books, reference books, school supplies, greeting cards, candy and gift items. The Bookstore also buys back used textbooks, sells class rings, orders special books, sells gift certificates and does copying. Students are encouraged to pick up the free Bookstore Information Handbook to familiarize themselves with the store's policies. The bookstore, located on the ground floor of Delaware Hall, is open Monday - Thursday from 8 a.m. - 7:30 p.m., Friday from 8 a.m. - 4:30 p.m., and Saturday from 9 a.m. - 12 noon. For more information call (614) 287-2427.

Center for New Directions

Center for New Directions, a not-for-profit organization and a United Way agency, is on campus providing services to women who are planning changes in their work life, and to families in transition due to divorce. Their services may be of interest to Columbus State students or to people you know. Call (614) 287-5333 for information about Center for New Directions, or look for their literature at distribution sites across campus.

Child Development Center

The Columbus State Child Development Center is a year-round facility open to the public. It serves families with children from ages six weeks to five years, and adds a school-age summer program for six and seven year-olds each year. The Center accepts both full-time and part-time enrollments. We have developed the reputation as a quality center in the Columbus community. For further information, call(614)287-3600.

Counseling and Advising Services

The department of Counseling and Advising Services offers a comprehensive range of services, programs and activities for students including academic advising, new student orientation, placement testing (see also Placement Testing), a college transfer fair, educational workshops and programs, and individual and group counseling for educational, career and personal concerns. The mission of Counseling and Advising Services is to assist students in defining and achieving lifelong academic, career and personal goals and to promote the retention and development of students within a diverse and changing global community.

To assist students in selecting courses and helping them to plan their academic programs, the department provides academic advising for transfer students seeking the Associate of Arts or Associate of Science degrees, for transient students from other institutions taking classes at Columbus State, and for students who are undecided and still exploring their educational and career goals. Academic advising is also provided for students who select a Career and Technical Program. New students in these programs are assigned a Career and Technical Program Advisor who assists students during their first quarter or until they are accepted into a Career and Technical Program. After acceptance into a Career and Technical Program, students are assigned a faculty advisor in their program of study. Faculty advisor information is available to students in the main Counseling and Advising Services office located in 048 Union Hall.

For all students, academic advisors can also direct students to a wide range of educational and career-related information, including transfer opportunities and transfer guide information, located on the Internet. Students can access much of this information by exploring our web site (see address below). Advisors are also available to students via e-mail through this site. The department is also increasing access for students to phone and video-conferencing advising services, especially for students at the off-campus sites and distance learners. Call us at (614) 287-2668 for more information.

Professional counseling services are also available to students for a wide range of college concerns: academic, social, vocational or personal. Stress/time management, adjustment to college, test anxiety and study skills, family, relationship or personal matters, self-esteem, depression, anxiety or related issues, and alcohol and other drug use/abuse issues are all examples of concerns that can be addressed in individual counseling. Counseling services are free and confidential and provided on an individual, short-term basis (up to six sessions). Information and referral to community resources and long-term assistance are also available. Personal conferences or sessions are offered to help students explore and understand their own attitudes, values, and skills. Appointments are recommended; call or stop by the department for more information and confidential assistance.

In addition to advising and counseling services, the department offers educational workshops and programs on a variety of topics designed to enhance the social, educational, and personal growth of students. Topics include stress/time management, choosing a major, career/life planning, test-taking and college study skills, self-esteem, learning styles, wellness and body image, and many others. This information is offered in a variety of formats to accommodate students different lifestyles and needs, including in-class presentations, workshops at the center in Union 048, "Drop-In" workshops in the Nestor Hall lobby, our "Unworkshop" series of handouts available in racks located both in Union 048 and in Nestor Hall near the Student Activities Office, and through our web site (see address below). Also, in recognition of problems associated with substance use/abuse, the department provides a drug and alcohol prevention program designed to increase awareness, prevent substance abuse problems, or address existing problems. For more information on alcohol and other substance use/abuse or prevention activities, contact the program coordinator directly at (614) 287-5416.

The main office of Counseling and Advising Services is located in Union Hall, Room 048. Hours of operation are Monday through Thursday, 8 a.m. - 7:30 p.m., Fridays 9:30 a.m. - 4:30 p.m., and Saturdays, 9 a.m. - 12 noon (closed holiday weekends). Appointments are recommended, but not required, and walk-in services are available. Some advisor offices are located in other building locations on campus. For more information on any of our advising, counseling or other services, or to arrange an appointment, please call (614) 287-2668. For information about placement testing, contact the COMPASS Placement Testing Lab directly at 287-3602. To locate our web site and access e-mail contact with an advisor and other information, go to www.cscc.edu; click on Student Services, Counseling and Advising Services.

Educational Resources Center (Library)

The Educational Resources Center in Columbus Hall, also known as the Library, provides a multimedia environment to support a wide range of learning experiences. All cataloged materials (books, videos. audiotapes, etc.) are intershelved so that materials on a subject can be located in one place. In addition to the collection in the main stacks, there are collections of reference and reserve materials, magazines, pamphlets, and video-based courses. All materials can be accessed through the ERC's web page, http://cslink.cscc.edu. Access is also provided to other resources in Ohio's academic libraries and the State Library through OhioLINK (http://www.ohiolink.edu). In order to check out materials, a Columbus State I.D. Card with current validation or an ERC Library Card is required. A forty-station computer lab, copiers, and typewriters are available for general use, and there is a dedicated computer lab for library instruction classes. Students can also receive assistance in producing media for classroom presentations. A handbook describing all ERC and Library services is available at the reference and circulation desks.

Disability Services

Columbus State Community College offers a wide range of support services to encourage the enrollment of persons with disabilities. Through the Department of Disability Services, support services are made available to qualified students with a documented disability. Eligibility for support services is based on disability documentation received by the Department of Disability Services. These services include, but are not limited to, adapted testing procedures, materials in alternate media, textbooks on tape, note taker notebooks and counseling. In addition, qualified sign language interpreters are available for students who are deaf or hard of hearing. Adaptive and state-of-the-art equipment is available on campus for student training and use in completing course requirements. Students may also meet with counselors and learning specialists to develop an individual plan for support services. The department consults with students, consumers and professionals in the field of rehabilitation and education, as well as state and federal resources in the continued development of program accessibility. For further information or to arrange for support services, please call (614) 287-2570 (VOICE/TTY). The Department of Disability Services is located in Franklin Hall, Rooms 223 and 228.

Food Service

Located in Union Hall and operated by Aramark Corporation, the cafeteria is open Monday through Thursday, 7 a.m. - 7 p.m., Friday, 7 a.m. - 2 p.m., and Saturday, 7:30 a.m. - 1:30 p.m. Breakfast foods are served until 10:30 a.m. The cafeteria has a wide variety of delicious foods to choose from: The Market offers rotisserie chicken meals, hot carved sub sandwiches, chicken pot

pie and many side dishes; Center Stage features chicken salad, pitas, and stir fry dishes; Grille Works is a full grill featuring combo meals with fries and a drink, seasoned twist fries and more; The Salad Bar features the freshest mixed greens, your favorite toppings, soups and a fruit bar; World's Fare is a hot, top-your-own food bar where you create your own hot meal and top it your way; Easy Goes is take-out food for when you're in a big hurry; and don't forget Taco Bell, DC Subs and Pizza Hut are also on site. Call (614) 287-2483 for more information.

Grievance Procedure

A grievance procedure has been established to help students resolve non-academic and non-disciplinary problems they may encounter on campus. A copy of the Columbus State Community College Student Grievance Procedure is published in the *Columbus State Student Handbook* or the Columbus State Policy & Procedures Manual. The Student Handbook is available in the Counseling Center, in Union Hall and the Associate Provost office in Academic Center B.

Health Office

The College Health Office provides health care by professional nurses for illnesses and injuries, and nursing consultation for health problems. Health records for students in the health care technologies are collected and maintained in the Health Office.

The College Health Office promotes healthy lifestyles through seminars, workshops, and individual counseling. For more information, please call (614) 287-2450 or come to Union Hall, Room 007.

Office of Multicultural Affairs and Community Outreach

The Office of Multicultural Affairs and Community Outreach is responsible for the leadership of all programs and activities of the College which act to increase minority student access and retention within established policies and procedures of the College. Several goals of the Office are to:

- Implement orientation and professional development programs related to minority affairs, for administrative, instructional, professional, and support personnel of the College;
- Increase the employment of minority staff, faculty and administrators;
- Promote activities and programs that will result in increased retention and graduation rates of minority students; and
- Market Columbus State Community College as an attractive institution of higher education for minorities to pursue their career goals.

The accomplishment of these goals are pursued in collaboration with appropriate offices and departments of the College.

The Office is involved in outreach in the Columbus community. Working relationships have been developed with middle and high school principals, counselors, teachers, ministers, civic and community leaders and government officials to increase minority student enrollment and retention. Through campus visitations and enrollment in college credit articulation programs, minority students gain exposure to the College.

Quarterly workshops, seminars, and forums are conducted by the Office.

For more information contact the Office of Multicultural Affairs and Community Outreach at (614) 287-2426.

"The Meeting" sponsored by the Multicultural Affairs Office.

Career Services

CAREER PLANNING ASSISTANCE

Career Services assists students and alumni who have questions about selecting majors and careers. We invite you to register for career planning services to explore our career development resources. Come visit us on the Internet at http://www.cscc.edu and select the *Student Services* link.

- ***Career Interest Testing Helps Students Get Started***
  Career Services offers computer-based and paper-and-pencil career interest tests to assist students and alumni with career planning. These activities may be entirely self-paced or interpreted for students and alumni by staff in individual or small group meetings. For your convenience, Internet links to other effective interest-testing tools can be found on our website.
- ***Career and Job Fairs and Seminars***
  Career information seminars and events are offered throughout the year, and employers often facilitate them. Special activities include the National Career Development Event, held every November, and the Collegiate Job Fair of Greater Columbus, a major community-wide employment event, held every Spring.

EMPLOYMENT AND PLACEMENT ASSISTANCE

Career Services' Partnership with Adecco Helps Students Find Jobs

Our partner for assisting students with obtaining temporary, temp-to-perm, and part-time job postings is Adecco, a major employment services firm with offices world-wide. Adecco has a computer kiosk next to the cafeteria in Delaware Hall.

WORKsource: Your Complete Job & Training Network

Another Career Services' partner, WORKsource is located on the Internet at http://www.worksource.net A community effort aimed at developing employment opportunities for people and a workforce for the companies in Columbus and Franklin County, this site offers many valuable resources. Jobseekers can write a resume, post resumes, search available jobs, and much more.

Build Career Experience with Internships and Co-ops

Career Services posts internship and co-op openings for students to bridge the student's program of study with career-related work experience. Some academic programs have required or elective co-op and internship courses. Internships and co-ops that require academic credit should be initiated through the student's academic department.

Placement Services for Graduating Students and Alumni

Career Services offers resume referral services and campus recruiting activities for full-time, permanent, career employment opportunities that require the completion of Columbus State's associate degree and certificate programs. Students may register for resume referral services after completion of 70% of their coursework or anytime after graduation. Registrants are encouraged to meet with staff prior to registration to discuss career plans.

OFFICE HOURS

Our regular office hours for appointments and walk-ins are Monday to Thursday, 8 a.m. to 6:30 p.m., and Friday, 10 a.m. to 4:30 p.m. To set up an appointment during these hours or to arrange an alternate time, contact our office at 614/287-2651. Please let us know how we can assist with accommodations.

Student Handbook

The ***Student Handbook*** is a useful guide to many of the campus resources available to students. The handbook provides information on student rights and responsibilities, policies, procedures, activities, services, and extracurricular opportunities at Columbus State. The *Student Handbook* is available through the Counseling Center in Union Hall and Office of the Associate Provost located in Academic Center B.

Sexual Harassment Policy

Columbus State Community College believes that all employees and students should be able to work and learn in an environment free of all discrimination and any form of harassment.

To help ensure that employees and students are not subjected to illegal harassment, and in order to create a comfortable work and learning environment, the College strongly opposes and prohibits any offensive physical, written, spoken or nonverbal conduct as defined and otherwise prohibited by state and federal law.

Further, College policy defines sexual harassment by a student as an example of general misconduct which may result in penalties up to and including dismissal from the College.

Student Conduct

The general policy of the Columbus State Community College favors as few rules and regulations as are necessary to be consistent with its educational purposes. Students are expected to act as responsible adults at all times. This expectation includes the honest performance of all work, regular class attendance, proper respect for others, prompt payment of debts, observance of law, and respect for property.

Any student violating Columbus State Community College policies or rules may be placed on disciplinary probation or dismissed. Disorderly, dishonest, and/or immoral conduct are grounds for probation or immediate dismissal. In technologies that include internship employment or clinical experiences, good standing with the cooperating employer or clinical affiliate is expected and is essential to continuation in the program. A copy of the Student Conduct Code and procedures is published in the *Student Handbook.* The *Student Handbook* is available through the Counseling Center in Union Hall and Office of the Associate Provost located in Academic Center B.

Tutoring Services

Learning Skills Center (LSC)

The Learning Skills Center, located in Franklin 245, offers tutorial assistance from professional tutors in the following areas: some Biological and Physical Science courses; Developmental Education math, reading and writing courses; and Communication Skills courses. To ensure an appointment with a Communication Skills tutor, students should sign-up in advance, or they can receive walk-in assistance if a tutor has an open appointment, Students are limited to one thirty-minute session per day. The LSC also houses computers for student use and offers VCRs for developmental math students who wish to view lecture tapes. Students are encouraged to visit the LSC to enhance their academic success.

For more information and hours of availability, call (614) 287-**2478.**

Math Tutors

Faculty tutors are available on a walk-in basis for most math courses beginning with MATH 102 through MATH 104 and other selected courses in room 3 13, Academic Center B.

For more information on this tutoring service, please call 287-5313.

Peer Tutoring Program
The peer tutoring program offers one-on-one tutors in Accounting, some Modem Language courses, and Developmental Education math courses. Peer tutors are not available for other courses at this time. Peer tutoring is based on tutor availability, so students are **not** guaranteed a peer tutor. Tutoring is free for students enrolled in Developmental Education math courses. There is a small fee for the Accounting and Modem Language courses.

For more information, please call 287-2474 between the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday.

Student Success Testing Center (SSTC)
The Student Success Testing Center (SSTC) provides testing services for all academic departments and Distance Learning (web-based and video-based courses). In addition, the SSTC will provide proctoring services for individual student exams as requested by other academic institutions.

The SSTC is located in Franklin Hall, Room 251. The SSTC hours of operation are designed to serve the needs of the general student population and do not reflect specific testing deadlines. Therefore, it is the student's responsibility to meet his/her individual course testing deadlines.

A distance learning test may be taken any time between the opening and closing time of the Testing Center. The test must be completed by the closing time of the SSTC. No extension of time will be given, so students should plan sufficient time for taking distance learning tests.

No children are allowed in the Student Success Testing Center. A picture ID is required.

Contact Person: For more details and any questions, please contact Michelle L. Branner at 287-5347.

Student Activities

Extracurricular activities for students are developed and organized by the Office of Student Activities, located on the first floor of Nestor Hall. A varied schedule of activities and programs are sponsored each quarter throughout the year. These include the Student Ambassador Leadership Program, the IMPACT Leadership workshop series, movies, speakers, special events, and ticket sales for amusement parks.

Athletics

The Athletic & Recreational Activities Office is responsible for the development and coordination of varsity athletics at Columbus State. Currently the College offers eleven varsity sports.

Men's Basketball	Men's Soccer	Men's Golf
Women's Basketball	Women's Volleyball	Equestrian
Men's Baseball	Men's Cross Country	Cheerleading
Women's Softball	Women's Cross Country	Men's Track
Women's Track		

All of the athletic teams hold open tryouts prior to the beginning of the season. Tryouts are held during autumn quarter, with the exception of men's soccer, men's cross country, women's cross country and women's volleyball, which are held during summer quarter.

Students who intend to participate in athletics must be full-time, registered in a minimum of 12 credit hours of coursework (although some part-time students may be eligible) and maintain a 2.0 GPA for the privilege to participate. The College adheres to the guidelines established by, and is a member of, the National Junior College Athletic Association. Athletic scholarships are available for student athletes playing men's and women's basketball. All other sports are non-scholarship.

Columbus State is a member of the Ohio Community College Athletic Conference. This conference status allows our students to compete against other two-year colleges as well as other four-year institutions in athletics.

Any questions or concerns pertaining to the athletic program may be addressed by calling (614) 287-2445 or by stopping in the Athletic & Recreational Activities Office located in Delaware Hall. **GO COUGARS!!**

Housing

The Columbus State Community College Office of Student Activities maintains information on opportunities for student housing. Out-of-town students are encouraged to contact the Office of Student Activities in Nestor Hall at (614) 287-2637 for current housing information. The department has a listing which contains information on apartment vacancies, rooms available in homes, and a roommate locator service.

Intramural Sports

The intramural sports program is an integral part of campus life. Intramurals provide opportunities for individuals to enjoy participation in their favorite sports against fair and equal competition. Both team and individual sports are offered to meet the interests and needs of all students, faculty and staff in their pursuit of leisure-time recreational opportunities. Intramural sports include basketball, billiards, euchre, chess, volleyball, football, softball, ping pong, and soccer. For more information call (614) 287-2616 between the hours of 8 a.m. - 4:30 p.m.

Student Organizations

The Office of Student Activities is committed to the belief that students have a right to organize and participate in groups whose purposes center around interests and goals of the individuals involved. Current list of clubs and organizations as of March, 1999 include:

Accounting Honorary Society
African American Women's Support Group "Sister Friends"
Alpha Phi Omega
Changed Lives
Columbus State Architecture Association
Columbus State Drama Club
Columbus State Student Nurses' Association
Columbus State Taekwondo Club
DEAFinitely Theatre
El Club de Espanol de Columbus State
Eta Sigma Delta
GABLE Cougars
International Student Association
Liberian Student Association
Pathways to Medicine
Phi Theta Kappa
Project Brotherhood
Society of Manufacturing Engineers
Student Chapter North American Veterinary Technicians Association
Student Organization for Adult Reentry
Student Organization of Legal Assistants

To learn more about our clubs and organizations, stop by the Office of Student Activities on the first floor of Nestor Hall, or call (614) 287-5343.

Publications

The Columbus Statement, a weekly student newsletter, is published through the Office of Student Activities. It presents a calendar of events for the forthcoming weeks, and serves to disseminate pertinent campus information.

Spring Street is a literary and visual arts magazine published by Columbus State students who enroll in ENGL 215 winter quarter and ENGL 280 spring quarter.

Recreational Facilities

Two areas are provided on the Columbus State campus for recreation and leisure activities in addition to the student lounges located throughout campus. The gymnasium and Fitness Center in Delaware Hall can be used for exercise, volleyball, basketball, and other desired sports. Activities in aerobics and Nautilus weight training are offered every quarter at a variety of times. Instructors will assist you. All activities are held in the Delaware Hall Recreational Facility. The weight room is located in the lower level of Delaware Hall, and offers Nautilus equipment, Lifecycles, stair climbers, aerobics area, and locker room facilities. The Aquinas Hall Lounge can be used for relaxing and studying. Nestor Hall has two lounges-one for studying and one for recreational activities including billiards and the campus movie series.

Wellness Program

The Athletic & Recreational Activities Office sponsors a wellness program for students, faculty, and staff of the College. The Wellness Program offers lectures, demonstrations, and group activities in an effort to balance the spiritual, emotional, physical, occupational, and intellectual aspects of life. Examples would include Yoga, Tai Chi, spirituality discussions, massage, and self defense to mention a few. For any questions, call (614) 287-2616.

Grading and Academic Procedures

Grading and Academic Procedures

Grades

At the close of the term and upon the completion of a course the instructor reports a letter grade indicating the quality of a student's work. Points for each quarter hour of credit attempted are assigned according to the following system:

Quality		Value	Credit Awarded
Excellent	A	4	Yes
Good	B	3	Yes
Average	C	2	Yes
Poor	D	1	Yes
Failing	E	0	No
Satisfactory	S	0	Yes
Unsatisfactory	U	0	No

Other Marks

INCOMPLETE (I) - When circumstances beyond the control of a student or a faculty member prevent the completion of course requirements during the quarter, an "I" (Incomplete) may be recorded until the final grade is established. An Incomplete is indicated only when the student has arranged for that grade with the faculty member and specific arrangements have been made for fulfilling the course requirements. Coursework must be completed within six weeks after the beginning of the next quarter. If a new grade is not submitted by the faculty member by that time, a grade of "E" is automatically recorded.

TRANSFER CREDIT (K) - To receive credit for a course taken at another college or university, a student must request an official copy of the transcript from each previous institution attended, be mailed to the Records and Registration Office. The official transcript copy becomes and remains the property of the College. Courses with a minimum grade of "C" and which fulfill requirements for a student's declared program of study or are needed to satisfy prerequisite course requirements will be considered for transfer credit. Please see page 32 for information on the Ohio Transfer Policy. Transfer credit does not apply to meeting residency credit hour requirements.

EXAMINATION/PROFICIENCY CREDIT (X) - A student may, upon the department chairperson's approval of the student's petition, be permitted to take a proficiency examination for credit. Permission is given only in cases when it is evident that previous experience or study warrants. A $50 non-refundable fee will be charged for each proficiency examination. Nursing students may take proficiency examinations only after they have been accepted into the Nursing Technology. Examination/proficiency credit does not apply to meeting residency credit hour requirements.

AUDIT (R) - A student may audit a course for information instruction only and with the understanding that credit may not be granted or later claimed as a result for the audited course. The course may be taken at a later date for credit. Neither proficiency, non-traditional, transfer or waiver credit will be given for a course that has been audited. Arrangements for audit should be made with the instructor no later than the first scheduled class meeting. A change to or from audit status will not be permitted after classes begin. The student's specific involvement in class shall be determined by the instructor. Any student wishing to audit a course is required to register for the course in the same manner as all other students and pay regular fees. The instructor will record a grade of "R" for the audited course.

NON-TRADITIONAL CREDIT (N) - Non-traditional credit may be awarded by the appropriate department chairperson for a student's documented life experiences which provide evidence of knowledge equivalent to that of a required course. If a portfolio is required, a fee of $50 will be charged for portfolio evaluation. Non-traditional credit does not apply to meeting residency hour requirements. Approved non-traditional credit is posted to the transcript after the student has earned 10 credit hours of technical, resident credit.

WITHDRAWAL (W) -Withdrawals during the first 14 calendar days of the quarter are not recorded on the permanent grade transcript. Withdrawals after the 14th calendar day of the quarter through the 63rd calendar day of the quarter (32nd calendar day of first-term courses) are recorded as "W" on permanent grade transcripts. See "Course Drop/Withdrawal Procedure" in this section of the *Catalog.*

NO GRADE REPORTED (*) - The instructor did not report a grade. The instructor must report a grade within six weeks after the beginning of the next quarter, otherwise a final grade of "E" is automatically recorded. A student receiving an "*" should contact his/her instructor.

INCORRECT GRADE REPORTED -A student who believes a grade reported is incorrect, should contact his/her instructor. If the grade is determined to have been incorrectly reported, the instructor must submit a Grade Change form to the Records and Registration Office to update the student's transcript.

Grade Report

Grades are reported to the student at the current address on file with the Records and Registration Office at the end of each term. The Business Office will hold the grades of any student who has not cleared all financial obligations to the College.

Calculating Grade Point Average

The basis for determining scholastic standing is the accumulative grade point average (GPA). The College uses a 4.0 scale (A=4.0, B=3.0, C=2.0, D=1.0, E=0.0). The grade point average is calculated by first multiplying credit hours for each course by the grade point value earned for the course. See the example in the following chart (credit hours x grade point value = total grade points earned for a course). Divide the total grade points earned for all courses attempted by the total credit hours for all courses attempted to determine accumulative grade point average.

EXAMPLE

Course	Credit Hours	Course Grade Received	Grade Point Value	Course Grade Points (Credits x Pt. Value)
Beg Comp (ENGL 101)	3	B	3	3x3 = 9
Med Term (MULT 101)	2	B	3	2x3 = 6
Physiology (BIO 169) -	5	C	2	5x2 = 10
Hematology (MLT 141)	6	A	4	6x4 = 24
Emergencies (MULT 103)	2	B	3	2x3 = 6
Total Credit Hours = 18				Total Grade Points = 55

$$\text{GPA} = \frac{\text{Total Grade Points}}{\text{Total Credit Hours}} = \frac{55}{18} = 3.055$$

Academic Standing

Each active student's record is reviewed at the close of each quarter. If a student's cumulative record (all courses attempted with a grade received) shows a grade-point deficiency, the student is subject to being placed on academic warning, academic probation or academic dismissal. The entire record, including each grade in each credit course attempted, is used to determine academic standing. The extent to which a student's accumulative average is below a grade point average (GPA) of 2.0 (C average) determines whether the student will be dismissed, placed on probation or continued on probation, or placed or continued on academic warning.

Dean's List

To recognize outstanding scholastic achievement, a Dean's List is compiled each quarter. To qualify for the Dean's List, a student must complete a minimum of 6 credit hours and earn a grade point average (GPA) of 3.5 or higher in that quarter. All credits must be in courses included in the calculation of the GPA. No student is eligible for the Dean's List who has a grade of "I".

Academic Honors

An Academic Honors List is compiled at the end of spring quarter to recognize students who are not eligible for the Dean's List, but who have achieved outstanding scholastic success over an academic year. Part-time students who have earned 12 or more hours of credit in any academic year (summer, autumn, winter, and spring quarters) with a GPA of 3.5 or above will be recognized on the Academic Honors List at the end of spring quarter.

Class Attendance

Students are expected to attend all classes. A student who has excessive unexcused absences during the quarter, and has not officially withdrawn, will receive an "E" in that course. Additional attendance policies may be defined by each technology chairperson, department coordinator, or instructor.

Satisfactory Academic Progress

"Satisfactory academic progress" is defined for all academic purposes at Columbus State Community College as progress in credit courses undertaken at the College that result in a grade point deficiency of not greater than 15 total grade points below a "C" (2.0) average for first-year students (47 or fewer credit hours earned) and not greater than 10 grade points below a "C" (2.0) average for second-year students (48 or more credit hours earned). For the purpose of graduation, a candidate for an Associate of Applied Science or Associate of Technical Studies degree must have a minimum 2.000 grade point average (GPA) in all required technical coursework and a minimum 2.000 grade point average (GPA) in all required non-technical coursework. A candidate for an Associate of Arts or Associate of Science degree must have a minimum 2.000 grade point average (GPA) in all coursework attempted at the College.

Academic Warning

WARNING is printed on the student grade report when the respective cumulative average drops below 2.000.

Academic Probation

The academic progress of a first-year student is considered unsatisfactory and the student is placed on academic probation when the cumulative grade point average reflects a grade point deficiency greater than 15 grade points and less than 26 grade points below a "C" (2.0) average. The academic progress of a second-year student is considered unsatisfactory and the student is placed on academic probation when the cumulative grade point average reflects a grade-point deficiency greater than 10 grade points and less than 19 grade points below a "C" (2.0) average. PROBATION is printed on the student's grade report and transcript and the student may be required to meet with an advisor/counselor for assistance prior to registering for subsequent quarters.

Academic Dismissal

A first-year student is academically dismissed from the College when the cumulative grade point average reflects a grade point deficiency greater than 25 grade points below a "C" (2.0) average. A second-year student is academically dismissed from the College when the cumulative grade point average reflects a grade point deficiency greater than 18 grade points below a "C" (2.0) average. DISMISSAL is printed on the student's grade report and transcript.

Petition for Readmission

A student who wishes to return to the College following academic dismissal must petition for readmission. If granted, readmission will be contingent on specific department policies and may require a contract between the student and the department defining expected class and/or grade performance. The registration of any dismissed student who returns to class without following the above procedure may be cancelled. Petitions for Readmission are available in the Counseling Center, Union Hall, Room 048.

Fresh Start Rule

The Fresh Start Rule is intended to help students who were unsuccessful in their previous academic attempts at the College because of immaturity or not being ready for college, and who voluntarily left the College and later returned after a substantial period of time and considerable personal change. In general, a student with courses in which grades of "D", "E" or "U" were earned, may be eligible to have the grades expunged from the student's record; the course(s) remain on the transcript. To be eligible for the Fresh Start Rule the basic requirements include, but are not limited to, the following:

- the student must have been away from the College for at least three consecutive years (12 consecutive quarters)
- the student has earned at least 12 credit hours meeting degree requirements with grades of "C" or better since returning to the College

A student may use the rule one time. An information sheet providing the complete requirements of the Fresh Start Rule and petition are available from the Records and Registration Office.

Course Drop/ Withdrawal Procedure

Students may withdraw from full-quarter and second-term courses through the 63rd calendar day of the quarter and from first-term courses through the 32nd calendar day of the quarter (including Saturdays, Sundays, and holidays). Please see the Records and Registration Office for deadlines for other short term courses. To withdraw from a class, it is necessary for the student to notify the College by using CATS (Computer Automated Touchtone System) registration at (614) 287-3900; using the SITE (Student Information Terminal) system; calling telephone registration, (614) 287-2666, submitting a completed Scheduling Form to the Records and Registration Office or an Off-Campus Center during business hours;. Receipt of the revised schedule, either in person or by mail, is the student's verification of completed registration transactions. Failure on the part of a student to follow withdrawal procedures will result in an "E" (failing grade) being recorded for the course or courses on the grade report.

Retroactive Academic Withdrawal Policy

A student who received failing grades as the result of documentable extenuating circumstances which prevented the student from following academic withdrawal procedures may be eligible to petition to retroactively withdraw from courses and have those grades changed to "W." Students must provide adequate third-party documentation that explains the extenuating circumstances. More information is available from the Records and Registration Office.

Repeating Courses

A student may repeat a course. Only the repeated course grade received will be used to compute the overall grade point average. However, both grades shall remain a part of the student's permanent record. Veterans and other financial aid recipients should check with the Financial Aid Office before repeating a course for which credit has been earned.

Program of Study Change

Students may request a Program of Study change in the Records and Registration Office. Students may also call the telephone Information Center, at (614) 287-5353, to change their program of study if the new program of study does not have a separate application procedure (such as many of the health related fields). Students transferring from one technical program to another shall not be required to carry the technical grade point average of the previous technical courses as a part of the technical grade point average of the new technical program. However, the grade point average of all courses taken shall remain as part of the official transcript record. Only those courses comprising the curriculum of the new technology will be considered when calculating the technical and non-technical grade point averages for determining eligibility to graduate.

Degree Audit Report

The Degree Audit Report System (DARS) is an important advising tool that helps students determine progress toward completion of their program or degree requirements. DARS provides a written report of courses in progress, courses completed and courses remaining for completion of program or degree requirements. It also reflects technical and non-technical grade point averages (for technical programs) and the overall grade point average (all programs). Your advisor can help you interpret this report. Regular use of the DARS report will assist the student in making prudent course selections. Students may request copies of their DARS at the Records and Registration Office or view

and request their report on-line from one of the SITE terminals located on campus.

Second-Year Status

A student shall be considered second-year after having satisfactorily completed a minimum of 48 credit hours of coursework as recognized by the College.

Petition to Graduate

Each student who wish to graduate must obtain a "Petition to Graduate" form and Degree Audit Report from the Records and Registration Office at the beginning of the quarter prior to the one in which the student intends to graduate. The student is to meet with his or her advisor for the evaluation of all course work completed, review of cumulative grade point averages, and review of courses for which he or she is registered the current quarter to determine eligibility for graduation. The petition to graduate must be filed with the Records and Registration Office by the published deadline date for the intended quarter of graduation. The student will then be notified of graduation eligibility pending receipt of final grades.

Graduation Requirements

Graduation requirements for technical and transfer programs are listed in the "Programs of Study" section in this *Catalog.*

Graduation Honors

Grade calculations through the quarter of graduation determine the appropriateness of posting HONORS on the graduate's transcript and Summa Cum Laude, Magna Cum Laude, or Cum Laude on the diploma. Graduates' grade point averages and honors designations printed in the graduation program are based on calculations of all grades through the quarter prior to their graduation quarter. Honors categories are as follows:

***Summa Cum Laude (With Greatest Praise) 4.000 GPA
**Magna Cum Laude (With Great Praise) 3.999-3.850 GPA
*Cum Laude (With Praise) 3.849-3.500 GPA

Commencement

A formal graduation ceremony is held at the end of each quarter. Caps and gowns, furnished by the College, are standard attire for the ceremony. Students graduating with honors are distinguished by wearing gold honor cords. Summa Cum Laude graduates are further distinguished by wearing engraved honor medallions. Class remarks are offered by the graduate attending the ceremony who has maintained a 4.0 accumulative grade point average (GPA) with the largest number of credit hours. The 4.0 graduate with the second largest number of credit hours leads the pledge of allegiance.

Replacement Diplomas

To obtain a replacement diploma, submit a written request attesting that the original diploma has been lost or destroyed. Include your name, social security number, degree earned, quarter and year of graduation, and your current address. Send the request along with a $15 replacement fee to: Office of Records and Registration ,550 E. Spring Street, Columbus, Ohio 43216. The replacement diploma will be sent to your current address by certified mail. Allow six weeks for delivery.

Student Rights Under the Family Education Rights and Privacy Act of 1974 as Amended

1. Definition of Education Record

Under the Act, "education records" mean, with certain exemptions as listed below, those records, files, documents, and other materials which contain information directly related to a student and are maintained by any unit of the College. The following categories of information are exempted and are not considered to be "education records":

a. Records made by College personnel which are in the sole possession of the maker and are not accessible or revealed to any other person.
b. Records maintained by the College Public Safety Department.

c. Medical and counseling records used solely for treatment. Medical records may be personally reviewed by a physician of the student's choice.

Right to Inspect and Review

Each student is granted the right to inspect and review all his or her education records except the following:

a. Financial records of parents.
b. Confidential letters and statement of recommendations for admission, employment or honorary recognition placed in education records after January 1, 1975, for which a student has signed a waiver of his or her right of access recorded by the Act.

Waiver of Rights of Access

The Act provides that a student may waive his or her right of access to confidential letters and statements of recommendation. If the student signs a waiver, he or she shall be notified, upon request, of the names of all persons making confidential recommendations. Waivers are valid only so long as they are made for the purposes stated in Paragraph 2b. The College may not require a student to waive his or her right of access accorded by the Act for receipt of College benefits or services.

4. Location of Educational Records

Columbus State Community College does not maintain education records in any one central office. Academic education records are maintained in the Admissions Office, Financial Aid/Veteran Services Office, the College Health Office, and the Records and Registration Office. Questions regarding the location of individual student records should be directed to the Records and Registration Office.

5. Procedures for Inspection and Review

a. Requests to review records and/or to obtain copies of such records (a charge of 10 cents per copy shall be paid by the student) must be made separately to each office maintaining records.
b. If any material or document in the education record of a student includes information on more than one student, the right extends to inspect and review only such part of such material or document as relates to such students or to be informed of the specific information contained in such part of such material.
c. Periodically, student records are reviewed and expunged and only records which are necessary to determine education status and demography are maintained indefinitely. Transcripts, and other pertinent documents of Columbus State Community College students will be microfilmed periodically and the originals destroyed.

6. Right to Challenge Information in Records

Students have the right under the Act to a hearing to challenge the content of their records on the grounds the information contained therein is inaccurate, misleading, inappropriate or in violation of their privacy or other rights. The hearing process includes an opportunity for the correction or deletion of such information and to insert into such records written explanations by the student regarding the content of such records.

NOTE: The right to challenge grades does not apply under the Act unless the grade assigned was inaccurately recorded.

7. Procedures for Hearings to Challenge Records

Students challenging information in their records must submit in writing a request for a hearing to the appropriate office maintaining the records, listing the specific information in question and the reasons for the challenge. Hearings shall be conducted and decided and a decision rendered in writing within a reasonable period of time after the challenge is filed.

Hearings will be conducted and a decision rendered by a College official who does not have a direct interest in the outcome of the hearing. Students shall be afforded a full and fair opportunity to present evidence relevant to the reasons for the challenge as referenced in paragraph 6. It shall be the responsibility of the office maintaining the record in question to insure the hearing is conducted in accordance with the provisions of the Act and within applicable Columbus State Community College procedures. Students may appeal the decision of the hearing officer. Appeals shall be in writing and submitted to the Associate Provost within 10 days of the student's notification of the decision of the hearing officer. The appeal shall be heard and decided, and a decision rendered in writing within a reasonable period of time.

8. Consent for Release

In accordance with the Act, written consent must be obtained from students for the release of education records or information that makes it possible to identify the student with reasonable certainty. The consent statement shall specify which records are to be released, the reasons for release, and to whom they are released. A copy of the release record shall be made available to the student if he or she so requests. The requirement for written consent does not apply to the following:

a. Requests from faculty and staff of Columbus State Community College who have a legitimate educational interest on a "need to know" basis;
b. Requests in compliance with a lawful subpoena or judicial order. Students shall be notified of all such subpoenas or orders in advance of compliance;
c. Requests in connection with a student's application for, or receipt of, financial aid;
d. Request by State or Federal authorities and agencies specifically exempted from the prior consent requirements by the Act-organizations conducting studies on behalf of the College if such studies do not permit the personal identification of students to any persons other than to representatives of such organizations and if the personal identification is destroyed when no longer needed;
e. Information submitted to accrediting organizations:
f. In the case of emergencies, the College may release information from education records to appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of a student or other persons;
g. Requests for "directory information." (See item 9)

NOTE: The College will not unilaterally send student records to other educational institutions. Students transferring from the College or making application to other educational institutions must notify the Records and Registration Office in writing to release official transcripts to other institutions. A student may request official transcripts for his or her own use (issued to student) by completing the form available from the Records and Registration Office.

9. Directory Information

Columbus State Community College, in accordance with the Act, has designated the following categories of information about students as public information.

a. Name -
b. Address (local and home)
c. Telephone (local and home)
d Program/Technology
e. Participation in officially recognized activities and sports
f. Weight and height of members of athletic teams
g. Inclusive dates of enrollment
h. Degrees and awards received (to include honor rolls)
i. Most recent previous educational agency or institution attended

NOTE: Students have the right to have this directory information withheld from the public if they so desire. Each student who desires that any or all directory information be withheld shall so indicate by completing a form available from the Records and Registration Office. During the quarter, students may request directory information be withheld or released by using the Change of Information Form (obtained from the Records and Registration Office). However, at least 10 days should be allowed for processing of these requests by the Records and Registration Office through the student information system and back to the academic program/technology offices.

10. Inquiries "Outside" Columbus State Community College

The College receives many inquiries for "directory information" from a variety of sources, including friends, spouses, parents, other relatives, prospective employers, other institutions of higher education, honor societies, licensing agen-

ties, government agencies, and the news media. Each student is advised to carefully consider the consequences of a decision to withhold "directory information." Columbus State Community College, in all good faith, will not release directory information requested to be withheld and any request from non-college persons or organizations will be refused.

11. Record of Access

a. Each office maintaining and releasing student records shall maintain a record, kept with the education records of each student, which will indicate all parties, other than those specified in paragraph 8 above, who have requested or obtained access to the records and specifically the legitimate interest that each such party has in obtaining this information.

b. Columbus State Community College will not release personal information about students except on the condition the party to which the information is being transferred will not permit access by a third party without the consent of the student.

12. Complaints

Any student who has reason to believe the College is not complying with the Act should inform the Associate Provost and the U.S. Department of Education in writing. The Associate Provost shall promptly review all such allegations.

13. Questions

Direct questions concerning your understanding of the Act to the Associate Provost.

Community Education & Workforce Development

Community Education & Workforce Development

Community Education and Workforce Development

Dr. Janet Wagner, Dean
(614) 287-2511

There is an ever-increasing need for meaningful, life-long learning for many people; those preparing to go to college, to get their first job, to advance in their current job or change careers. The Community Education and Workforce Development Division, headed by Dr. Janet Wagner, Dean, provides opportunities for these students in traditional and non-traditional settings.

Each department in Community Education and Workforce Development is designed for students of varying ages, professional experience and education levels to assist in learning new skills, or enhancing existing skills. Today's competitive labor market demands that employees are up to date on the latest business equipment, computer software, management techniques, professional trends, market information, computer networking, customer service, and office operations. Through Columbus State's Community Education and Workforce Development departments, students, business professionals, and new or first-time employees have the opportunity to learn many of these work-related skills at convenient times.

Continuing Professional Education

Department of Continuing Professional Education

Fred Baker, Administrator (614) 287-5997

This department provides professionals with continuing education through non-credit courses and seminars designed to meet the licensing and certification needs of professionals in the community. Continuing Professional Education also offers a variety of seminars and courses for those who need continuing education credits (CEUs) to stay current in their field, and for those seeking personal enrichment through life-long learning. To access the department website, visit www.cscc.edu, click on ***Community Education,*** then ***Continuing Professional Education.***

Continuing Professional Education Course Descriptions

Continuing Professional Education provides courses and seminars to many audiences. While some of our courses are specifically for participants who have licenses or certificates that either require or encourage regular continuing education in order to maintain their license or certificate, anyone who feels they will benefit from the course can attend.

With the rapidly changing technologies and work methods, many employers and employees seek continuing education classes to help in careers and job skills. That's why CPE also offers courses and seminars in areas of personal interest and personal enrichment as well as business. Combined, these classes can help working individuals remain state-of-the-art in the workplace or help people achieve personal goals.

Continuing Professional Education has several groupings of courses identified as the Continuing Professional Education CERTIFICATE SERIES. Some of the courses offered are a part of a series. If you are interested in completing a series for a certificate, contact Frederick L. Baker, Administrator, Continuing Professional Education at 614/287-5997.

CPEA - ACCOUNTING/CPA
CPEB - BUSINESS/OFFICE ADMINISTRATION/ OFFICE ASSISTANT
CPEC - COMPUTER
CPEE - EDUCATION
CPEF - FINANCE/PERSONAL FINANCE
CPEG - GENERAL
CPEH - HEALTH/ALLIED HEALTH
CPEL - LEGAL
CPEM - COUNSELING/SOCIAL SERVICES/ MENTAL HEALTH
CPES - PERSONAL ENRICHMENT/SEMINAR
CPET - PROFESSIONAL/TECHNICAL

LEGAL CERTIFICATE SERIES
Real Estate Specialist

CPEL 101 The Real Estate Title
The Real Estate Title consists of an examination of the components of negotiation and development of a contract resulting in the transfer of title to real estate. Interests in, and types of title and ownership will be discussed as well as the process of the transfer of title. Title search and closing is introduced in this course.

CPEL 102 Title Insurance for Real Property
Title Insurance for Real Property examines the process of protecting the ownership interest and title through real estate title insurance. Both commercial and residential binders will be discussed along with the impact of continuations of abstracts of title as an alternative to title insurance. The liability of title insurers relative to local zoning ordinances, commercial and residential development, quiet title actions and other title issues will be evaluated.

CPEL 103 Real Estate Civil Litigation
Civil litigation relating to real estate transactions has a wide range of causes of action ranging from title and ownership issues to landlord/tenant matters. **Real Estate Civil Litigation** will identify various causes of action, demonstrate the development of ***prima facie*** cases and defenses, and examine the practice and procedure to complete the cause. ADR will be also discussed as a method of disposing of real estate cases.

CPEL 104 Real Estate Title Searching and Closing
Real Estate Title Searching and Closing is a course designed to give the student the tools necessary to successfully complete on-site as well as computer accessed real estate title searches and complete the documentation required for the issuance of title insurance or continuation of abstract. Additionally, this course will prepare the student to evaluate the results of real estate title searches, and to incorporate those results into a title closing. Finally, this course will provide the student with the skills required to prepare documents, perform and complete commercial and residential real estate title closings.

Credit Specialist

CPEL 106 Legal Relationship of Debtors and Creditors
Legal Relationship of Debtors and Creditors an examination and dissection of the various relationships created and developed by debtors and creditors when negotiating and entering into loan and other types of credit agreements. Among other contracts, secured and unsecured debts, mortgages, credit reporting, and the rights and obligations of each under state and federal law and common law will be investigated so that the student will have a working knowledge of the expectations of creditors and debtors that arise out of the credit agreement.

CPEL 107 The Process of Debt Collection
The Process of Debt Collection examines various methods appropriate and available to creditors to successfully collect prejudgement delinquent and defaulted obligations or accounts as well as satisfying judgements. Both formal and informal processes will be explored. Pre-judgement resolution, which is mutually beneficial to debtor and creditor, is emphasized. Development of records, pleadings, discovery, motions and entries filed in appropriate jurisdictions, the effect of bankruptcy and alternatives to bankruptcy will be discussed, including Consumer Credit Counseling.

CPEL 108 Regulation of the Debtor/Creditor Relationship
Regulation of the Debtor/Creditor Relationship will explore various state and federal statutes and regulations that govern the relationship of debtor and creditor. Protection of the rights and obligations of both parties will be examined as well as legal tools that are available to debtors and creditors to avoid potential abuses of credit instruments. Statutes discussed include the Fair Debt Collection Act, Uniform Consumer Credit Code (UCCC) and Article 9 of the Uniform Commercial Code (UCC).

Alternative Dispute Resolution Specialist

CPEL 109 Trends in Alternate Dispute Resolution
The purpose of **Trends in Alternate Dispute Resolution** is to examine the history of dispute resolution and the statutory/judicial establishment of alternative dispute resolution as a method used for disposal of civil disagreements. The evolution and development of ADR and the growth and impact of the alternative system on American jurisprudence and everyday society is evaluated. As this is an introductory course, the student will examine process of ADR, current trends of ADR; its acceptance by the legal environment, business, society; and its use in the global economy.

CPEL 110 The Arbitration Process
The Arbitration Process is an intensive examination of arbitration and the process for accomplishing dispute resolution through this forum. Students will explore both court annexed arbitration and private arbitration processes. Researching arbitration decisions and the use of legal resources in the arbitration process will be explored. Use of data bases and the Internet will be included in the development of research techniques. Students will be able to conduct an arbitration at the completion of the course.

CPEL 111 The Process of Mediation
The Process of Mediation is an overview of the mediation principles and process. Students will explore statutory and private mediation procedures. The course will concentrate on mediation domestic relations; employment practices; and labor mediation. Additionally, the student will be exposed to different models of mediation with particular emphasis on the Seven Step model. Methods of researching decisions and various legal resources utilized in mediation procedures are be examined including computer data bases and the Internet. Students will be able to conduct a mediation at the completion of the course.

CPEL 112 ADR - Methods of Negotiation and Resolution
This purpose of **ADR - Methods of Negotiation and Resolution** is to introduce the student to techniques used to achieve successful negotiation of disputes. Students will be introduced to principles of negotiation and will learn how to properly and effectively use the mechanics of client interviewing; recognize nonverbal cues; and define and analyze descriptions of conflicts. Methods of resolving conflicts through an evaluation of various successful negotiation strategies will be explored and applied.

CPEL 113 Alternative ADR Procedures
ADR methods and procedures, other than arbitration and mediation, which are statutorily created and privately contracted in the resolution of business disputes is the focus of **Alternative ADR Procedures.** Hire-A-Judge, Summary Jury Trial, mini-trials and international ADR methods will be explored for appropriateness of use in a given conflict. Students will be able to prepare forms and summaries required to complete these various ADR processes.

Bankruptcy Specialist

CPEL 114 Survey of Bankruptcy Law and Practice
Survey of Bankruptcy Law and Practice is an overview of the law of bankruptcy designed to familiarize the student with the statutory and regulatory structure of bankruptcy; the process and procedure of completing the bankruptcy process; location and jurisdiction of bankruptcy courts and their non-judicial officers. Parties involved in a bankruptcy petition as well as and judicial and non-judicial proceedings will be discussed through an examination of the bankruptcy chapters.

CPEL 115 Chapter 7 Bankruptcy: Liquidation
Chapter 7 Bankruptcy: Liquidation is a concentrated examination of Chapter 7 of the Bankruptcy Code and the proceedings for liquidation of a debtors' assets pursuant to Chapter 7. The role of creditors and trustees will be discussed in the liquidation process. The student will prepare a packet for Chap. 7 and will be able to apply the practical skills and concepts necessary to complete a Chapter 7 bankruptcy.

CPEL 116 Chapter 11 Bankruptcy: Reorganization
Chapter 11 Bankruptcy: Reorganization examine the requirements to complete a Chapter 11 (Reorganization Process) bankruptcy. The course is designed to provide the student with the practical skills to understand and complete the forms necessary to comply with and achieve the statutory requirements of this legal action. A comparison of Chapter 11 with Chapters 7 and 13 and the advantages and disadvantages of each is addressed. Negotiation strategies to work with creditors will be explored. Students will write reorganization plans for submission to the bankruptcy court as well as research and draft appropriate responses to motions.

CPEL 117 Chapter 13 Bankruptcy: Adjustment of Debts
Chapter 13 Bankruptcy: Adjustment of Debts is an examination of Chapter 13 of the Bankruptcy Code and the proceedings required to achieve the reorganization of debt pursuant to Chapter 13. Students will explore the differences between Chapter 13 and Chapters 7 and 11 and build the skills necessary to complete a Chapter 13 petition. The role of trustees and creditors in the development of a reorganization plan will be discussed. The student will develop reorganization plans and complete forms and documents necessary to effect a Chapter 13 Petition.

CPEL 118 Bankruptcy Alternatives
Bankruptcy Alternatives is an examination of workouts and other alternatives to bankruptcy to accomplish mutually beneficial resolution to bankruptcy issues to the debtor and creditor. Successful negotiating strategies other methods of credit resolution are discussed. Federal and Ohio Consumer Protection Statutes are explored with an emphasis on the Fair Debt Collection Practices Act. Students will research and draft documents necessary to complete a workout Legal issues regarding consumer rights and protection are addressed and legislative updates are reviewed

Elder Law Specialist

CPEL 119 Survey of Elder Law
Survey of Elder Law provides the student with an overview of social and legal issues relevant to the elder person. Common legal issues are identified and methods available to assist such persons to resolve these concerns are examined. Medicare/Medicaid/ state and federal benefits, estate planning, living wills and P.O.A.s are addressed as well as health care and general legal concerns, e.g. asset protection, confronted elders are discussed. Ethical considerations relevant to working with the elder person are explored.

CPEL 120 Survey of Social Security
Survey of Social Security is designed to provide the student with an overview of the Social Security Administration. The historical and statutory origin of Social Security; jurisdiction and regulation; and practice and procedure within the Social Security Administration is examined with an emphasis on S.S. claims and dispute resolution.

CPEL 121 Survey of Medicare/Medicaid
Survey of Medicare/Medicaid is an overview of the Medicare system. The statutory origin of Medicare will be explored as well as the jurisdiction and regulation of the system. The differences in application of Medicare and Medicaid will be defined. Claims practice, asset protection, and procedures for the resolution of Medicare and Medicaid issues will be reviewed. At the completion of the course, students will be able to identify Medicare/Medicaid issues and complete Medicare/Medicaid matters.

CPEL 122 Asset Preservation for the Elder Person
Asset Preservation for the Elder Person addresses concerns that all persons entering into an independent living, assisted care, or nursing care facilities, as well as the family or other guardians involved. That is how to preserve part or all of the estate of the person entering the facility. The course examines the methods available and appropriate for developing and implementing plans to protect and preserve assets of the elder person as they encounter the need for care due to catastrophe or other voluntary or involuntary long term assisted, medical or nursing care.

Probate Specialist

CPEL 123 Administration of the Probate Estate
Administration of the Probate Estate is designed to acquaint the student with methods of estate administration. The course addresses the jurisdiction, completion of forms, and the procedures for completing a full administration of a testate and intestate estate, and the process and procedure for seeking relief from the administration of an estate. The law of intestate succession will be examined as well as an introduction to estate tax and estate tax forms. At the completion of the course the student will be able to complete forms required to initiate and conclude both full and no administrations of estates.

CPEL 124 Guardianship
Guardianship is a course that introduces students to the law of guardianship at guardianship is petitioned for and awarded by a probate court. Jurisdiction issues are examined and the process and procedures through which guardianships are requested, obtained, and accounted are discussed. At the completion of the course the student will be able to initiate and conclude all necessary requirements to seek and finish a guardianship under the jurisdiction of the probate court.

CPEL 125 Wills, Trusts and P.O.A.

Wills, Trusts and P.O.A. is a course designed to provide the student with an in-depth examination of the law relating to wills, trusts and various forms powers of attorney. Jurisdiction and requirements necessary for the development and execution wills, living wills, durable and revocable powers of attorney and trusts are examined. The purposes and application of these probate tools are discussed relative to the development and protection of estates.

CPEL 126 Survey of Civil Issues in Probate

Survey of Civil Issues in Probate is designed to introduce the student to the variety of matters within the jurisdiction of the Probate Court. The jurisdiction, process and procedures for concluding name changes, legitimation, marriages, ancillary administration, adoptions, land sale proceedings, and the involvement of the Probate Court in wrongful death actions are some of the issues included in this course.

CPEL 127 Estate Taxation

Estate Taxation is an in-depth examination of the aspects of state and federal taxation as the law applies to estates. At the conclusion of this course, the student will examine the state and federal tax codes, conduct relevant legal research and complete applicable state and federal tax forms necessary to report the tax status of an estate and be-able to calculate the appropriate state and federal tax for an estate.

Workers' Compensation Specialist

CPEL 128 Survey of Workers' Compensation Law

Survey of Workers' Compensation Law is designed to introduce the student to the state agency the insures injured workers, the Bureau of Workers' Compensation. The focus is the structure of the Bureau, emphasizing the statutory origin of the Bureau, the purpose of the agency, the hierarchy, the authority under which it operates, the organization as it relates to the Industrial Commission, and basic concepts of Workers' Compensation benefits.

CPEL 129 The Process of BWC Claims

The Process of BWC Claims is designed to acquaint the student with how the Bureau of Workers' Compensation processes claims, including hoe the Bureau works with companies that are self-insured, the calculation of wages and compensation, payment of medical bills, authorization of medical treatment, determination of disability, as well as how the Bureau addresses appeals of decisions, applications to reactivate, and permanent partial disability settlements in the resolution process.

CPEL 130 The Workers' Compensation Adjudication Process

The Workers' Compensation Adjudication Process is designed to acquaint the student with how the Bureau of Workers' Compensation works with contested claims. The course will examine the adjudication of claims process from the claimant position, as well as that of the employer and the Bureau. The emphasis of this course is how to conduct discovery and acquire information available through state tiles and computer systems, and procedure for adjudicating a claim through an administrative hearing. Violations of specific safety requirements, applications for permanent total disability, the hearing and appeals process will be addressed.

CPEL 131 Rating the Workers' Compensation Risk

Rating the Workers' Compensation Risk is a course designed to acquaint the student with how the Bureau determines a premium based on an employers risk factors. Different rating plans available through the Bureau of Workers' Compensation to establish appropriate premiums are discussed, as well as appeals available to an employer who contests a rating assigned. The emphasis is on the underwriting process of the Bureau, however, the self-insured options available are addressed.

CPEL 132 BWC Practice and Procedure

BWC Practice and Procedure is an in-depth examination of the procedures necessary to request and complete the hearing process in a claim made to the Bureau of Workers' Compensation. The Practice and procedures are examined from both the Bureau (internal) and claimant or employer (external) perspective. At the completion of the course, the student will be familiar with the procedures required to practice in the BWC and will further able to initiate and conclude, or defend a claim made to the Bureau.

Environmental Health Care

CPEH 106 Medical Terminology

Medical terminology is a basic medical vocabulary course designed for the student who has little or no health care experience. Students will become acquainted with medical terms commonly used by health professionals when discussing health issues with patients and in health records.

CPEH 105 Health Issues for the Elderly

Health Issues for the Elderly is an overview of mental, emotional, and physical health issues that face an aging population, with an emphasis on addressing and coping with changes that occur with the aging process.

CPEH 107 Critical Thinking Skills for Health Professionals

Critical Thinking Skills for Health Professionals teaches basic critical thinking skills and concepts for health professionals who work with patients in a clinical environment.

Legal

CPEL 105 Technology in Professional Research

Technology in Professional Research will introduce the student to the concepts of and use of technology in professional research. Designed to be discipline specific, the student will use various resources to research and retrieve information relevant to their specific professional area. Remote data bases, CD-ROM, Internet will be addressed as well as a review of basic computer literacy. The course will delivered in computer labs providing each student with a computer station to use in each session as well as instruction through local and remote connections using LCD overhead projection. The student will be acquainted with Internet user groups where questions are asked and answered via e-mail and list servs. The goals of the course are to provide the student with computer competencies that go exceed the basics with confidence to be pro-active in the use of technology within the profession and to develop creative thinking skills.

CPEL 140 Basics of Legal research
Basics of Legal research is an overview of the tools used by legal professionals to research statutes and case law. The course is designed for both persons who have little or no experience in the law or legal related fields as well as those who are employed in a legal environment.

CPEL 141 Employment Law for Managers
Employment Law for Managers is an overview of employment law. Emphasis is on legal rights of employees relating to privacy issues, harassment, substance abuse, trends in employment law, and general liability of both employers and employees.

CPEL 142 Legal Terminology
Legal Terminology is a basic legal vocabulary course designed to acquaint persons with little or no experience in the legal environment to "legal ease" commonly used by legal professionals.
CPEL 143 Computer Literacy for Legal Professionals
Computer literacy for legal professionals acquaints the student with computer applications commonly used in legal research. A basic understanding of legal research material and traditional legal research methods is necessary.

CPEL 145 ADA Compliance
Is you office in compliance with the requirements of the Americans with Disabilities Act? If you are unsure or want to learn what is "compliance" with the ADA this course will give you the information you need to know, what to do if your office is not compliant, and what causes of action and remedies are available to persons affected by ADA.

Grant Writing

CPEG 114 Beginning Grant Writing
Beginning Grant Writing shows how to find grants to fund your project: how to determine the most appropriate funding source; and how to write a basic response to requests for proposals for funding.

CPEG 115 Advanced Grant Writing
Advanced Grant Writing examines how to draft responses to proposals for funding projects so that your document will provide the best chances for you to receive the grant you are seeking. This course builds upon the basics of grant writing discussed in Beginning Grant Writing, with hands on experience and expert feedback. A variety of methods used to draft RFPs will be explored.

Employment Relations

CPES 101 Basics of EEO
This class provides the student with an overview of EEO act and regulations and how they are incorporated into the office environment. The responsibilities of the EEO officer, organizations and employees, as well as remedies available will be discussed.

CPES 102 Sexual Harassment
What is sexual harassment and have you been a victim? What are the remedies available to persons who have been harassed? What are the responsibilities of the company and the employee? How do you recognize and avoid sexual harassment in the workplace? These and many other questions are answered in Sexual Harassment.

Sign Language

CPEG 102 Basic Sign Language - The ABCs
Learn how to communicate effectively with the hearing impaired. **Basic Sign Language - The ABCs** is an overview of the fundamentals of ASL and will give you the basic skills needed to communicate using sign language.

CPEG 103 Intermediate Sign Language
Intermediate Sign Language is the second course in the ASL series and builds on the skills developed in Basic Sign Language. Increase your effectiveness in communicating with the hearing impaired by further developing your signing abilities with this interactive skill building class.

Computer

CPEC 101 Introduction to PCs
Introduction to PCs is an introduction to PCs for the end user. No knowledge of computers is needed at all. This class will take you from turning on the computer to using basic word processing, the Internet and e-mail. Offered in general and senior sessions.

CPEC 109 Introduction to the Internet
Have you ever wanted to "surf the net," do research, use e-mail, or just experience the Internet? **Introduction to the Internet** is an overview of the Internet that will give you the skills to navigate along the information super highway.

CPEC 110 Intermediate Internet
Intermediate Internet builds on the skills acquired in Introduction to the Internet and develops techniques for the effective, efficient use of the Internet.

CPEC 111 Advanced Internet
Advanced Internet teaches the student to become an expert in the use of the information super highway. The newest technology will be explored and the basics of building web sites will be discussed.

CPEC Create your Own Web Page I
Are you interested in developing your own web page or a web site for your company. Learn the basics of developing a web site and open yourself to the opportunities of the information super highway. Common web texts are discussed, along with graphic development and the layout of an effective Internet web page.

CPEC Create your Own Web Page II
Learn how to use Frontpage 98 software to complete the development of an Internet web site. At the completion of this course you will create a web site designed by you. How to find and incorporate links to related web sites will be discussed along with copywrite issues and how to protect yourself from liability claims.

BUSINESS/OFFICE ASSISTANT/ ADMINISTRATIVE ASSISTANT

American Payroll Professional (Series)

CPEB 104 Primary Skills (APA Payroll Series)
Payroll Primary Skills introduces the student to the basics of payroll. This class is a survey class exploring the payroll profession. Basic payroll terminology, law and procedure will be addressed.

CPEB 105 Essential Skills (APA Payroll Series)
Essential Skills of payroll is the second and intermediate course in the payroll series. This class is a procedures class building on the skills acquired in the Primary Skills class.

CPEB 106 Advanced Skills (APA Payroll Series)
This class is the final class in the APA payroll series. Advanced topics in payroll are explored such as tax and benefits calculations and other topics that appear in the CPP examination.

On-line Courses

Columbus State's Global Campus offers a series of non-credit courses on-line for convenient continuing education, anytime, anywhere. Many of the courses are Microsoft-approved study guides which can lead to Microsoft Certification. Visit the College's website at www.cscc.edu, click on ***Global Campus,*** then ***Continuing Education*** for a complete course listing. The courses are offered in cooperation with DPEC, a Columbus computer training company.

CPEC 112 On-line Professional series
User-paced professional development on-line courses and certificates.

CPEC 113 On-line Technical series
Technical, self-paced, on-line courses and certificates.

Business and Industry Training

Business and Industry Training Department

John Meighan, Director (614) 287-5000

This department was created to assist local businesses with on-site or on-campus consulting services and training programs that improve organizational and/or individual performance. These services are coordinated by experienced representatives who assist local employers in identifying and meeting their company's needs.

Course Offerings and One-Day Seminars

Competency Builders

Career Development
This course is designed to help participants identify career options related to their life goals, and that are consistent with their interests and abilities. Participants will learn how to develop a career plan that is based on their unique interests and aptitudes.

Managing Time and Work
This course is designed to introduce participants to the tools and techniques necessary to manage their time. The course covers phone time, procrastination, managing time with co-workers and protecting time through appropriate delegation of tasks. Participants will learn how to plan and analyze time utilization to maximize their personal effectiveness.

Office Organizational Skills
This course presents proven organizational techniques to help tackle the endless flow-of paperwork. These techniques include filing tips, clutter-busters and workable action plans. Participants will learn how to increase their organizational skills for improved efficiency in the work place.

Stress Management
Stress Management is designed to provide participants with a series of tools and techniques to better enable them not only to cope with the stress in their lives, but also to turn those stress initiators into powerful drivers for change and accomplishment. Participants will learn strategies to revitalize motivation on the job. Participants will learn how to respond appropriately to stressful events.

Project Planning and Management
This introductory course is designed to teach the basics of project management with special emphasis on the nature of projects; general strategies and techniques for planning and implementing project; and major functions of an effective project manager. Participants will learn how to apply project management tools and techniques in planning and managing projects.

Train-the-Trainer
This course is designed for the non-professional trainer who must occasionally develop or deliver training. Participants will be introduced to a series of tools and techniques designed to provide them with the opportunity to build the skills commonly needed by trainers. Participants will learn the basic skills necessary for conducting effective training.

Effective Presentations
Effective Presentations teaches participants everything they need to know about delivering a solid presentation with clarity, persuasiveness and confidence. It covers organizing thoughts and data for maximum impact, developing eye-catching visual aids, and using effective body language. Participants also will benefit from learning how to conduct good question and answer sessions. Participants will develop the skills necessary to deliver an effective presentation.

Goal Setting
Goal Setting is designed to teach the rationale and process for goal setting. This course covers goals and goal setting, how goals are set, and strategies for goal achievement. Participants will learn how to set goals, create an action plan for goal achievement, and adjust plans over time.

Decision Making and Problem Solving
This course introduces participants to a variety of decision-making and problem-solving tools. It also presents a logical problem-solving process that has application in any setting. Participants will learn how to define a problem or situation, generate alternative solutions, evaluate alternatives, make informed decisions, implement a solution. and follow-up with results.

Computer User Programs

Keyboarding
This course is designed to teach basic keyboarding skills. Emphasis is on lines of timed drills and timed paragraphs. Participants will learn how to key alphabetic and numeric characters on a computer keyboard.

Computer Literacy: Introduction to the PC
This introductory course gives an overview of computing for the beginning PC user. No knowledge, of or experience with, computers is required. Participants will develop an understanding of personal computers and their use..

Introduction to Windows 95
This course is designed to teach basics of Windows 95. Participants will access Windows features, work with Windows using buttons and dragging techniques, create shortcuts, and learn to share data between programs. Participants also will learn to use Windows Explorer and additional document management techniques. Participants will learn how to set priorities, manage seemingly complex tasks, and apply a variety of techniques to increase their effectiveness.

Basic Internet
This course explores the basic technologies of the Internet and the World Wide Web and shows participants how to explore Internet resources. Participants will learn how to use various browsers and engines to find resources on the Internet.

Introduction to Front Page and Web Page Design
This course is designed to help participants learn basic HTML coding and use of Microsoft Front Page for web page design. Basic knowledge of HTML coding will be coupled with the ease of MS Front Page to quickly learn web page design. This course will also assist in preparation for the MOUS Office Integration Expert test.

Intermediate Front Page and Web Page Design
This course is designed to build on the design skills learned in the Introductory course. Participants will learn additional Web Page design techniques and features using Microsoft Font Page. To assist in the preparation for the MOUS Office Integration Expert test.

Introduction to Microsoft Outlook 97
An introduction to the hands-on experience and skills development necessary to perform complex tasks in Microsoft Outlook. Participants will learn MS Outlook 97's computer-based mail service, appointment book, and address book features, and assist in preparation for the MOUS Office Integration Expert test.

Introduction to Microsoft Project 98
Project is a project management application that allows you to monitor the progression of projects, so that you can make the best use of your time. It helps you organize the tasks involved in the completion of a project, schedule your resources to complete the project efficiently, and maintain information about the project during its progression.

Intermediate Microsoft Project 98
A continuation of learning the powerful features of this information and project management application. A review of the basic concepts and features covered in the Introduction to Project 98 class. Learning the more advanced application features in creating and managing a project. This course will also assist in preparation for the MOUS Office Integration Expert test.

Introduction to Office for Windows 97
This course introduces the basic concepts, skills and techniques presented in Microsoft Office. Professional Edition. Participants will learn how to get started with Office, customize the Office shortcut bar, link and embed objects, share data between programs, use Binder and use Schedule + with Word and Excel.

Introduction to Word for Windows 95: Version 7.0
This course presents an introduction to basic word processing techniques. Participants will learn basic word processing techniques and skills.

Introduction to Word 97
This course is designed to present and practice the basic topics of Word '97 word processing applications. Participants will learn the techniques of creating and editing documents, and many other automatic text features.

Intermediate Word for Windows 95: Version 7.0
This course reviews the basic concepts and features of Word and teaches intermediate word processing skills. Participants use headers and footers; create, use and format tables; and work with columns. They also use pictures, graphic elements, worksheets, and charts in documents and work with envelopes and labels. Participants will learn intermediate word processing skills and additional features of Word.

Intermediate Word 97
This course is designed to cover intermediate Word concepts and skills. Participants will use advanced techniques of the Word '97 system to create templates, documents, and a wide variety of other items.

Advanced Word 97
This course is designed to gain a mastery of Word 97 and should be taken by those already completing Intermediate Word 97 or already posses significant experience in Word 97. Participants will quickly review Intermediate features and gain mastery of advanced functions, features, and shortcuts.

Introduction to Excel for Windows 95: Version 7.0
This course introduces participants to basic spreadsheet concepts and uses. Participants create worksheets, work with basic formulas and functions, explore formatting techniques, and explore time saving features such as styles, AutoFormats, and the Find and Replace commands. Participants will learn basic spreadsheet techniques and skills.

Introduction to Excel 97
This course introduces participants to basic spreadsheet concepts and uses of Excel 97. Participants create worksheets, work with basic formulas and functions, explore formatting techniques, and explore time saving features such as styles, AutoFormats, and the Find and Replace commands. Participants will create, modify, print, and learn formatting on Excel worksheets.

Intermediate Excel for Windows 95: Version 7.0
This course presents intermediate Excel skills that can help participants use many of the software's timesaving and enhancement features. Participants use names, work with advanced functions and formatting features, and use special format and print options. Participants also explore timesaving techniques and features such as consolidating and linking information from multiple workbooks, using templates and macros automate tasks, and importing and exporting data. Participants also use protection features and work with charts. Participants will learn intermediate spreadsheet techniques, features, and skills using Excel.

Intermediate Excel 97
This course is designed to teach use of Excel '97 through working with advanced functions and changing data. Participants will learn to work with advanced Excel functions, formatting features, changing and updating data. and using special format and print options.

Advanced Excel 97
This course is designed to gain a mastery of Excel 97 and should be taken by those already completing Intermediate Excel 97 or already have significant experience in Excel 97. Participants will quickly review Intermediate features and gain mastery of advance functions, features, and shortcuts.

Introduction to PowerPoint for Windows 95: Version 7.0
This is a course teaching basic slide presentation skills. Participants will open presentations, display slides and slide shows, print slides, use a variety of slide views, create and edit slides, and select design templates.

Introduction to PowerPoint 97
This course is designed to help participants get started with PowerPoint '97. Participants will create and edit presentations, format text, and print presentations through a variety of techniques.

Intermediate PowerPoint for Windows 95: Version 7.0
This course reviews the basic concepts and features of PowerPoint and teaches advanced slide presentation skills. Participants will create graphs and organization charts and enhance presentations by using color features, scaling objects, and enhancing placeholders. Participants also will use advanced slide show effects to create professional quality presentations.

Intermediate PowerPoint 97
This course is designed to provide advanced training in PowerPoint '97 tools and techniques. Participants will learn to work with slide outlines, create charts and tables, and add multimedia elements.

Advanced PowerPoint 97
This course is designed to gain a mastery of PowerPoint 97 and should be taken by those already completing Intermediate PowerPoint 97 or already possess significant experience in PowerPoint 97. Participants will quickly review Intermediate features and gain mastery of advanced functions, features, and shortcuts.

Introduction to Access for Windows 95: Version 7.0
This course teaches basic database concepts and reviews the features of Access. Participants will get started with Access, and create databases. Participants also will work Access tables, set field properties, and change and customize tables. Finally, participants will create and work with queries, create reports, and import date into Access. Participants will learn how to design and create databases, query databases, and generate reports using Access.

Introduction to Access 97
This course teaches basic database concepts, and reviews the features of Access '97. Participants will learn how to design databases, work with Access objects, and create and work with tables and forms.

Intermediate Access for Windows 95: Version 7.0
This course reviews basic database concepts and teaches intermediate database skills. Participants will work with forms, enhance forms and reports, and insert objects into forms and re-

ports. Participants also will locate data, use macros, and use criteria in queries. Finally, participants will work with values in queries, use calculations in queries, and work with charts. Participants will learn intermediate database skills.

Intermediate Access 97
This course reviews basic database concepts and teaches intermediate database skills. Participants will work with charts, filters, and relationships. Additionally, they will use advanced form features, macros and advanced report and query features.

Advanced Access 97
This course is designed to gain a mastery of Access 97 and should be taken by those already completing Intermediate Access 97 or already have significant experience in Access 97. Participants will quickly review Intermediate features and gain mastery of advanced functions, features, and shortcuts.

Introduction to Desktop Publishing
This course is designed to teach the basics of desktop publishing. Participants will learn how to lay out a page, use desktop publishing tools, import text and graphics, manipulate files, and create a variety of publications.

Intermediate Desktop Publishing
This course reviews basic concepts and intermediate designing skills. Participants will learn project skills related to stories, scripts, and envelopes.

General Knowledge

Basic Statistics
Basic Statistics is an introductory course designed to teach the fundamentals of descriptive statistics. It covers measures of central tendency and measures of variation, and gives special emphasis to the development and interpretation of graphs. **Special Note:** Participant should bring a basic calculator to the class. Participants will learn how to collect, organize, analyze and interpret numerical information.

Accounting and Bookkeeping
This introductory course emphasizes the accounting cycle, recording of financial transactions through use of special journals and the nature and content of financial statements. Participants will learn the "why" along with the "how" of accounting and bookkeeping procedures. **Special Note:** Participant should bring a basic calculator to the class. Participants will learn the skills necessary for understanding accounting principles, interpreting financial statements, and the fair presentation of financial affairs.

Writing Skills Workshop
This workshop is designed to provide participants with an overview of the basic skills necessary to compose and edit documents such as letters and memos. Participants will learn conceptualization, critical thinking, outlining and documentation skills. Participants will learn how to compose basic business documents clearly and concisely.

Report and Proposal Writing
This course is designed to provide participants with the skills necessary to effectively and efficiently prepare proposals and reports. The techniques presented will help stimulate positive responses in the reader, enhance readability, and provide clarity of message conveyed. Participants will learn how to analyze report or proposal requirements and prepare reports that demonstrate an understanding of the reader's needs regarding content and writing style.

Technical and Procedural Writing
This course is designed to provide participants with the organizational and logical thinking necessary to successfully convey a message, using a minimum of words and images. Participants will learn how to provide a clear, concise message in a step-by-step manner.

Grants Writing
This course is designed to provide participants with an overview of the grants writing process. The steps from visioning through actual submission will be reviewed and discussed. Participants will learn how to find grant opportunities, analyze the grant application submission guidelines, and prepare a winning proposal.

Proofreading and Editing Techniques
Proofreading and Editing Techniques is designed to provide participants with an understanding of proofreading and the use of effective editing techniques. The course includes basic rules regarding grammar usage and aspects of style. Participants will learn how to proofread and edit a variety of documents.

Interpersonal Communications Techniques
This course is designed to provide participants with the knowledge and skills necessary to communicate effectively in an organizational setting. Various forms of interpersonal communications will be reviewed, discussed and applied. Participants will learn how to apply a variety of effective interpersonal communications techniques appropriate for the organizational setting.

Listening and Memory Development
This course is designed to help participants improve their listening and memory skills. Participants will leave this course with a greater appreciation of the importance of listening and techniques for an improved memory. Participants will learn how to improve their listening effectiveness and ability to remember information.

Communications Techniques for Customer Service
This course is designed to provide participants with the knowledge and skills necessary to communicate effectively in an organizational setting, with emphasis on telephone techniques. Participants will learn how to apply a variety of effective interpersonal communications techniques.

Technical Programs

Introduction to the ISO 9000 Standards
This important course briefly discusses the history of the ISO 9000 series of International Quality Standards and details the requirements and interpretations of each of the 20 sections of ISO 9001, including the changes brought about by the new revision. Mandatory steps to registration, "best practices" that successfully registered companies have utilized, and what to expect during an actual assessment by a third-party registrar are reviewed. Valuable practical insights and interpretations of the standards are given, based upon the presenter's own first-hand experience leading a major corporation's business unit to registration, and assisting other companies to prepare for registration. Included in this introduction is an overview and discussion of the current drafts of ISO 9000: 2000, ISO 9001: 2000, and ISO 9004: 2000, each of which is undergoing extensive revision at this time.

This training is designed for key company management, including senior and upper management, quality managers and production managers. In addition, first-line supervisors and ISO 9000 "steering committee" members would benefit from this course. It is most useful when conducted early in the company's ISO 9000 registration program.

Internal Auditing to the ISO 9000 Standards
Performing internal audits of a company's own quality system is required if a company wants to become registered to one of the ISO 9000 quality standards. This two-day program will briefly address the requirements of each of the 20 individual elements of ISO 9001, then present the essentials you need to know to implement an internal auditing system compliant with the standard. In addition to training auditors, this course is one of the most popular training courses for employees directly involved in the registration process, such as managers, supervisors, and steering committee members. Five case studies and other practical exercises will help you to clearly understand the auditing as the basis for continuous quality improvement. This course meets the requirements of ISO 1001 l-l.

This updated course now includes an overview an discussion of the current drafts of ISO 9000: 2000, ISO 9001: 2000, and ISO 9004: 2000, each of which is undergoing extensive revision at this time.

K-12 Initiatives

K-12 Initiatives Department

Laurie Johns, Administrator
(614) 287-5961

Columbus State offers programs targeted to students in kindergarten through high school (K-12), preparing students for entry into college, careers and life-long learning. This department administers Columbus State's Tech Prep program.

Off-Campus Programs

Off-Campus Programs

Joan Freeman, Director (614) 287-5083

Columbus State's Off-Campus Centers, located throughout the college's four-county service district, provide educational opportunities for more than 9,000 students each year with day, evening and weekend classes. Suburban centers offer courses in general education, computer skills and technical areas, and are equipped for telecourse and distance learning delivery. A year-round schedule allows students to plant their educational programs several quarter in advance.

Off-Campus Centers

5 Dublin Center
6190 Shamrock Court
Dublin, OH 43016
(614) 761-2800

2 Gahanna Centers
445 Havens Corner Road
Gahanna, OH 43230
(614) 476-4711
and
200 South Hamilton Road
Gahanna, OH 43230
(614) 475-7866

6 Marysville Center
800 Amrine Mill Road
Marysville, OH 43040
(614) 287-2696

3 Southeast Center
4449 Professional Parkway
Groveport, OH 43 125
(614) 836-9434

4 Southwest Center
Columbus State
Bolton Field Facility
5355 Alkire Road
Columbus, OH 43228
(614)878-1094

1 Westerville Center
7233 Northgate Way
Westerville, OH 43082
(614)882-2016

Transitional Workforce

Transitional Workforce Department

Julie Maurer, Administrator (614) 287-2576

This department provides numerous programs geared toward those moving into the workforce from various situations including Ameritech Workforce Plus, a welfare-to-work program; the ONOW program, an Orientation to Non-traditional Occupations for Women; General Equivalency Degree (GED) training and testing; and corrections institution programs.

Entrepreneur Workforce

Entrepreneur Workforce Program

Carl Hemmeler, Administrator (614) 287-2447

This department administers the A. Robert Kent Real Estate Resource Center, as well as creates and implements programs to assist other small business owners and entrepreneurs in learning how to get started and become successful through entrepreneurial concepts, funding opportunities and seminars.

Tech Prep

Tech Prep/Heart of Ohio Consortium

Connie Faddis, Director (614) 287-5083

Administered by Learning Systems, Columbus State houses the Tech Prep/Heart of Ohio Consortium's central office and acts as fiscal agent. Columbus State is a founding member of the Heart of Ohio Tech Prep Consortium. Since 1992, the college and it's consortium partners-33 high schools, two regional campuses of Ohio University, and central and southern Ohio businesses, industries and labor organizations-have worked together to offer high quality Tech Prep programs.

Students who choose Tech Prep in 11th grade enter a seamless curriculum for two years of high school, moving directly into an advanced skills Associate Degree program at Columbus State. Tech Prep college programs are currently available in architecture, automotive technology, business management, civil engineering technology, electronic engineering technology, environmental technology, graphic communications, heating, ventilation and air conditioning, landscape design/build, mechanical engineering technology, medical assisting, microcomputing, multicompetency health and office administration.

Distance Learning & Global Campus

Distance Learning at Columbus State "Learning Anytime, Anywhere"

Global Campus - Distance Learning at Columbus State is the name of Columbus State's distance education program. Distance Learning through Columbus State's Global Campus is a unique alternative to traditional on-campus courses. It utilizes a variety of technologies, including the Internet and electronic communications, computer technologies, and video-based programming. Students enrolled in a Global Campus course are able to interact with the class instructor and classmates through Internet-based communications. Intended to provide greater access and flexibility to college coursework, this method of delivery allows students from around the city, to around the globe, the capability of learning together without the limits of place and time. Visit the Global Campus Website (http://global.cscc.edu) for additional information regarding courses and degree options via distance learning, or consult the ***Quarterly Schedule of Classes.***

Video-based courses (television and videotape courses) offer access to learning via television and videotape. Assignments are based on televised programs, accompanying textbooks and provided course materials. Students communicate with the instructor in one or more of the following ways: campus meeting, office hours, telephone, fax, and e-mail. Most tests are administered on campus. These courses are televised on **WOSU-TV** and **Educable,** over the Columbus area cable systems. They are also available on videotape for viewing and rental at Columbus State's Library (Columbus Hall).

Web-based courses (online courses) allow students to take credit classes at their convenience to meet degree or certificate requirements, or increase workplace skills and knowledge. All classes are taught using the Internet and e-mail. Students need a computer, modem, and an Internet Service Provider, like CougarNet, Columbus State's Internet access solution for students. Students without their own computers can use selected computer labs around campus or at the off-campus centers.

Non-credit web-based courses are now offered through Columbus State's Global Campus. These courses, offered in conjunction with DPEC, a Columbus-area computer courseware company, cover a wide variety of professional and technical skill areas. Some are Microsoft approved Study Guides, which can lead to Microsoft Certification. Visit the College's website at www.cscc.edu, then click on ***Global Campus*** and ***Continuing Education*** for a complete course listing.

Going the Distance - Complete degrees in Associate of Arts and Associate of Applied Science in Business Management are offered through distance learning by combining video-based and on-line courses. For course listings and requirements, visit the College's website at www.cscc.edu, then click on ***Global Campus*** or consult the ***Quarterly Class Schedule.***

Who should take a distance learning course?

Distance learning courses require high degree of commitment on the part of the learner. Because there are no structured meeting times, and no regular instructor contact, distance learning means the student must be an independent and self-motivated learner.

A calendar of deadlines and due dates has been established for Global Campus courses. If you follow these dates closely, completing assignments and required readings, your level of success in a distance course will increase. If you tend to wait until the last minute to complete projects - or prefer learning where there are more opportunities for personal interaction - this may not be the best approach to completing college-level coursework.

Global Campus Courses

The following is a list of credit courses taught at a distance. Please consult the *Quarterly Schedule of Classes* for additional distance learning courses added throughout the year.

ACCT 106	Introduction to Accounting I
ACCT 107	Introduction to Accounting II
BIO 100	Introduction to Biological Sciences
BIO 111	Introduction to Biology
BIO 112	Introduction to Biology II
BIO 169	Human Physiology
BMGT 101	Introduction to Business
BMGT 111	Management
BMGT 211	Organizational Behavior
BMGT 216	Business Ethics
BMGT 219	International Business
BMGT 231	Small Business Development
BMGT 232	Small Business Operations
BMGT 271	Management Decisions
BMGT 272	Case Studies in Business
CHEM 100	Introduction to Chemistry
COMM 105	Speech
CPT 155	Visual Basic
CPT 253	Programming for C++
CPT 295	Special Topics
DEV 006	Writing Skills/Grammar/Sentence Structure
ECON 200	Introduction to Micmeconomics
ECON 240	Principles of Macroeconomics
ENGL 101	Beginning Composition
ENGL 102	Essay and Research
ENGL 111	English Composition
ENGL 190	Freshman Experience
ENGL 102	Essay & Research
ENGL 200	Business Communications
ENGL 204	Technical Writing
ENGL 250	Writing about the American Experience
ENGL 252	Images of Men/Women
ENGL 253	Regional American Writing
ENGL 262	Survey of British Literature
ENGL 264	Introduction to Shakespeare
FMGT 101	Personal Finance
FMGT 201	Business Finance
FREN 101	Elementary French I
FREN 102	Elementary French II
FREN 103	Intermediate French I
FREN 104	Intermediate French II
HIMT 113	Managed Care Trends
HIMT 121	Advanced Medical Terminology
HIMT 270	Certified Case Manager
HOSP 153	Nutrition
HOSP 107	Food Principles
HRM 121	Human Resource Management
HRM 220	Labor Relations
HUM 111	Civilization I
HUM 112	Civilization II
LEGL 261	Business Law I
LEGL 262	Business Law II
LEGL 264	Legal Environment of Business
MATH 101	Business Math
MATH 148	College Algebra
MCT 106	Computer Literacy 2
MCT 231	Introduction to the Internet
MKTG 111	Marketing Principles
MMPT 101	Introduction to Multimedia Production
MMPT 111	Multimedia Computer Systems
MMPT 116	Information Logistics
MMPT 131	Multimedia Project Planning
MMPT 226	Multimedia Telecomm/Network Systems
MULT 101	Medical Terminology
NSCI 101	Natural Science I
NSCI 103	Natural Science III
NURS 113	Nursing Skills
NURS 190	Special Topics in Nursing
OADM 101	Business Grammar Usage
OADM 131	Keyboarding I
PHYS 100	Introduction to Physics
PSY 100	Introduction to Psychology
SPAN 101	Elementary Spanish I
SPAN 102	Elementary Spanish II
SPAN 103	Intermediate Spanish I
SPAN 104	Intermediate Spanish II
SSCI 101	Cultural Diversity

Programs of Study & Course Descriptions

Programs of Study & Course Descriptions

Career & Technical Programs

Associate of Applied Science
Associate of Technical Studies
Certificate Programs

These technical degree programs, offered in the Career & Technical Programs Division, are designed to prepare students for immediate employment upon graduation. Programs of Study can be completed within two years for students enrolled full-time. Agreements have been made with Capital University, DeVry Institute of Technology, Franklin University, Ohio Dominican College, Otterbein College, Shawnee State University, and Wilberforce University which enable technology students to complete baccalaureate degrees within two years of full-time study at those institutions. Technology Specific 2+2 Agreements for the Associate of Applied Science to the BA/BS degrees have been developed with Circleville Bible College, Devry Institute of Technology, Embry-Riddle Aeronautical University, Florida International University, Miami University of Ohio, Mount Carmel College of Nursing, Mount St. Joseph College, Ohio University, University of Rio Grande, the University of Cincinnati and The Ohio State University. Bachelor degree completion information is available from the academic departments and the Counseling Center.

Within many of the technologies, short-term certificate programs are offered which qualified students can complete in less than two years.

General Education

Central to the mission of Columbus State Community College is the provision of general education studies as an integral part of all degree programs. General education refers to the measurable knowledge and skills that serve as the foundation to success within all programs of study and throughout life. General education is not an end in itself, but a means to continuing and enhancing education throughout life by enabling the students to:

- Think critically
- Solve problems
- Communicate effectively
- Recognize the value of human diversity
- Demonstrate interpersonal skills
- Demonstrate life management skills

Computational and computer literacy skills appropriate to the program of study are included in the degree requirements for program. Student competence in these areas is assessed throughout the curriculum and at the end of the student's academic program.

Transfer Programs

Associate of Arts
Associate of Science
The Ohio Transfer Module

The Associate of Arts and Associate of Science degrees are specifically designed to allow for the transfer and application of all credits earned at Columbus State to the bachelor degree requirements of most colleges and universities. Specific agreements have been made with colleges at The Ohio State University, Antioch College, Capital University, Central State University, Franklin University, Mount Carmel College of Nursing, Ohio Dominican College, Otterbein College, Shawnee State University, University of Toledo, and Wilberforce University which guarantee admission and the application of all courses taken in the Associate of Arts and Associate of Science degree programs at Columbus State to the bachelor degree requirements at those institutions. Guides for course selection to meet specific requirements at these schools are available in the Columbus State Counseling Center or from the Dean of Arts and Sciences.

Completion of the Associate of Arts and Associate of Science degrees at Columbus State also ensures completion of the Ohio Transfer Module. This guarantees the application of a minimum of 60 quarter hours to the general education requirements of all state supported institutions in Ohio. Those who complete the AA or AS degree are to be given preferential consideration for admission to Ohio public colleges.

The Associate of Science Degree is different from the Associate of Arts Degree primarily in the level of mathematics required. The Associate of Science Degree requires completion of Calculus and Analytical Geometry II, which is the foundation for further study in advanced physics, chemistry, mathematics and engineering. Careers in the biological and health sciences may not require this level of mathematics.

Upon completion of the Associate of Arts or Associate of Science degree, the graduate will be able to:

- Read and listen critically and with understanding.
- Write and speak clearly and effectively in standard English.
- Analyze ethical issues and value conflicts and adopt a defensible resolution to those issues.
- Discuss current social and political problems in their cultural and historical contexts and suggests remedies to such problems.
- Critically review works of art and music in the context of the society which produced them.
- Discuss the nature, role, and impact of technology on the environment and society.

- Apply mathematics and reasoning skills to solve problems.
- Explain public policy issues from the viewpoints of psychology, economics, sociology, and potential science.
- Apply the scientific method to examine nature and interpret everyday experiences.

Graduation Requirements:

Catalog Rights

In order for a student to be considered a candidate for an associate degree, he/she must have completed all the requirements for that degree as described in the college *Catalog* in effect at the time the student enrolled in the program leading to that degree. If the requirements for the degree change while the student is enrolled in a degree program, the original requirements will apply to the student until he/she earns the degree or for a period of twelve quarters from the time the student initially enrolled in the program. If the student does not receive a degree within twelve quarters of initial enrollment, and there is a change in the degree requirements, the Provost for Learning Systems shall decide what requirements the student shall meet in order to be awarded a degree.

Graduation Requirements:

Associate of Arts and Associate of Science Degrees

1. All students must satisfactorily complete at least 92 credit hours of approved courses, a minimum of 35 hours of which must be completed at Columbus State. Approved courses are designated below. Satisfactory completion requires a final grade of A, B, C, or D. Transfer credit may be awarded for courses in which a "C" or better has been earned at other accredited institutions if the course level equivalencies have been approved by the Dean of Arts and Sciences. Courses listed in the "Transfer Module" of an Ohio college, have been pre-approved for credit toward a Columbus State degree. Credits by examination, proficiency credit, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.
2. All students must attain an overall grade point average of 2.0 or better for all credit courses at the 100 level or above taken at Columbus State. Grade point averages are calculated on the following scale: A=4, B=3, C=2, D=1, E=0. Number equivalencies are not assigned for grades other than these.
3. All students must complete the following General Education Requirements for the Associate of Arts or the Associate of Science degrees:

ENGL 190 Freshman Seminar - 2 **hours** Required for all new degree seeking students or students new to Columbus State with less than 15 applicable hours of transfer credit from their previous college. Students are to take this course in conjunction with ENGL 101 or ENGL 111. Topics should be chosen according to the student's interest.

Communication Skills- 12 quarter hours minimum

College Composition (5-6 hours required)

ENGL 101	Beginning Composition **(3** hours) **and**
ENGL 102	Essay and Research (3 hours) or
ENGL 111	English Composition (5 hours)

(Students who place into ENGL 111 may take ENGL 111 instead of ENGL 101 and ENGL 102.)

Composition and Literature (3-5 hours required)

Students who complete ENGL 111 must take a five hour Composition and Literature course. Additional courses In this category may not be taken as elective hours.

ENGL 220	Introduction to Literature (3 hours)
ENGL 250	Writing About the Amer. Exp. (5 hours)
ENGL 251	The American Identity (5 hours)
ENGL 252	Images of Men & Women in Amer. (5 hrs)
ENGL 253	American Regional Writing (5 hours)

Oral Communication (3 hours required)

COMM 105	Speech (3 hours)
COMM 115	Oral Interpretation (3 hours)

Mathematical and Logical Analysis - Associate of Arts Degree requires 10 quarter hours, 5 must be in mathematics. The remaining 5 hours-may be from mathematics, statistics, logic, or computer programming. The Associate of Science Degree requires completion of MATH 152.

Mathematics

MATH 125	Mathematics in the Modern World (5 hours)
MATH 148	College Algebra (5 hours)
MATH 150	Precalculus (5 hours)
MATH 151	Calculus and Analytical Geometry I (5 hrs)
MATH 152	Calculus and Analytical Geometry II (5 hrs)
MATH 153	Calculus and Analytical Geometry III (5 hrs)
MATH 254	Multivariable Calculus (5 hrs)
MATH 255	Elementary Differential Equations 1 (5 hrs)
MATH 256	Elementary Differential Equations II (5 hrs)
MATH 268	Elemementary Linear Algebra (5 hours)
MATH 285	Ordinary and Partial Differential Equations (6 hrs)
MATH 130	Mathematical Analysis for Business I (5 hours)
MATH 131	Mathematical Analysis for Business II (5 hours)
MATH 132	Business Calculus (5 hours)

Statistics

MATH 135	Elementary Statistics (5 hours)
MATH 233	Statistics for Business (5 hours)

Formal Logic

PHIL 150	Introduction to Logic (5 hours)
PHIL 250	Symbolic Logic (5 hours)

Computer Programming

CPT 111 Assembly Language I (5 hours)
CPT 112 Assembly Language II (5 hours)
CPT 201 Cobol I (5 hours)
CPT 202 Cobol II (5 hours)
CPT 205 Cobol III - CICS (5 hours)
CPT 221 Database Programming (3 hours)
CPT 225 Database Systems (5 hours)
CPT 251 Intro. to C++ Programming (5 hours)
CPT 252 Advanced C++ Programming (5 hours)

Biological and Physical Sciences

Associate of Arts - 15-20 hours

Option 1: (15 hours) NSCI 101, NSCI 102, and NSCI 103.
Option 2: 20 hours from the following approved lists. At least one course must be from the Biological Sciences and at least one course must be from the Physical Sciences.

Associate of Science - 25 hours

Option 1: NSCI 101, NSCI 102, and NSCI 103, and 10 additional hours of mathematics above the level of MATH 152 Calculus and Analytic Geometry II or 10 additional hours of laboratory science from the following approved list.
Option 2: 25 **hours** of laboratory science from the following approved lists, including one approved 10 hour sequence. At least one course must be taken from the Biological Sciences and at least one course must be from the Physical Sciences.
Option 3: 15 hours of laboratory science from the approved lists **and 10 hours** of mathematics above the level of MATH 152 Calculus and Analytic Geometry II.

Approved 10 hour Sequences

Physical Sciences	Biological Sciences
CHEM 111 & 112	BIO 111 & BIO 112
CHEM 171 & 172	BIO 111 & BIO 115
PHYS 117 & 118	BIO 111 & BIO 126
PHYS 177 & 178	BIO 111 & BIO 127
	BIO 111 & ANTH 200
	BIO 161 & BIO 169
	BIO 174 & BIO 175

Approved Individual Courses

Physical Sciences	Biological Sciences
CHEM 173 (5 hours)	ANTH 200 (5 hours)
CHEM 251 (5 hours)	ANTH 240 (5 hours)
CHEM 252 (5 hours)	BIO 104 & 105 (5 hours)
CHEM 253 (5 hours)	BIO 115 (5 hours)
CHEM 261 (5 hours)	BIO 125 (5 hours)
GEOL 101 (5 hours)	BIO 126 (5 hours)
GEOL 121 (5 hours)	BIO 127 (5 hours)
PHYS 119 (5 hours)	BIO 161 (5 hours)
PHYS 179 (5 hours)	BIO 169 (5 hours)
	BIO 170 (5 hours)
	BIO 201 (5 hours)
	BIO 205 & 206 (6 hours)

Social and Behavioral Sciences - 15-20 hours

Option I: 15 quarter hours - choose three from:

SSCI 101	Cultural Diversity (5 hours)
SSCI 102	America in Transition (5 hours)
SSCI 103	Social Problems (5 hours)
SSCI 104	World Economic Geography (5 hours)

Option II: 20 quarter hours from at least two areas:

Integrated/Interdisciplinary

SSCI 101	Cultural Diversity (5 hours)
SSCI 102	America in Transition (5 hours)
SSCI 103	Social Problems (5 hours)
SSCI 104	World Economic Geography (5 hours)

Economic/Geography

ECON 100	Introduction to Economics (5 hours)
ECON 200	Principles of Microeconomics (5 hours)
ECON 240	Principles of Macroeconomics (5 hours)
GEOG 200	World Regional Geography (5 hours)

Political Science

POLS 101	Introduction to American Government (5 hours)
POLS 165	Introduction to Politics (5 hours)

Psychology

PSY 100 Introduction to Psychology (5 hours)
PSY 200 Educational Psychology (5 hours)
PSY 230 Abnormal Psychology (3 hours)
PSY 235 Psychology of Adjustment (3 hours)
PSY 240 Human Growth and Development (4 hours)
PSY 261 Introduction to Child Development (5 hours)
PSY 267 Social Psychology (5 hours)

Sociology/Anthropology

ANTH 201	World Prehistory (5 hours)
ANTH 202	Introduction to Cultural Anthropology (5 hours)
SOC 101	Introduction to Sociology (5 hours)
SOC 210	Sociology of Deviance (5 hours)
SOC 230	Intro. to Marriage and Family Relations (5 hours)
SOC 280	American Race and Ethnic Relations (5 hours)

Humanities- 15 quarter hours -

Option I:

HUM 111	Civilization I (5 hours)
HUM 112	Civilization II (5 hours)
HUM 113	Civilization III (5 hours)

Option II:

HUM 111	Civilization I (5 hours)
HUM 151	American Civilization to 1877 (5 hours)
HUM 152	American Civilization since 1877 (5 hours)

Elective Requirements - 15-20 hours

Associate of Arts students select a minimum of 20 elective hours. Associate of Science students select a minimum of 15 hours. Students may complete their degree requirements from any of the courses listed above, or below in the Transfer Module. In addition students may select electives from the following:

Foreign Languages: Arabic, French, German, Italian, Japanese, Latin, or Spanish,
Creative Writing: ENGL 281 through ENGL 285,
Humanities and Fine Arts: Any courses listed under ART, DANCE, HUMANITIES, MUSIC, THEATER. or ENGLISH 260 through ENGLISH 278.
Mathematics: MATH 105 & 106
Other elective options may be chosen from pre-approved lists available from the Counseling Center or the Dean of Arts and Sciences. Careful selection of Columbus State "elective" courses can ensure the greatest applicability of Columbus State credits to the requirements for a baccalaureate degree.

5. A&S **290 Capstone Experience - 3 hours.** Within the last 2 quarters prior to graduation, students must complete a "Capstone" course in the discipline of their intended major at a baccalaureate institution, e.g., BIO 290, ENGL 290, etc.

Ohio Transfer Policy

The Ohio Board of Regents has established **the Transfer Module,** which is a specific set of courses from a college or university's general education requirements. The Transfer Module contains 54-60 quarter hours (or 36-40 semester hours) of course credits in English composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science and interdisciplinary courses.

A Transfer Module completed at one public college or university will automatically meet the requirements of the Transfer Module at the receiving institution, after the student has been accepted. Students may be required to meet additional general education requirements that are not included in the Transfer Module. Since private colleges and universities in Ohio may or may not be participating in the Transfer Module policy, students are encouraged to check with the college of their choice regarding their transfer agreements.

Students who complete Columbus State's degree requirements in Communication Skills, Mathematics, Humanities, Biological and Physical Sciences, and Social and Behavioral Sciences will automatically have completed the Transfer Module.

Transfer Module

English Composition -

College Composition - 5 - 6 hours required

ENGL 101	Beginning Composition **(3) and**
ENGL 102	Essay and Research (3) or
ENGL 111	English Composition (5)

Literature-based Composition select one course (students with credit for ENGL 111 must take a 5 hour course).

ENGL 220	Introduction to Literature (3)
ENGL 250	Writing About the American Experience (5)
ENGL 251	The American Identity (5)
ENGL 252	Images of Men and Women in America (5)
ENGL 253	Regional American Writing (5)

Mathematics and Logical Analysis - select a minimum of one course

Mathematics - 5 hours required

MATH 125	Mathematics in the Modem World (5)
MATH 130	Mathematical Analysis for Business I (5)
MATH 131	Mathematical Analysis for Business II (5)
MATH 132	Business Calculus (5)
MATH 148	College Algebra (5)
MATH 150	Precalculus (5)

MATH 151	Calculus and Analytic Geometry I (5)
MATH 152	Calculus and Analytic Geometry II (5)
MATH 153	Calculus and Analytic Geometry III (5)
MATH 254	Multivariable Calculus (5)
MATH 255	Elementary Differential Equations (5)
MATH 266	Discrete Mathematical Structures (5)
MATH 268	Elementary Linear Algebra (5)

Biological and Physical Sciences - select Option I or Option II

OPTION I:

Integrated/Interdisciplinary

NSCI 101	Natural Science I(5)
NSCI 102	Natural Science II (5)
NSCI 103	Natural Science III (5)

OPTION II: select three courses from at least two areas

Biological Sciences

BIO 111	Introductory Biology I(5)
BIO 112	Introductory Biology II (5)
BIO 115	General Microbiology (5)
BIO 125	General Botany (5)
BIO 126	Introduction to Ecology (5)
BIO 161	Human Anatomy (5)
BIO 169	Human Physiology (5)
BIO 174	Biological Sciences I (5)
BIO 175	Biological Sciences II (5)
BIO 201	Animal Diversity and Systemics (5)

Physical Sciences

CHEM 111	Elementary Chemistry I (5)
CHEM 112	Elementary Chemistry II (5)
CHEM 113	General and Biological Chemistry (5)
CHEM 171	Genera1 Chemistry I (5)
CHEM 172	General Chemistry II (5)
CHEM 173	General Chemistry III (5)
GEOL 121	Physical Geology (5)
PHYS 117	College Physics Mechanics and Heat (5)
PHYS 118	College Physics Elect, Magnetism & Light (5)
PHYS 119	College Physics Modern Physics (5)
PHYS 177	General Physics I (5)
PHYS 178	Genera1 Physics II (5)
PHYS 179	General Physics III (5)

Arts/Humanities - select Option I or Option II

OPTION I: select one of the Civilization sequences

Integrated/Interdisciplinary

HUM 111	Civilization I(5) and
HUM 112	Civilization II (5) and
HUM 113	Civilization III (5) **or**
HUM 111	Civilization I(5) and
HUM 151	American Civilization to 1877 (5) and
HUM 152	American Civilization since 1877 (5)

OPTION II: select three courses from at least two areas

Interdisciplinary

HUM 205	Medicine and the Humanities (5)
HUM 222	Classical Mythology (5)
HUM 245	Music and Art Since 1945 (5)

Western Arts

ART 101	History of Western Art (5)
MUS 101	History of Western Music (5)
THEA 100	Introduction to the Theater (5)

Philosophy

PHIL 101	Introduction to Philosophy (5)
PHIL 130	Ethics (5)
PHIL 270	Philosophy of Religion (5)

World/Non-Western Cultures

HUM 251	History of Latin America (5)
HUM 252	The Islamic World and the Middle East (5)
HUM 253	History of China and Japan (5)
HUM 254	Introduction to African Literature (5)
HUM 270	Comparative Religions (5)

Literature

ENGL 230	Introduction to Dramatic Literature (5)
ENGL 235	Introduction to Poetry (5)
ENGL 240	Introduction to Science Fiction (3)
ENGL 262	Survey of British Literature (5)
ENGL 264	Introduction to Shakespeare (5)
ENGL 265	Modern European Lit. in Translation (5)
ENGL 270	Black American Writers (5)
ENGL 272	Introduction to Folklore (5)
ENGL 276	Women in Literature (5)
ENGL 274	Introduction to Non-Western Literature (5)

Social and Behavioral Sciences - select Option I or Option II

OPTION I: select three courses from the following

Integrated/Interdisciplinary

SSCI 101	Cultural Diversity (5)
SSCI 102	America in Transition (5)
SSCI 103	Social Problems (5)
SSCI 104	World Economic Geography (5)

OPTION II: select three courses from at Least two areas

Economics/Geography

ECON 100	Introduction to Economics (5)
ECON 200	Principles of Microeconomics (5)
ECON 240	Principles of Macroeconomics (5)
GEOG 200	World Regional Geography (5)

Political Science

POLS 101	Introduction to American Government (5)
POLS 165	Introduction to Politics (5)

Psychology

PSY 100	Introduction to Psychology (5)
PSY 230	Abnormal Psychology (3)
PSY 235	Psychology of Adjustment (3)
PSY 240	Human Growth and Development (4)
PSY 261	Introduction to Child Development (5)
PSY 267	Social Psychology (5)

Sociology/Anthropology

ANTH 200	Introduction to Physical Anthropology (5)
ANTH 201	World Prehistory (5)
ANTH 202	Introduction to Cultural Anthropology (5)
SOC 101	Introduction to Sociology (5)
SOC 230	Intro. to Marriage and Family Relations (5)
SOC 280	American Race and Ethnic Relations (5)

Conditions for Transfer Admission

Students who meet the Transfer Module requirements 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. For individual courses, only those 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 does not guarantee that a transfer student will be automatically admitted to any major, minor or field of study offered at that institution. Once admitted, transfer students will be subject to the same catalog requirements as all other students. Transfer students will be accorded the same class standing and other privileges as all other students based on the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibility of Students

Early in their college career, students should identify the major and the university they wish to transfer into from Columbus State. They should plan their course of study to meet the requirements of the degree program they wish to pursue at the receiving four-year institution. Students should determine if there are foreign language or special course requirements that can be completed in the freshman or sophomore year. Students are encouraged to consult with an academic advisor to determine their specific transfer requirements.

Appeals Process

An appeals process is required at each institution, which allows students who disagree with application of transfer credits to file an appeal. If a transfer student's appeal is denied by the institution, the student must be advised in writing how to appeal at the state level Articulation and Transfer Appeals Review Committee. This committee will recommend a resolution to each case.

The appeals process begins after the student receives a copy of the Transfer of Credit form, which indicates that some previous coursework may not be applicable to the student's new degree. The student may then appeal by asking the Director of Records and Registration for an explanation of the appeals process. The Director of Records-and Registration will provide the student with additional information regarding the appeals process.

FULFILLMENT OF THE ASSOCIATE OF ARTS OR ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS ASSURES FULFILLMENT OF TRANSFER MODULE REQUIREMENTS.

Columbus State Community College Transfer Agreements

Columbus State Community College has established transfer agreements with the following institutions. Please see your academic advisor for specific transfer course information.

Associate of Arts and Associate of Science Degrees to B.A. and B.S. Degrees
Antioch College
Capital University
Central State University
Franklin University
Mount Carmel College of Nursing
Ohio Dominican College
The Ohio State University - All Colleges
Otterbein College
Shawnee State University
University of Toledo
Wilberforce College

2 + 2 Agreements for all Degree Programs
Capital University
Central State University
Devry Institute of Technology
Franklin University
Otterbein College
Wilberforce University
Shawnee State University

Guaranteed Admission to all Graduates of Columbus State (AA, AS, or AAS)
Central State University
Otterbein College
Shawnee State University
Wilberforce University

Technology Specific Agreements for Associate of Applied Science Degrees
Circleville Bible College:
Accounting Technology
Business Management Technology
Early Childhood Development Technology
Nursing Technology
Devry Institute of Technology:
Accounting Technology
Business Management Technology
Computer Programming Technology
Electronic Engineering Technology
Embry-Riddle Aeronautical University:
Aviation Maintenance Technology
Florida International University:
Hospitality Management Hotel and Food Service Mgmt.
Miami University:
Electronic Engineering Technology
Electra-Mechanical Engineering Technology
Mechanical Engineering Technology
Mount St. Joseph College:
All A.A.S. degrees in Health, Human and Public Services
Ohio University:
Hospitality Management to Hotel and Food Service Mgmt.
University of Rio Grande:
Associate of Science Degree to B.S. in Mathematics
The Ohio State University:
Mechanical Engineering to Industrial Tech. Education
Mechanical Engineering to Welding Engineering

Graduation Requirements:
Associate of Applied Science Degree

Requirements of All Graduates

1. The satisfactory completion of 90-110 quarter credit hours as required by the particular program.
2. The attainment of a "C" (2.00) average in all technical courses and a "C" (2.00) average in all non-technical courses.
3. The completion of no fewer than 35 of the required credit hours, including no fewer than 20 credit hours in technical courses approved by the department chairperson, while in attendance at Columbus State Community College. Credits by examination/proficiency, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.

General Education Requirements

1. 12 credit hours in English/Communication Skills: ENGL 101, ENGL 102 (students placing into ENGL 111 can take ENGL 111 instead of ENGL 101 AND ENGL 102), COMM 105, COMM 110 or COMM 115 (depending on the technology requirement), and one of the following three courses: ENGL 204, ENGL 202, or ENGL 200.
2. Five credit hours in Humanities: HUM 111, HUM 112, HUM 113, HUM 151, HUM 152, or HUM 224.
3. Five credit hours in Social and Behavioral Sciences for students in Engineering and Health and Human Services degree programs: SSCI 101, SSCI 102, SSCI 103 or SSCI 104. Five credit hours in Biological and Physical Sciences for students in the Business and Public Services degree programs: NSCI 101 or BIO 104 & 105.
   Following are exceptions to this requirement:
   a. Mental Health/Chemical Dependency/Mental Retardation students must take BIO 112 to fulfill the requirement.
   b. Early Childhood Development, and Interpreting/Translit-erating students must take NSCI 101 or BIO 104 & 105 to fulfill the requirement.

c. Computer Programming, Microcomputing, Dietetic Technician Major, EDP Auditing and Medical Office Administration students must take SSCI 101, SSCI 102, SSCI 103 or SSCI 104 to fulfill the requirements.

Basic Studies Requirements
Each technical program requires completion of at least 21 credit hours in basic studies. Basic studies are those that provide students with the scientific and theoretical foundations of their technology, or those that provide students with an understanding of the legal, social, economic, or political environments within which they will practice their technology. Courses that fulfill the basic studies requirements vary from program to program. They are listed in the following section, with the listings of technical program requirements.

Technical Studies Requirements
Each technical program requires completion of 45 to 67 credit hours in courses clearly identifiable with the technical skills, proficiency, and knowledge required for career competency. Technical studies requirements also vary from program to program; they are also listed in the following section, by program.

Students need to work closely with an assigned advisor to assure they meet all requirements for graduation. The student is responsible for meeting all requirements.

Graduation Requirements:

Associate of Technical Studies Degree
Designing Your Own Degree

Application Procedures

The Associate of Technical Studies Degree program enables a student to design an individualized program of study to fulfill a unique career goal that cannot be met through the completion of any one of the College's technical programs. This is accomplished by selecting courses from up to four different technical disciplines, thereby fashioning a coherent technical program. In order to be considered for admission to this program, an applicant must:

1. Demonstrate a level of maturity and motivation which gives promise of successfully handling the responsibilities inherent in this program.

2. Satisfy the general admission requirements of Columbus State Community College.

3. Prepare and submit the Associate of Technical Studies application which includes the proposed program of study. The Associate of Technical Studies Coordinator will assist the student in planning an Associate of Technical Studies Degree program.

4. To obtain the Associate of Technical Study application, contact Associate of Technical Studies Coordinator at 614/287-2663, or stop by the Career Services Office in 108 Nestor Hall.

Graduation Requirements of all ATS Graduates

1. The satisfactory completion of 90-110 credit hours.

2. The attainment of a "C" (2.00) average in all technical courses, and a "C" (2.00) average in all non-technical courses.

3. The completion of no fewer than 35 of the required credit hours, including no fewer than 20 credit hours in technical courses approved by the department chairperson(s), while in attendance at Columbus State Community College. Credit by examination/proficiency, non-traditional credit, and transfer credit do not apply toward meeting residency credit hour requirements.

Specific Program Requirements

In this section, the requirements for Columbus State's programs of study are listed alphabetically by department or technology. After you have located the program you are interested in, you will find a listing of the courses to be taken. The first three or four alpha identifiers of each course number indicate which department offers the course. For example, course numbers beginning with EET are all from the Electronic Engineering Technology and VET indicates Veterinary Technician Technology. A chart in the **Course Description Section** shows all the departments and their corresponding numbers.

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Course descriptions can be found in the next section of the Catalog listed alphabetically by department.

COURSE NUMBER - the three- or four-letter alpha identifier indicates the department; the three numbers that follow identify the specific course. Three or four letters followed by xxx indicate an elective requirement for which only the department is specified.

CREDIT HOUR - indicates amount of credit awarded for completion of the course.

Honors Program

Columbus State offers an honors program for eligible students. Honor courses offer students more challenging, faster-paced coursework. Courses in English, humanities, and social sciences will be open to students who have completed or placed into ENGL 111, and have received permission from the Director of the Honors Program. Please see the quarterly list of course offerings for the complete listing of honors courses. For more information on the honors program, please call (614) 287-5368.

Academic Programs

Columbus State's technical degree programs are offered in more than 50 career fields in areas of business, health, engineering, human service, and public service. These programs are are grouped under the heading of Career and Technical Programs. Students enrolled in these programs can attend classes on either a full -or part-time basis. Graduates receive the Associate of Applied Science, or an Associate of Technical Studies degree. Upon successful completion of these programs, the graduate can work as a technician or paraprofessional in his/her field.

Each of the College's career and technical programs is developed in response to needs of local employers who serve on professional advisory committees.

Listed below (in bold) are the degree programs leading to the Associate of Applied Science. Also listed are all the majors, tracks and short-term certificate programs in each field of study.

ARTS AND SCIENCES DIVISION

Technical Communication

CAREER AND TECHNICAL PROGRAMS

Accounting
- EDP Auditing Major
- Bookkeeping-Certificate
- Certificate of Accounting Concentration
- Certificate of Taxation

Architecture

Automotive Technology
- Automotive Service Management Major
- Ford ASSET Program
- TechLINK Program

Aviation Maintenance Technology
- Airframe Certificate
- Powerplant Certificate

Business Management
- Business Management Major
- Small Business Management Major
- Training and Development for the Non Trainer Certificate

Civil Engineering Technology
- Surveying Certificate

Computer Programming Technology
- AS/400 Programming Language Certificate
- Networking and Distributed Systems Certificate
- Object-Oriented Programming Certificate

Construction Management

Dental Hygiene

Dental Laboratory Technology

Early Childhood Development

Electra-Mechanical Engineering Technology

Electronic Engineering Technology
- Computer Electronics Major

Emergency Medical Services Technology
- EMT-Basic Certificate
- EMT-Intermediate Certificate
- EMT-Paramedic Certificate
- EMS Administration Certificate
- EMS Rescue Certificate
- Advanced Cardiac Life Support Certificate
- Advanced Rescue Certificate
- Basic Trauma Life Support Certificate
- CPR Instructor Certificate
- EMS Dispatcher Certificate
- First Responder Certificate
- Hazardous Materials Certificate
- River Rescue Certificate

EMS/Fire Science (Associate of Technical Studies)

Environmental Technology
- Health and Safety for Hazardous Waste Operations Training Program Certificate

Facility Management

Finance

Fire Science

Gerontology (Aging Studies)
- Gerontology Certificate
- Activities Programming for the Elderly in Long Term Care Cert.

Graphic Communications Technology

Health Information Management Technology
- Medical Coding Specialist Certificate
- Medical Transcription Certificate

Heating, Ventilating and Air Conditioning Technology
- High Pressure Boiler License Training Program

Hospitality Management
- Chef Apprenticeship Major
- Dietetic Technician Major
- Food Service/Restaurant Management Major
- Travel/Tourism/Hotel Management Major
- Dietary Manager Certificate
- Travel Industry Certificate

Human Resources Management Technology

Interpreting/Transliterating
- American Sign Language/Deaf Studies Certificate

Landscape Design/Build

Law Enforcement
- Corrections Major
- Law Enforcement Major
- Law Enforcement Management Major
- Law Enforcement Major - Academy Track

Legal Assistine
- Workers' Compensation Certificate

Legal Medical Consulting (Associate of Technical Studies)

Logistics
- Purchasing Major

Marketing
- Customer Service Major
- Direct Marketing Major

Mechanical Engineering Technology

Medical Assisting Technology

Medical Laboratory Technology

Mental Health/Chemical Dependency/Mental Retardation
- Mental Health Track
- Chemical Dependency Track
- Mental Retardation Track
- Advanced Level Chemical Dependency Certificate
- Community Living Specialist Certificate
- Entry Level Chemical Dependency Certificate
- Foster Parent Treatment Specialist Certificate

Microcomputing Technology
- PC Hardware/Software Installation & Maintenance Certificate

Multi-Competency Health
- EMT - Paramedic Degree Track
- Histology Degree Track
- Patient Care Degree Track
- Animal Assisted Therapy in Education Certificate
- Basic Electrocardiography Certificate
- EMT Basic Certificate
- EMT Intermediate Certificate
- Health Care Manager Certificate
- Histology Certificate
- Home Health Aide Certificate
- Mammography Certificate
- Nurse Aide Training Program Certificate
- Phlebotomy Certificate
- Registered Nurse First Assistant Certificate
- Registered Nurse Home Care Certificate
- Respiratory Care Rehabilitation/Home Care Certificate
- Sleep Studies Certificate
- Train the Trainer Certificate

Multimedia Production Technology
- Authoring Systems Track
- Computer Graphics Track

Nursing

Office Administration
- Administrative Assistant Major
- Administrative Assistant Legal Cognate
- Administrative Assistant Medical Cognate
- Word Processing Certificate

Quality Assurance Technology

Radiography

Real Estate

Respiratory Care
- Registered Respiratory Therapist Program
- Registered/Graduate Nurse to the Registered Respiratory Therapist Program

Retail Management

Sports & Fitness Management
- Exercise Specialist Certificate
- Massage Therapy Certificate

Surgical Technology

Veterinary Technology

Accounting

Accounting Associate Degree
EDP Auditing Major
Certificate of Accounting Concentration
Bookkeeping Certificate
Certificate of Taxation

Accountants, and the theoretical principles they use in their work, stand at the very center of our financial and economic activities. Economists, investors, business executives, labor leaders, bankers, and government officials all rely upon financial statements and other reports prepared by accountants to summarize and interpret the multitude of financial transactions that comprise day-to-day economic activity. The true value of an accountant is measured by his or her ability to develop and present understandable, reliable analyses of financial positions and the results of operations upon which business decisions are based.

The Accounting Associate Degree program prepares graduates for employment as accountants in business, industry, and government. Many experienced accountants become owners/operators of their own public accounting firms. The program emphasizes the use of personal computers along with manual procedures of accounting. The Accounting Associate Degree program is ideally suited to the needs of those who wish to take the Ohio CPA Examination with qualifying examinations upon graduation.

The Associate Degree major in EDP Auditing serves many student and employer requests for accounting training that emphasizes systems analysis and programming. This major fills a gap for those trained in accounting or computer science who do not have the opportunity to gain expertise in both areas without on-the-job training or pursuit of advanced degrees. Job opportunities for EDP auditing specialists exist in public accounting firms, industrial-commercial accounting departments (particularly internal auditing), and with governmental accounting employers. The program's diversity also enables graduates to seek employment in data processing management, systems analysis, programming. controlling, cost accounting, and general accounting. Graduates of this program may also qualify to take the Ohio CPA Examination through qualifying equivalency examinations.

The Certificate of Accounting Concentration is intended for individuals that currently possess a bachelor's, master's or Ph.D. in an area other than accounting and want to qualify under Ohio law to sit for the Ohio CPA exam. The 54 hours of course work recommended would provide candidates with the broadest possible knowledge of all four parts of the Ohio exam.

The one-year Bookkeeping Certificate program develops the competencies needed for success as a full-charge bookkeeper. Credits earned in the Certificate program may be applied to an Associate Degree in Accounting, EDP Auditing, or other business technologies.

A seven-course, four-quarter, Certificate of Taxation program prepares individuals to operate their own income tax practice. Graduates should upon completion of the program be able to file federal, state, city, and county income tax returns for individuals, partnerships, and corporations. Graduates may sit for the Enrolled Agents Exam thereby enabling them to acquire a professional license to practice before the Tax Court of the United States.

Columbus State Community College is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the Associate of Arts, Associate of Science, and Associate of Applied Science Degrees.

Upon completion of the Associate Degree in Accounting, the graduate will be able to:
Apply generally accepted accounting principles to measure, process, and communicate financial information about a business entity.

- Use accounting computer software to maintain accounting records and prepare financial statements.
- Apply theory and practical applications of job order and process cost systems, including the evaluation of actual to standard costs.
- Prepare systems flowcharts and evaluate the internal control of a business system.
- Compare and use financial statements for decision making purposes.
- Explain the purpose and standards for an independent audit.
- Explain the procedures used in applying auditing standards in conducting an independent audit.
- Prepare budgets and forecasts for financial decisions.
- Identify and describe each of the rules contained in the AICPA Code of Professional Conduct.
- Prepare individual income tax returns and research tax questions.
- Prepare federal, state, and local payroll tax returns as well as franchise and personal property tax returns.

EDP Auditing Major
In addition to many of the Accounting competencies, a graduate majoring in EDP Auditing will be able to:

- Write, debug, test, maintain and document programs, according to a program specification, in IBM mainframe Assembly Language or Structured ANSI COBOL.
- Use an on-line editor for program development.
- Analyze an existing internal control system and reconfigure its specifications to conform to auditing software.
- Perform system analysis to improve accountability of system results.

Accounting Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
BMGT 111	Management	5
ACCT 111	Principles of Accounting I	5
CPT 101	Computer Literacy 1	3
Quarter 2		
ENGL 102	Essay & Research	3
NSCI 101	Natural Science I	5
ACCT 112	Principles of Accounting II	5
ACCT 121	Data Processing for Accountants	4
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
Quarter 3		
ENGL 200	Business Communications	3
COMM 105	Speech	3
LEGL 265	Business Law for Accountants	5
ACCT 113	Principles of Accounting III	5
ACCT 126	Accounting Systems	5
Quarter 4		
MATH 135	Elementary Statistics	5
ACCT 201	Intermediate Accounting I	5
ACCT 211	Cost Accounting	5
ACCT 221	Financial Statement Analysis I	3

Quarter 5		
ACCT 202	Intermediate Accounting II	5
ACCT 232	Federal Taxation	5
ACCT 222	Financial Statement Analysis II	3
ACCT 241	Auditing I, Principles	3
Quarter 6		
BMGT 272	Case Studies in Business Seminar	3
ACCT xxx	Accounting Technical Elective	4
ACCT 231	State & Local Taxation	3
ACCT 242	Auditing II, Applications	3
ACCT 25 1	Accounting Practice	4
TOTAL CREDIT HOURS		**110**

Technical Elective must be selected from the following list of courses:

ACCT 206	Advanced Accounting	5
ACCT 236	Advanced Taxation	4
ACCT 261	Controllership/CPA Review	4
ACCT 266	Public Admin./Fund Accounting	4
ACCT 271	Accounting Internship*	2
ACCT 272	Internship Seminar*	2

* Must be taken together

EDP Auditing Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 121	Mathematics for Computer Technology	5
ACCT 111	Principles of Accounting I	5
CPT 101	Computer Literacy I	3
Quarter 2		
ENGL 102	Essay & Research	3
CPT 108	Program Design & Development	3
CPT 111	Assembly Language I	5
LEGL 261	Business Law I	3
ACCT 112	Principles of Accounting II	5
Quarter 3		
ENGL 200	Business Communications	3
CPT 112	Assembly Language II	5
ACCT 121	Data Processing for Accountants	4
ACCT 113	Principles of Accounting III	5
COMM 105	Speech	3
Quarter 4		
CPT 201	COBOL I	5
CPT 211	Systems Analysis I	4
ACCT 201	Intermediate Accounting I	5
SSCI 10x	Social Science 101, 102, 103 or 104	5
Quarter 5		
CPT 202	COBOL II	5
CPT 212	Systems Analysis II	4
ACCT 202	Intermediate Accounting II	5
ACCT 241	Auditing I, Principles	3
Quarter 6		
ACCT 242	Auditing II, Applications	3
ACCT 256	Final Project	5
xxxx xxx	Technical Elective	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
TOTAL CREDIT HOURS		107

Technical Elective must be selected from the following list of courses:

CPT 241	Introduction to AS/400	3
CPT 151	Basic Business Language	3
CPT 155	Visual Basic	3
CPT 245	Introduction to RPG	5
CPT 246	Advanced RPG	5
CPT 205	COBOL III	5
CPT 221	Database Programming	3
MCT 131	Advanced Spreadsheets	3
CPT 251	Introduction to C++ Programming	5
CPT 252	Advanced C++ Programming	5
MCT 221	Local Area Networks	3
ACCT 232	Federal Taxation	5
ACCT 266	Public Administration/Fund Accounting	4

Certificate of Accounting Concentration

COURSE		CR
Quarter 1		
ACCT 111	Principles of Accounting I	5
ACCT 121	Data Processing for Accountants	4
Quarter 2		
ACCT 112	Principles of Accounting II	5
Quarter 3		
LEGL 265	Business Law for Accountants	5
ACCT 113	Principles of Accounting III	5
Quarter 4		
ACCT 201	Intermediate Accounting I	5
ACCT 211	Cost Accounting	5
Quarter 5		
ACCT 202	Intermediate Accounting II	5
ACCT 232	Federal Taxation	5
ACCT 241	Auditing I, Principles	3
Quarter 6		
ACCT 266	Public Admin/Fund Accounting OR	
ACCT 261	Controllership/CPA Review	4
ACCT 242	Auditing II, Applications	3
TOTAL CREDIT HOURS		54

Bookkeeping Certificate

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra I	4
CPT 101	Computer Literacy I	3
ACCT 111	Principles of Accounting I	5
Quarter 2		
ENGL 102	Essay and Research	3
OADM 131	Keyboarding I	3
ACCT 121	Data Processing for Accountants	4
ACCT 112	Principles of Accounting II	5
Quarter 3		
ENGL 200	Business Communications	3
OADM 132	Keyboarding II	3
ACCT 126	Accounting Machines Systems	5
ACCT 113	Principles of Accounting III	5
Quarter 4		
HUM 11x	Civilization I, II, OR III	5
LEGL 261	Business Law I	3
ACCT 231	State & Local Taxation	3
ACCT 211	Cost Accounting OR	5
ACCT 232	Federal Taxation	5
TOTAL CREDIT HOURS		62

Certificate of Taxation

COURSE		CR
Quarter 1		
ACCT 106	Introduction to Accounting I	5
CPT 101	Computer Literacy 1	3
Quarter 2		
ACCT 232	Federal Taxation	5
Quarter 3		
ACCT 23 1	State and Local Taxation	
ACCT 236	Advanced Taxation	4
Quarter 4		
ACCT 237	Enrolled Agent's Review Course	4
ACCT 238	Tax Practice Management	4
TOTAL CREDIT HOURS		28

Architecture

Architectural technicians assist architects and others who design building projects in preparing plans and specifications. They also work for builders and contractors, land developers, remodelers, facility and property managers, and with building product manufacturers and retailers. The Columbus job market for architectural technicians is remaining strong as Columbus continues to grow.

Columbus State's Associate Degree program in Architecture teaches manual and CAD drafting, product selection and specification, and code evaluation skills used daily in the occupation. Students in the program share common courses in materials, structures, blueprint reading and co-op work experiences with other programs in the Construction Sciences Department. This provides architecture students with a strong foundation of technical skills and a sense of teamwork required in the construction industry.

The Architecture program provides students with a solid educational background in communication skills, math, computer literacy and operations, and humanities and behavioral sciences.

Upon completion of the Associate Degree in Architecture, the graduate will be able to:

- Work with one- and two-point perspectives, shades and shadows, and free-hand drawing techniques to express relevant ideas graphically.
- Generate and organize a complete set of architectural working drawings.
- Research materials, consult with industry experts, and use CSI standards to create specifications to support the architectural drawings.
- Read and interpret information from architectural and engineering drawings for material quantity determination and estimating.
- Use building codes and standards to ensure that architectural drawings and specifications comply with legal and safety requirements.
- Utilize wood, steel, and concrete information and handbooks to detail building structures.
- Create isometric layouts of basic mechanical systems employed in commercial buildings.

Architecture Associate Degree

COURSE		CR
Quarter 1		
ARCH 111	Construction Drafting - Manual I	4
CIVL 120	Basic Construction Materials	3
CPT 101	Computer Literacy 1	3
ENGL 101	Beginning Composition	3
MATH 104	Intermediate Algebra	5
Quarter 2		
ARCH 100	Intro to the History of Architecture	5
ARCH 112	Construction Drafting I -CAD I	3
ARCH 161	Architectural Drafting -Manual II	4
CMGT 121	Building Construction Drawings	3
MATH 148	College Algebra	5
Quarter 3		
ARCH 113	Construction Drafting - CAD II	3
ARCH 155	Structures - Wood	3
CIVL 232	Statics & Strength of Materials	3
LAND 152	Site Planning	4
COMM 105	Speech or COMM 110 Conference & Group Discussion	3
ENGL 102	Essay & Research	3
Quarter 4		
ARCH 232	Building Construction Standards	3
ARCH 250	Building Enclosure Materials	3
ARCH 262	Presentation Drawings -CAD III	3
HAC 222	Load Calculations I	4
BMGT 111	Management	5
Quarter 5		
ARCH 116	Piping Systems	3
ARCH 237	Structures - Steel and Concrete	4
ARCH 263	Working Drawings I	4
ENGL 204	Technical Writing	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
Quarter 6		
ARCH 214	Electricity & Lighting	3
xxx xxx	Technical Elective	3
ARCH 264	Working Drawings II	4
SSCI 10x	Social Science 101, 102, 103 or 104	5
TOTAL CREDIT HOURS		**109**

Technical Electives must be selected from the following list of courses:

ARCH 130	Introduction to Interior Design	4
ARCH 291	Field Co-Op Experience	4
CIVL 112	MicroStation CAD Drafting	3
CMGT 105	Construction Contract Documents	3
LAND 101	Landscape Principles	3
LAND 206	Landscape Graphics	4
SURV 247	Townsite & Urban Development	3

Automotive Technology

Automotive Technology Associate Degree
TECHLINK Program
Automotive Service Management Major
Ford ASSET Program

Automotive Technology Program:

Graduates of the Associate Degree program in Automotive Technology are qualified for entry-level positions as automotive service technicians, service writers, and entry-level managers. Many persons already employed in the field use the program to progress to advanced technical or management positions, and to prepare for Automotive Service Excellence (ASE) certification examinations.

Columbus State has one of the few college programs in the nation to be master certified by ASE. To receive this certification, the program was evaluated against industry standards of quality. To earn an Associate Degree, students complete 60 credit hours in automotive technical courses. These courses cover all aspects of mechanical and electrical automotive systems. Students are able to specialize by selecting courses focused on their specialty areas. These specialty areas include the eight basic areas of ASE, alternative fuels, plus service and parts department management. To earn the degree, students must complete 46 credit hours of related coursework (including communication skills, math, management skills, and computer literacy).

The program is designed to allow students to enter at the level most appropriate for their present knowledge and skills. Students with experience and/or prior training may enroll in technical courses to update and improve their knowledge and skills. Courses AUTO 061 and AUTO 062 are designed to prepare students with little experience for other technical courses. Students may receive credit in these courses by satisfactorily completing the courses,

by passing proficiency exams, or by presenting evidence of ASE certification. ASE certification may also be used to earn credit in additional technical courses.

Upon completion of the Associate Degree in Automotive Technology, the graduate will be able to:

- Solve automotive problems in a systematic, logical, and efficient manner.
- Diagnose and repair driveability problems on early and current car models, including those with fuel injection and computerized engine controls.
- Diagnose and repair simple and complex electrical problems.
- Diagnose and repair engine mechanical problems.
- Diagnose and repair automatic transmissions and transaxles, including total rebuilding of units.
- Diagnose and repair manual transmissions and transaxles, as well as other driveline components such as driveshafts, drive axles, and differentials.
- Precisely measure engine and other automotive parts, using the appropriate measuring instruments.
- Diagnose brake system problems and perform a complete brake service (including necessary machining).
- Diagnose and repair steering and suspension problems and properly align the suspension of all types of automobiles and light trucks, using either two- or four-wheel alignment machines.
- Diagnose and repair automotive air-conditioning systems.
- Demonstrate an understanding of basic principles needed for understanding of new technologies as they become incorporated into automobile designs.
- Make repair estimates and complete the necessary paperwork for customer service and warranty repairs.
- Apply basic business practices, including cultivation of good customer and employee relations.

TECHLink:

TECHLink is a cooperative learning program co-sponsored by the Columbus Automobile Dealers Association and the Automotive Technology Department at Columbus State. The total length of the program is 10 quarters (2 1/2 years). This includes an initial two quarters as a full-time student on campus followed by two years working at the sponsoring dealer's site under the guidance of a master technician while completing the remaining coursework at the college.

The program follows the same curriculum as the Automotive Technology program. However, since students are working in dealerships as well as taking coursework on campus, the scheduling of courses is arranged to coordinate with the students' work schedule. See the department advisor for further information on course scheduling.

Graduates of the TECHLink program meet all of the objectives of the Automotive Technology Program (listed above). In addition, the program is designed to:

- Fill the local shortage of qualified, entry-level technicians needed by area new car dealership service departments.
- Provide interested students with the skills and knowledge necessary to prepare them for a successful career in automotive repair and prepare them for A.S.E. certification.
- Provide participating students with paid industry work experience to enhance the learning experience and to enable them to successfully transition from the classroom to the workplace.
- Provide a course of study that will enable successful graduates to have the knowledge and skills necessary to develop an upward career path in automotive repair.

Automotive Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 101	Business Math	5
AUTO 061	Automotive Principles	4
AUTO 062S	hop Orientation	4
CPT 101	Computer Literacy	3
Quarter 2		
AUTO 110	Engine Repair	4
AUTO 130	Manual Transmissions	3
ENGL 102	Essay & Research	3
NSCI 101	Natural Science 1 or PHYS 100	5
AUTO 160	Electrical Systems	4
Quarter 3		
AUTO 120	Automatic Transmissions	4
AUTO 140	Suspension & Steering	4
AUTO 180	Engine Performance	4
AUTO 170	Heating & Air Conditioning	3
ENGL 204	Technical Writing	3
Quarter 4		
AUTO 150	Brake Systems	4
SSCI 10x	SSCI 101, 103, 103, or 104	5
AUTO 1x5or 19x	Technical Elective	3
AUTO 1x5or 19x	Technical Elective	3
AUTO 1x5or 19x	Technical Elective	3
Quarter 5		
AUTO 1x5or 19x	Technical Elective	3
AUTO 1x5or 19x	Technical Elective	3
AUTO 1x5or 19x	Technical Elective	3
COMM 105	Speech	3
AUTO 2x0or 19x	Technical Elective	2
AUTO 2x0or 19x	Technical Elective	2
Quarter 6		
HUM 1xx 111, 112, 113, 151, or 152		5
AUTO 300s	hop Experience	4
AUTO 2x0or 19X	Technical Elective	2
BMGT xxx	Business Mgmt. Elective	3-5
AUTO 2x0or 19X	Technical Elective	2
TOTAL CREDIT HOURS		**106**
TECHNICAL ELECTIVES - 1x5		
AUTO 115	Advanced Engine Repair	3
AUTO 125	Advanced Auto. Trans	3
AUTO135	Advanced Man. Trans	3
AUTO 145	Advanced Susp. & Stg.	3
AUTO 155	Advanced Brake Systems	3
AUTO 165	Advanced Electrical Systems	3
AUTO 175	Advanced Heating &A/C	3
AUTO 181	Fund of Alternative Fuels	3
AUTO 185	Advanced Engine Perf.	3
AUTO 190	Automotive Bus. Mgmt.	3
AUTO 191	Service Advising	3
AUTO 192	Auto. Service Management	3
TECHNICAL ELECTIVES - 2x0		
AUTO 210	Current Trends in Engine Repair	2
AUTO 220	Current Trends in Auto. Trans.	2
AUTO 230	Current Trends in Man. Trans.	2
AUTO 240	Current Trends in Susp. Stg.	2
AUTO 250	Current Trends in Brake Systems	2
AUTO 260	Current Trends in Electrical Syst.	2
AUTO 270	Current Trends in Heating & A/C	2
AUTO 280	Current Trends in Engine Perf.	2
AUTO 186	Advanced Alternative Fuel Sys.	2
AUTO 193	Automotive Serv. Merchandising	3
AUTO 195	Auto Parts - Sales	2
AUTO 196	Auto Parts - Inventory Control	2
AUTO 197	Auto Parts - Management	3

Automotive Service Management Major:

The program is designed to prepare students for entry-level management positions in automotive service operations. Students will attain a sound foundation in the technical systems of the automobile as well as a broad spectrum of principles and practices needed in managing a repair operation. Students with experience and/or prior training may enroll in technical courses to update and improve their knowledge and skills.

Upon completion of the program students earn an Associate Degree of Applied Science in Automotive Technology. The program is designed to:

- Provide students with fundamental knowledge of the theory and operation of all automotive systems
- Provide students with a broad-based background in general business management principles and practices
- Provide students with knowledge of a wide range of current automotive-specific management practices and principles
- Prepare students for entry-level management-track positions in the automotive repair industry

Automotive Service Management Major

COURSE		CR
Quarter 1		
AUTO 06 1	Automotive Principles	4
AUTO 062s	hop Orientation	4
MATH 101	Business Math	**5**
ENGL 101	Beginning Composition	**3**
CPT 101	Computer Literacy	**3**
Quarter 2		
AUTO 110	Engine Repair	4
AUTO 150	Brake Systems	4
AUTO 160	Basic Electricity	4
BMGT 101	Intro. To business	**5**
Quarter 3		
AUTO 170	Heating &A/C	3
AUTO 120	Automatic Transmissions	4
AUTO 180	Engine Performance	4
BMGT 111	Management	**5**
ENGL 102	Essay & Research	**3**
Quarter 4		
AUTO 140	Steering & Suspension	4
AUTO 130	Man. Transmissions	3
ENGL 200	Business Communications	3
AUTO 190	Auto. Business Mgmt.	3
AUTO 191	Service Advising	**3**
Quarter 5		
HUMxxx	111, 112, 113, 151, or 152	5
COMM 105	Speech	3
AUTO 192	Auto. Service Mgmt.	3
NSCI 101	Natural Science I or	
PHYS 100	Physics	5
AUTO 193	Auto. Service Merch.	**3**
Quarter 6		
SSCI 10x	101,102, 103, or 104	5
QUAL 240	Total Quality Management	3
AUTO 197	Auto. Parts Management	3
xxx xxx	Technical Elective	2
xxx xxx	Technical Elective	**2**
TOTAL CREDIT HOURS		**105**

TECHNICAL ELECTIVES

BMGT 216	Business Ethics	**3**
AUTO 195	Auto. Parts Inventory Cnt.	**2**
AUTO 196	Auto. Parts Sales	**2**
AUTO 101	Autocare	**3**

Ford ASSET:

The Automotive Technology Department also offers a two-year cooperative training program sponsored by Ford Motor Company. This program, called ASSET, covers the same subject areas as the Automotive Technology two-year program but is unique in two ways: (1) all lecture and lab exercises are specific to Ford Motor Company products; and (2) ASSET is eight quarters in length with students attending classes for 4 quarters and working at a dealership the remaining 4 quarters. For specific information on the Ford ASSET program, contact the Ford ASSET Coordinator. Graduates of this program receive an Associate's degree in Automotive Technology and have the opportunity to earn ASE certifications and advanced Ford certifications.

Ford ASSET - Automotive Technology Associate Degree

Quarter I		
CPT 101	Computer Literacy I	**3**
FORD 100	Intro. To Auto Service	**5**
FORD 106	Basic Auto Electricity	4
FORD 103	Man. Trans/Drivelines	**4**
Quarter 2		
ENGL 101	Beginning Composition	3
FORD 201	Cooperative Exp. I	**4**
FORD211	Automotive Seminar	**2**
Quarter 3		
NSCI 101	Natural Science I	5
FORD 101	Basic Engines	**4**
FORD 108	Engine Performance	**5**
FORD 107	Climate Control	3
Quarter 4		
ENGL 102	Essay & Research	**3**
FORD 202	Cooperative Exp. II	**4**
FORD 212	Automotive Seminar II	2
Quarter 5		
ENGL 200	Business Communications	3
SSCI 10x	101, 102, 103, or 104	**5**
FORD 116	Auto Electronics	**4**
FORD 105	Brake Systems	3
FORD 104	Suspension and Steering	**4**
Quarter 6		
MATH 101	Business Math	
FORD 203	Cooperative Exp. III	**4**
FORD 213	Automotive Seminar III	**2**
Quarter 7		
FMGT 101	Personal Finance	4
HUM 1xx	111, 112, 113, 151, or 152	**5**
FORD 102	Automatic Transmissions	**5**
FORD 111	Engine Repair	2
FORD 126	Adv. Electronic Engine Control	4
Quarter 8		
COMM 105	Speech	3
FORD 204	Cooperative Exp. IV	**4**
FORD 214	Automotive Seminar IV	**2**
TOTAL CREDIT HOURS		**109**

Aviation Maintenance Technology

Aviation Maintenance Technology Associate Degree
Airframe Certificate
Powerplant Certificate

Aviation maintenance technicians find many job opportunities with airlines, airport operators, companies with aircraft, oil companies, the space program, and manufacturers. Industry studies predict a shortage of these mechanics during the next 10 years. Many industries not associated with aviation also recognize the skills of these technicians and hire them for non -aviation jobs.

Students in the Aviation Maintenance Technology program may pursue technical training for the Airframe Certificate, the Powerplant Certificate, both certificates, or the Associate Degree. The Airframe Certificate program covers the structure as well as mechanical, electrical, and hydraulic systems of airplanes. The Powerplant Certificate program covers the engine and its accessories. Students who complete both certificate programs may take additional course work to receive an Associate Degree. The Associate Degree or both of the certificate programs may be completed in eight quarters.

The Columbus State Aviation Maintenance facility is located at the Bolton Field Airport southwest of Columbus. The 10,000 square foot hangar houses the College's fleet of single- and multi-engine, reciprocating and jet engine aircraft. Well -equipped classrooms and laboratories provide students with hands-on experience in an airport environment.

The Aviation Maintenance Technology program is approved by the Federal Aviation Administration (FAA Certificate No. DL9T090R) and meets the requirements of FAA Regulation Part 147. Students successfully completing the appropriate technical studies are qualified to take the exam for the FAA Airframe and/or Powerplant certificate rating.

Upon completion of the Associate Degree or both Certificate programs in Aviation Maintenance Technology, the graduate will be able to:

- Use precision measuring tools to work on airframes and aviation powerplants.
- Perform nondestructive inspection and test procedures.
- Identify and select aviation industry hardware.
- Demonstrate a knowledge of correctly evaluating the quality of aircraft welds.
- Read and use blueprints for fabrication and repair procedures.
- Identify aircraft materials and their structural properties.
- Inspect, check, service, troubleshoot, and repair aircraft hydraulic systems; electrical systems; fuel systems; pneumatic vacuum systems; heating, cooling, and pressurization systems; and control systems.
- Perform structural repairs for both metal and composite airframe structures.
- Use corrosion control materials and procedures correctly and safely.
- Identify and select aircraft finishing material.
- Inspect, check, service, troubleshoot and repair landing gear and related systems.
- Inspect, check, service, troubleshoot and repair turbine engines and related systems.
- Inspect, check, service, troubleshoot and repair propellers and related systems.
- Meet FAA certification requirements for the Airframe and Powerplant certificates.

Aviation Maintenance Technology Associate Degree

COURSE		CR
Quarter 1		
MATH 103	Beginning Algebra II	4
AVI 111	Aviation Theory	6
AVI 115	Aircraft Maint Regs., Pubs., & Records	2
AVI 117	Basic Aviation Maintenance	5
AVI 119	Aircraft Drawings	2
Quarter 2		
ENGL 101	Beginning Composition	3
MATH 111	Technical Math I	4
AVI 121	Basic Electricity	9
AVI 125	Ground Operations & Cleaning	3
Quarter 3		
PHYS 181	Technical Physics 1 (Mechanics)	4
AVI 211	Aircraft Environmental Controls	4
AVI 213	Aircraft Instruments & Electronics	4
AVI 215	Aircraft Electrical Systems	7
Quarter 4		
ENGL 102	Essay & Research	3
PHYS 183	Technical Physics III (Prop. Of Matter)	4
AVI 221	Aircraft Structures I	4
AVI 223	Aircraft Structures II	9
Quarter 5		
ENGL 204	Technical Writing	3
AVI 24 1	Aircraft Fluid Power Systems	4
AVI 245	Aircraft Fuel Systems	2
AVI 246	Landing Gear Systems	4
AVI 249	Rigging, Assembly, & 100 hour Inspections	6
Quarter 6		
SSCI 10x	SSCI 101, 102, 103. or 104	5
AVI 311	Reciprocating Engine Theory, Overhaul, & Repair	6
AVI 313	Reciprocating Engine Ignition & Fuel Systems	6
AVI 315	Reciprocating Engine Cooling, Induction & Exhaust Systems	3
Quarter 7		
HUM 1XX	HUM 111, 112, 113, 151, or 152	
AVI 321	Turbine Engine Theory & Overhaul	6
AVI 323	Turbine Engine Airflow Systems	4
AVI 325	Turbine Engine Fuel & Ignition Systems	6
Quarter 8		
COMM 10.5	Speech	3
AVI 331	Propellers	6
AVI 333	Engine Instruments & Electrical Systems	3
AVI 335	Powerplant Inspection & Fire Protection	7
TOTAL CREDIT HOURS		**156**

Airframe Certificate

COURSE		CR
AVI 111	Aviation Theory	5
AVI 115	Aircraft Maintenance Regs., Pubs., and Records	2
AVI 117	Basic Aviation Maintenance	6
AVI 119	Aircraft Drawings	2
AVI 121	Basic Electricity	9
AVI 125	Ground Operations and Cleaning	3
AVI 211	Aircraft Environmental Controls	4
AVI 213	Airframe Instruments and Electronics	4
AVI 215	Aircraft Electrical Systems	7
AVI 221	Aircraft Structures I	4
AVI 223	Aircraft Structures II	9

AVI 241	Aircraft Fluid Power Systems	4
AVI 245	Aircraft Fuel Systems	2
AVI 246	Landing Gear Systems	4
AVI 249	Rigging, Assembly and 100 hour Inspections	6
TOTAL CREDIT HOURS		**71**

Powerplant Certificate Program

COURSE		CR
AVI 111	Aviation Theory	5
AVI 115	Aircraft Maintenance Regs., Pubs., and Records	2
AVI 117	Basic Aviation Maintenance	6
AVI 119	Aircraft Drawings	2
AVI 121	Basic Electricity	9
AVI 125	Ground Operations and Cleaning	3
AVI 311	Reciprocating Engine Theory, Overhaul and Repair	6
AVI 313	Reciprocating Engine Ignition & Fuel Systems	6
AVI 315	Reciprocating Engine Cooling, Induction & Exhaust	3
AVI 321	Turbine Engine Theory and Overhaul	6
AVI 323	Turbine Engine Airflow Systems	4
AVI 325	Turbine Engine Fuel and Ignition Systems	6
AVI 331	Propellers	6
AVI 333	Engine Instruments and Electrical Systems	3
AVI 335	Powerplant Inspection and Fire Protection	7
TOTAL CREDIT HOURS		74

Business Management

Business Management Associate Degree
Business Management Major
Small Business Management Major
Training and Development Certificate

In order to compete effectively in the 21st Century successful managers and entrepreneurs will need a complex set of interpersonal, communication, analytical and decision-making skills. Columbus State's Business Management program focuses on meeting these requirements for students who wish to attain a two-year degree in business management or who wish to upgrade current job performance skills. The emphasis in the program is on skill applications through the latest teaching techniques and technologies available. An electronic classroom is available on main campus for selected topical presentations, tutorials and group study. Included in the program are opportunities for the student to elect to take a hands-on internship experience with a local company or government agency, or to pursue independent research projects. The program is also available to students via distance learning, through the medium of television and computer-based instruction (See "Going the Distance" in the Programs of Study section).

To meet the demands of students desiring to own or operate a small business, the program includes a Small Business Management Major described below.

The Business Management Department also offers a Training and Development Certificate, intended to provide a unique opportunity to build your training and development skills, even if you are not working in human resources or training departments of your company. Professionals in all areas, such as managers who train, can benefit from skills and knowledge gained in these courses. This is a three-course certificate program available to degree as well as non-degree seeking students interested in improving training and development skills.

Columbus State Community College's degree granting business programs are nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP).

Upon completion of the Associate Degree program in Business Management, the graduate will be able to:

- Demonstrate knowledge of management theory, function, and skills.
- Apply knowledge of current computer technology and computational skills to business activities.
- Demonstrate a working knowledge of current legal, ethical, social, financial and economic environmental factors as they apply to business.
- Prepare and present written and oral business related reports for a variety of audiences at a generally accepted level of business English.
- Work effectively as a member of a team.
- Compile, analyze, and synthesize information to solve business problems.
- Apply the principles of the strategic planning process to a business simulation and case studies.

In addition to the Business Management core outcomes, a graduate pursuing the Business Management degree on-campus will be able to:

- Assess their own communication, leadership, and team building styles.
- Recognize the communication, leadership, and team building styles of others.
- Apply the skills of creative thinking, communication, adapting to change, motivation, and teamwork to business simulations, and selected projects.

Small Business Management Major

In addition to the Business Management core outcomes, a graduate pursuing the Small Business Management degree will be able to:

- Demonstrate knowledge of the skills needed to start a new business.
- Demonstrate knowledge of the methods used to conduct research into selecting an established business for purchase.
- List and explain the major factors influencing the success or failure of a small business.
- Develop a business plan.
- Demonstrate knowledge of the management skills needed to operate a small business.
- Demonstrate knowledge of the necessary accounting principles and records to operate a small business.
- Demonstrate knowledge of marketing and customer service principles as they apply to small business operations.

Associate Degree, Business Management Major

COURSE		CR
Quarter 1		
OADM 101	Business Grammar Review	3
Math 101	Business Math	5
MCT 106	Computer Literacy 2	3
BMGT 101	Introduction to Business	5
*BMGT 102	Managing Interpersonal Skills	3

*Not required for distance learning students

Quarter 2

BMGT 111	Management Principles	5
PSY 100	Introduction to Psychology	5
ENGL 101	Beginning Composition	3
*MCT 211	Information Presentation	3
#XXX XXX	Business Elective	5

*Not required for distance learning students
#Required for distance learning students only

Quarter 3

ENGL 102	Essay & Research	3
*BMGT 220	Leadership Fundamentals	3
#FMGT 101	Personal Finance	4
COMM 110	Conference & Group Discussion or COMM 105 Speech	3
LEGL 264	Legal Environment of Business	4
ECON 200	Principles of Microeconomics	5

*Not required for distance learning students
Required for distance learning students only

Quarter 4

ENGL 204	Technical Writing	**3**
BMGT 211	Organizational Behavior	**4**
HRM 121	Human Resource Management	**4**
ACCT 106	Introduction to Accounting I	**5**
MKTG 111	Marketing Principles	**5**

Quarter

ACCT 107	Introduction to Accounting II	**5**
HRM 220	Labor Relations	**5**
FMGT 201	Business Finance	**5**
HUM 1XX	Humanities 111, 112, 113, 151 or 152	**5**

Quarter 6

NSCI 101	Natural Science	**5**
BMGT 271	Management Decisions	**2**
BMGT 272	Case Studies/Bus. Seminar	**3**
BMGT 216	Business Ethics	**3**
XXX XXX	Technical Elective	**3**

TOTAL CREDIT HOURS **110**

Technical Electives:

In the courses listed below, BMGT prefix courses are approved for "business elective" requirements; all courses are approved for "technical elective" requirements:

BMGT 103	Interpersonal Skills II	**3**
BMGT 218	Management Training for Supervisors	**5**
**BMGT 219	International Business	**3**
HRM 124	Personnel Interviewing	**4**
**BMGT 231	Small Business Development	**4**
**BMGT 232	Small Business Operations	**4**
BMGT 253	Negotiation Principles	**3**
BMGT 261	Business Mgmt Internship I	**4**
BMGT 262	Special Problems in Business Management I	2
BMGT 273	Management Service Project	**3**
BMGT 276	Assessment, Analysis, & Evaluation Skills	**4**
BMGT 277	Instructional Design & Development Skills	4
BMGT 278	Training Delivery Skills	**4**
BMGT 280	Business Etiquette	**3**
**BMGT 285	Contemporary Studies in Business	1 - 6
MATH 135	Elementary Statistics	**5**
MKTG 122	Business and the Internet	**3**
MKTG 266	Customer Service	**3**
OADM 172	Advanced Microsoft Excel	**3**

**Also offered in distance learning/independent studies modes.

Associate Degree, Small Business Management Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	**3**
MATH 101	Business Math	**5**
MCT 106	Computer Literacy 2	**3**
BMGT 101	Introduction to Business	5
BMGT 102	Managing Interpersonal Skills	3
Quarter 2		
ENGL 102	Essay & Research	3
ECON 100	Introduction to Economics	5
BMGT 111	Management	5
MKTG 111	Marketing	5
Quarter 3		
ENGL 200	Business Communications	3
PSY 100	Introduction to Psychology	5
LEGL 264	Legal Environ. Of Business	4
ACCT 104	Small Business Accounting	3
Quarter 4		
COMM 105	Speech	3
ACCT 102	Managerial Accounting	3
HRM 121	Human Resources Management	4
BMGT 231	Small Business Development	4
NSCI 101	Natural Science	5
Quarter 5		
HUM 1XX	Humanities 111, 112, 113, 151 or 152	5
BMGT 232	Small Business Operations	4
MKTG 226	Customer Service Principles	3
FMGT 130	Small Business Finance	3
x x x x x x	Technical Elective	3
Quarter 6		
BMGT 234	Cases in Small Business	4
BMGT 238	Small Business Management Internship	4
BMGT 239	Small Business Management Internship Seminar	2
BMGT 235	Strategic Business Planning	5
TOTAL CREDIT HOURS		**104**

Note: The following courses may be used by any student in the Small Business Major to satisfy the Technical Elective requirements. Students currently serving as owner/manager of a small business, upon proof of ownership/management, may substitute the following electives for the BMGT 238 and 239 Internship Experience.

Electives:

BMGT 211	Organizational Behavior	**4**
BMGT 216	Business Ethics	**3**
BMGT 219	International Business	**3**
HRM 124	Personnel Interviewing	**4**
BMGT 236	Franchising	**3**
BMGT 237	Home-Based Business	**3**
MCT 211	Information Presentation	**3**
MKTG 230	Small Business Marketing	**3**

Training and Development Certificate

COURSE	CR	
BMGT 276	Assessment. Analysis &Evaluation	**4**
BMGT 277	Instructional Design &Development	**4**
BMGT 278	Training Delivery Skills	**4**
TOTAL CREDIT HOURS		**12**

Civil Engineering Technology

Civil Engineering Technology Associate Degree Surveying Certificate

The Associate of Applied Science Degree in Civil Engineering Technology provides a basis for entry-level careers in all phases of the construction continuum; planning, design, construction and operations. The Associate of Applied Science is designed as a terminal degree providing those skills necessary for immediate

employment. Graduates of the program are prepared to work for either private or governmental segments of the construction industry requiring civil engineering technicians. Specific employment positions include manual or computer assisted (CAD) construction drawing and contract document preparation for commercial, heavy and industrial/institutional projects, construction inspection, survey crew operations, and construction material quality control and quality assurance.

In addition to providing entry-level positions, the degree provides opportunities for individuals seeking career changes, continuing education and skills enhancement. The Civil Engineering Technology Degree is preparation for immediate, productive employment.

The Civil Engineering Technology Surveying Certificate is a one-year, three-quarter program, which provides a basis for entry-level careers in survey field and office operations. The one-year certificate is a directed focus program which empowers students with those skills necessary for construction layout of buildings and roadways and, working under the direction of a Registered Surveyor, in land surveying and subdivision of land. Specific employment positions include instrument person, field crew chief and drafter/designer.

The Surveying Certificate encompasses those Surveying courses, which when coupled with a Bachelor of Science in Civil Engineering fulfills the State of Ohio Board of Registration for Engineers and Surveyors Education Requirements toward registration as a Professional Surveyor.

Upon completion of the Associate Degree in Civil Engineering Technology, the graduate will be able to:

- Manually or with the assistance of computer aided drafting (CAD) prepare engineering drawings for public and private work projects.
- Apply appropriate proportioning, mixing, placing, curing and admixtures to ensure quality structural concrete structures.
- Perform appropriate testing of soils, aggregates, asphaltic and portland cement concrete, masonry, steel and wood in accordance with American Society of Testing Methods (ASTM) procedures.
- Correctly apply regulatory and industry standards to design stormwater management systems.
- Correctly apply regulatory and industry standards to design sanitary wastewater collection systems.
- Perform all field operations to determine preliminary route alignment, prepare centerline and offset staking notes and stake a proposed project for finish grade complete with cut sheet.
- Correctly apply Ohio Department of Transportation (ODOT), Federal Highway Administration (FHWA) and industry design standards to plan, design and detail a simulated highway including drainage structures.
- Apply subdivision regulations and surveying laws in the preparation of preliminary sketch, preliminary plat and final plat for a major private land subdivision.
- Perform preliminary site investigations, research infrastructure records, secure appropriate codes and regulations and prepare a set of preliminary drawings of an urban redevelopment site.
- Employ modem supervision techniques in field crew and work team settings.
- Perform quantity takeoffs for bid preparation.

Civil Engineering Technology Associate Degree

COURSE		CR
Quarter 1		
ARCH 111	Construction Drafting - Manual I	4
CIVL 120	Basic Construction Materials	3
CMGT 121	Building Construction Drawings	3
ENGL 101	Beginning Composition	3
MATH 148	College Algebra	5
Quarter 2		
ARCH 112	Construction Drafting -CAD I	3
CIVL 121	Heavy Construction Materials	3
CMGT 105	Construction Contract Documents	3
CMGT 131	Construction Quantity Survey	3
ENGL 102	Essay & Research	3
MATH 135	Elementary Statistics or	
MATH 150	Pre Calculus	5
Quarter 3		
xxx xxx	Basic Elective*	5
CMGT 106	Supervision of Field Operations	3
CMGT 123	Heavy Construction Drawings	3
CPT 101	Computer Literacy 1	3
SURV 141	Basic Surveying	4
Quarter 4		
CIVL 221	Elementary Hydraulics	3
CMGT 125	Heavy Construction Methods	3
ENGL 204	Technical Writing	3
MCT 106	Computer Literacy 2	3
SURV 241	Route Surveying	4
xxx xxx	Technical Elective	3
Quarter 5		
CIVL 223	Public Utility Systems	3
CIVL 232	Statics & Strength of Materials	3
COMM 105	Speech or COMM 110 Conf. & Group Discussion	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
SURV **245**	Survey Law	3
Quarter 6		
HUM 1xx	Humanities 111, 112, 113, 151, 152 or 224	5
SURV 243	Heavy Construction Standards	4
SURV 247	Townsite/Urban Development	3
SURV 249	Land Subdivision Systems	3
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**110**

Basic Elective must be selected from the following courses:

PHYS 117	College Physics	5
GEOL 101	Earth Systems I	5
REAL 102	Real Estate Law	3

Technical Electives must be selected from the following list of courses:

ARCH 113	Construction Drafting - CAD II	3
ARCH 237	Structures - Steel & Concrete	4
CIVL 112	MicroStation CAD Drafting	3
CIVL 233	Structural Steel Systems	3
CIVL 235	Structural Concrete Systems	3
CIVL 291	Field Co-op Experience	4
CMGT 241	Planning & Scheduling	3
LAND 152	Site Planning	3
SURV 248	Advanced Surveying Systems	4

Surveying Certificate

COURSE		CR
Quarter 1		
ARCH 112	Construction Drafting -CAD I	3
CMGT 123	Heavy Construction Drawings	3
ENGL 101	Beginning Composition	3
MATH 148	College Algebra	5
SURV 141	Basic Surveying	4

Quarter 2		
ENGL 102	Essay & Research	3
MATH 135	Elementary Statistics or MATH 150 Pre Calculus	5
REAL 102	Real Estate Law	3
SURV 24 1	Route Surveying	4
SURV 245	Survey Law	3
Quarter 3		
ENGL 204	Technical Writing	3
SURV 243	Heavy Construction Standards	4
SURV 247	Townsite/Urban Development	3
SURV 249	Land Subdivision Systems	3
*xxxx xxx	Technical Elective	**4**
TOTAL CREDIT HOURS		**53**

***Technical Elective Options**		
LAND 152	Site Planning	4
SURV 248	Advanced Surveying Systems	4

Computer Programming Technology

Networking & Distributed Systems Certificate
AS/400 Program Language Certificate
Object-Oriented Programming Certificate
Also see: EDP Auditing Major (Accounting)
Also see: Computer Electronics Major (Electronic Engineering Technology)
Also see: Microcomputing Technology

Society's increasing dependence on computers ensures a growing demand for qualified computer programming graduates. To meet this demand, Columbus State's Associate of Applied Science Degree program in Computer Programming Technology provides students with the technical skills required for entry-level programming and related positions in business. Students learn to write programs and use commercially available software on mainframe, mini and micro computers. Laboratory exercises using up-to-date equipment are an integral part of the program.

Columbus State Community College is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the Associate of Arts, Associate of Science, and Associate of Applied Science Degrees.

Upon completion of the Associate of Applied Science Degree in Computer Programming Technology, the graduate will be able to:

Write, debug, test, maintain and document programs, according to a program specification, in ANSI COBOL, CICS, IBM mainframe Assembly Language, ORACLE and some of the following languages: RPG, C++ and VISUAL BASIC.
Use an on-line editor for program development.
Write procedures to execute typical business applications on various computer platforms.
Use new program languages, application software or command languages, given the appropriate reference manuals.
Use PC based word processing, spreadsheet, database and other application software.

- Design, normalize and develop a corporate database using a relational Database Management System (DBMS).
- Understand the fundamental concepts of data communications applicable to business systems.
- Write program specifications for a typical business application using an appropriate system specification.
- Work effectively as part of a project or system team.

In addition to many of the Computer Programming Technology competencies, a graduate with a Certificate in Networking and Distributed Systems will be able to:

- Describe the various types of distributed processing systems and operating systems.
- Design, create, and operate a distributed DBMS.
- Use at least one major LAN operating system.
- Sit for an industry standard network system examination.
- Design, create, and implement a distributed processing system to support the information processing requirements for a large information management organization to include installing a DBMS.

In addition to many of the Computer Programming Technology competencies, a graduate with a Certificate in AS/400 Program Language will be able to:

- Use the basic features of the AS/400 including, handling messages, running programs, memory allocation, job types; starting and terminating jobs, controlling the printer output, the menu system, the help feature, the concepts of objects and libraries, the command language, and the Program Development Manager.
- Use programming constructs needed to develop CL programs and commands.
- Write batch RPG/400 programs utilizing structured code, create physical and logical files, define and access externally described files, and compile and debug RPG/400 programs for business applications.
- Write interactive programs utilizing subfiles.
- Write report programs utilizing external printer tiles.

In addition to many of the Computer Programming Technology competencies, a graduate with a Certificate in Object-Oriented Programming will be able to:

- Demonstrate techniques of Object Analysis and Object Design.
- Design, code and process ANSI Standard C++ programs.
- Design, code and process ANSI Standard Object-Oriented COBOL programs.
- Design objects and classes associated with Object Technology.
- Develop Windows programs using Object Technology.

Specific Program Admissions Information

Listed are additional requirements for admission to the Computer Programming Technology and following Certificate programs.

Computer Programming Technology

- Placement into MATH 121 - Mathematics for Computer Technology, or complete MATH 103 Beginning Algebra II
- Complete CPT 101 - Computer Literacy 1, or equivalent approved by Chairperson

Networking and Distributed Systems Certificate

- Complete MCT 221 - Local Area Networks
- Complete AAS degree in Computer Programming, Microcomputing or the equivalent

AS/400 Program Language Certificate

- MCT 106 - Computer Literacy 2
- CPT 108 - Program Design & Development
- CPT 111 - Assembly Language I

Object-Oriented Programming Certificate

- CPT 111 - Assembly Language 1
- CPT 201 - COBOL I
- Associate of Applied Science Degree in Computer Programming Technology or
- Equivalent work experience approved by the Department Chair of Computer Science.

Computer Programming Technology Associate Degree

COURSE		CR
Quarter 1		
MCT 106	Computer Literacy 2	3
CPT 108	Program Design & Development	3
MATH 121	Mathematics for Computer Technology	5
ACCT 111	Principles of Accounting I	5
ENGL 101	Beginning Composition	3
Quarter 2		
CPT 111	Assembly Language 1	5
ACCT 112	Principles of Accounting II	5
ENGL 102	Essay & Research	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
Quarter 3		
CPT 112	Assembly Language 2	5
CPT 131	Operating Systems	3
CPT xxx	Technical Electives	3
BMGT xxx	Business Elective	3
xxxx xxx	Basic Studies Elective (Accounting, Business Management, or Mathematics)	5
Quarter 4		
CPT 201	Cobol 1	5
CPT 211	Systems Analysis 1	4
CPT 221	Database Programming	3
CPT xxx	Technical Elective	3
COMM 105	Speech	3
Quarter 5		
CPT 202	Cobo1 2	5
CPT 212	Systems Analysis 2	4
CPT 225	Database Systems	3
ENGL 200	Business Communications	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
Quarter 6		
CPT 205	Cobol 3 (CICS)	5
CPT 281	Final Project	5
CPT 289	ACP Examination	1
CPT xxx	Technical Elective	5
TOTAL CREDIT HOURS		**110**

Technical Electives must be selected from the following list of courses:

COURSE		CR
CPT 155	Visual Basic	5
CPT 156	Advanced Visual Basic	5
CPT 206	Introduction to Object-Oriented COBOL	5
CPT 241	Introduction to AS/400	3
CPT 243	Command Language/400	3
CPT 244	AS/400 System Operations	3
CPT 245	Beginning RPG	5
CPT 246	Advanced RPG	5
CPT 248	RPG IV	5
CPT 251	C ++Language Programming	5
CPT 252	Advanced C ++	5
CPT 253	Programming in C++ for Windows	5
CPT 261	Network Communication Systems	5
CPT 262	Client/Server Systems	3
CPT 263	Networking	5
CPT 264	Advanced Networking	5
CPT 265	Distributed Database Management Systems	5
CPT 266	Certification Test Review	1
CPT 291-6	Special Topics in CS	1-6
CPT 297-9	Computer Science Internship/Field Experience	1-3
MCT 221	Local Area Networks	

AS/400 Program Language Certificate

COURSE		CR
Quarter 1		
CPT 241	Introduction to AS/400	3
Quarter 2		
CPT 243	Command Language/400	3
CPT 245	Introduction to RPG	5
Quarter 3		
PT 246	Advanced RPG	5
Quarter 4		
CPT 248	RPG IV	5
TOTAL CREDIT HOURS-		**21**

Object-Oriented Programming Certificate

COURSE		CR
Quarter 1		
CPT 251	C++ Programming	5
CPT 155	Visual Basic	5
Quarter 2		
CPT 252	Advanced C++ Programming	5
CPT 206	Object-Oriented COBOL	5
Quarter 3		
CPT 253	C++ Programming for Windows	5
TOTAL CREDIT HOURS		25

Networking & Distributed Systems Certificate

COURSE		CR
Quarter 1		
CPT 261	Network Communication Systems	5
CPT 262	Client/Server Systems	3
Quarter 2		
CPT 263	Networking	5
Quarter 3		
CPT 264	Advanced Networking	5
Quarter 3		
CPT 265	Distributed Database Management Systems	5
CPT 266	Certification Test Review	1
TOTAL CREDIT HOURS		24

Construction Management

The Construction Management program prepares graduates for entry-level employment with all types of construction companies. Inside positions include work assignments in marketing, sales, estimating and purchasing; field assignments include those in scheduling, cost control, quality assurance, assisting field superintendents, and monitoring safety programs. The local job market for these graduates is expected to continue to grow as the Columbus construction industry steadily expands.

In addition to technical and management courses taught at the College, Associate Degree students have the opportunity to work directly with employers through a summer quarter cooperative job program that fulfills part of the degree program requirements. Students in the program share a course core curriculum with other programs in the Construction Sciences Department. This core provides students with a strong foundation of technical skills as well as a sense of the teamwork needed in the construction field. Students also complete courses in communication skills, technical math and computer literacy.

Upon completion of the Associate Degree in Construction Management, the graduate will be able to:

Analyze and interpret all types of construction drawings and documents.
- Calculate quantities of material, labor, and equipment needed for a project.
- Analyze financial data relative to construction work in the field and office.
- Control field operations through cost analysis and productivity analysis.
- Apply data analysis to identify construction problems, specify goals, and execute projects.
- Utilize the critical path and Gantt bar chart methods to organize complex construction projects.
- Identify and understand the major elements in construction labor and contract law.
- Operate and use microcomputers, pre-packaged project management software, 35mm camera and scan machine.
- Stake out control points for projects using modem laser surveying equipment.
- Assist in developing marketing tools and objectives to increase the sales of no-bid jobs for their employers.
- Assist in purchasing or safety/loss control of equipment and materials.
- Apply bid strategies to marketing proposals for building and heavy construction type projects.
- Assist in resolving construction disputes, claims and arbitration/litigations.

Construction Management Associate Degree

COURSE	CR		
Quarter I			
ENGL	101	Beginning Composition	3
CMGT	101	Managing a Construction Company	3
CMGT	105	Construction Contract Documents	3
CMGT	115	Building Construction Methods	3
CMGT	121	Building Construction Drawings	3
CMGT	125	Heavy Construction Methods	3
Quarter 2			
CPT	101	Computer Literacy 1	3
CMGT	106	Supervision of Field Operations	3
CMGT	123	Heavy Construction Drawings	3
CMGT	131	Construction Quantity Survey	3
ENGL	102	Essay & Research	3
MATH	104	Intermediate Algebra	5
Quarter 3			
CIVL	120	Basic Construction Materials	3
CMGT	135	Safety and Loss Prevention	3
CMGT	141	Building Estimating	3
MATH	148	College Algebra	5
MCT	106	Computer Literacy 2	3
Quarter 4			
CMGT	241	Planning and Scheduling	3
CMGT	243	Construction Labor Law	3
CMGT	248	Heavy Construction Estimating	2
MATH	135	Elementary Statistics	5
SURV	141	Basic Surveying	4
Quarter 5			
COMM	105	Speech	3
CMGT	251	Construction Cost Controls	3
CMGT	252	Construction Contract Law	3
HUM	1xx	Humanities 111, 112, 113, 151 or 152	5
xxxx	xxx	Technical Elective	3
xxxx	xxx	Technical Elective	3
Quarter 6			
CMGT	261	Project Management	3
CMGT	263	Marketing Construction Services	3
ENGL	200	Business Communications	3
SSCI	10x	Social Science 101,102, 103 or 104	5
SURV	241	Route Surveying	4
TOTAL CREDIT HOURS			**110**

Technical Electives must be selected from the following list of courses:

ARCH	111	Construction Drafting - Manual I	4
ARCH	112	Construction Drafting -CAD I	3
CIVL	121	Heavy Construction Materials	3
CMGT	231	Computer Estimating	3
CMGT	253	Residential Construction	3
CMGT	290	Work Experience Seminar	1
CMGT	291	Construction Work Experience	4
SURV	245	Survey Law	3

Dental Hygiene

The Dental Hygiene program prepares the student to work as a dental hygienist in dental offices or clinics. The dental hygienist is responsible for providing quality oral hygiene services to all types of patients including adult, handicapped, and pediatric patients. The hygienist also provides patients with education in oral hygiene and disease prevention. Graduates of the program are eligible to take state, regional and national examinations.

Upon completion of the Associate Degree in Dental Hygiene, the graduate will be able to:

- Demonstrate an awareness of their roles and responsibilities within the community.
- Understand their roles as a dental health care provider.
- Demonstrate appropriate concern for the total well-being of their patients.
- Educate patients in oral hygiene and disease prevention.
- Demonstrate the knowledge and skills necessary to provide quality dental hygiene services to their patients.
- Sit for state and regional board examinations.

Specific Program Admissions Information
Listed below are additional requirements for admission to the Dental Hygiene program.

- High school Biology-grade "C" or better
- High school Chemistry-grade "C" or better
- Placement into MATH 103
- Placement into ENGL 101
- BIO 121 Human Anatomy, Physiology and Pathophysiology, with grade "C" or better
- MULT 102 with grade "C" or better OR completion of American Red Cross or American Heart

Association CPR/Basic Life Support Course

- Dental hygienist observation or experience working in a dental office or clinic.

Dental Hygiene Associate Degree Program

COURSE		CR
Quarter 1		
PSY 100	Intro. to Psychology	5
BIO 122	Anatomy, Physiology & Pathology II	5
DHY 140	Head & Neck Anatomy & Tooth Morphology	3
DHY 141	Head & Neck Anatomy & Tooth Morphology Lab	1
DHY 110	Introduction to Dental Hygiene	3
Quarter 2		
CHEM 113	General & Biological Chemistry	5
DHY 120	Clinic I (pre-clinic)	4
DHY 111	Dental Hygiene Techniques I	2
DHY 130	Dental Radiography	3
DHY 131	Dental Radiography Lab	1
ENGL 101	Beginning Composition	3
Quarter 3		
ENGL 102	Essay & Research	3
DHY 112	Dental Hygiene Techniques II	1
DHY 121	Clinic II	4
DHY 240	Dental Materials	2
DHY 241	Dental Materials Lab	1
BIO 115	General Microbiology	5
Quarter 4		
DHY 210	Dental Hygiene Techniques III	1
DHY 220	Clinic III	4
DHY 250	Oral Histology and Pathology	4
DHY 260	Periodontology	3
HOSP 153	Nutrition	5
Quarter 5		
DHY 211	Dental Hygiene Techniques IV	1
DHY 221	Clinic IV	4
DHY 270	Pharmacology	2
HUM 1xx	Humanities 111, 112, 113, 114, 151 or 152	5
Quarter 6		
xx xxx	Technical Elective(s)	3
DHY 212	Dental Hygiene Techniques V	1
DHY 222	Clinic V	4
DHY 280	Community Dental Health	3
COMM 105	Speech	3
ENGL 200	Business Communications	3
Quarter 7		
SSCI 10x	Social Science 101, 102,103 or 104	5
DHY 213	Dental Hygiene Techniques VI	2
DHY 223	Clinic VI	5
DHY 28 1	Community Dental Health External Projects	1
TOTAL CREDIT HOURS		**110**

Technical electives, student's must select 3 hours from the following:

CPT 101	Computer Literacy 1 OR	3
MCT 106	Computer Literacy 2	3
MLT 100	Introduction to Health Care	3
MULT 174	Personal Health	3
MULT 101	Medical Terminology	2
MULT 103	Responding to Emergencies	2
MULT 108	Twelve-Lead Electrocardiography	2
MULT 112	Identifying Cardiac Rhythms	2
MULT 170	Cancer Prevention, Diagnosis and Treatment	1
MULT 171	Current Issues: HIV	1
MULT 172	Instructor Course HIV/AIDS	1
MULT 190	Radiation Protection for Health Care Providers	2
MULT 221	Introduction to Sleep Disorders	2
MULT 276	Legal Aspects and Risk Management	3

Dental Laboratory Technology

Dental laboratory technicians are skilled artisans. They create the appliances that restore or replace oral tissues or structures. For example, they fabricate complete dentures, removable partial dentures, crowns, and bridges.

The Dental Laboratory Technology program provides students with experience in fabricating a wide variety of dental appliances, using state-of-the art materials and equipment. The program develops skill, not only in proper construction, but also in attractive appearance and accuracy of fit for patient comfort. Because workers in the dental lab area may be exposed to infectious materials and communicable diseases, the program emphasizes safety and infection control. Columbus State's program is accredited by the American Dental Association.

New students enter the program in the fall quarter, but applications to the program may be submitted at any time.

Upon completion of the Associate Degree in Dental Laboratory Technology, the graduate will be able to:

- Design and fabricate complete dentures, removable partial dentures, crowns and bridges to a clinically acceptable degree.
- Apply learned theories to problem cases involving all dental laboratory procedures.
- Identify acceptable dental impressions submitted from clients.
- Read and accurately interpret dental laboratory prescriptions.
- Select and safely use the proper materials and equipment for a given case.
- Recognize specific landmarks of the oral cavity associated with a given case.
- Install, adjust, and store equipment and supplies.
- Σ Demonstrate the attitude, abilities, and professionalism essential for the welfare of the patient.
- Practice safety and health regulations as established by the state and federal government.

Specific Program Admissions Information
Listed below are additional requirements for admission to the Dental Laboratory Technology.

- High school graduate or G.E.D. equivalency
- College placement tests in math, reading, and writing skills
- Contact Dental Laboratory Coordinator to schedule an interview

Dental Laboratory Technology Associate Degree Program

COURSE		CR
Quarter 1		
DENT 101	Materials I	3
DENT 102	Materials II	2

DENT 111	Anatomy	3
DENT 121	Complete Dentures I	3
MATH 102	Beginning Algebra I	4
CPT 101	Computer Literacy 1	3
Quarter 2		
DENT 122	Complete Dentures II	2
DENT 132	Occlusion	3
DENT 142	Removable Partial Dentures I	3
CHEM 100	Introduction to Chemistry	4
ENGL 101	Beginning Composition	3
Quarter 3		
DENT 123	Complete Dentures III	3
DENT 143	Removable Partial Dentures II	2
DENT 153	Fixed Partial Dentures I	3
ENGL 102	Essay & Research	3
PHYS 100	Introduction to Physics	4
Quarter 4		
DENT 224	Complete Dentures IV	2
DENT 244	Removable Partial Dentures III	3
DENT 254	Fixed Partial Dentures II	3
DENT 264	Dental History & Ethics	2
ENGL 200	Business Communications	3
COMM 105	Speech	3
Quarter 5		
DENT 255	Fixed Partial Dentures III	4
DENT 275	Ceramics I	4
DENT 285	Orthodontics	2
BMGT 231	Small Business Development	4
BIO 101	Introduction to Anatomy & Physiology	3
Quarter 6		
DENT 256	Fixed Partial Dentures IV	3
DENT 276	Ceramics II	3
DENT 296	Applied Lab I	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
Quarter 7		
DENT 297	Applied Lab II	7
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
TOTAL CREDIT HOURS		**107**

Early Childhood Development

With the increase of both the two income family and the single parent household, there is a great demand for qualified professionals trained in early childhood education. Early childhood professionals are responsible for planning daily activities, developing educational practices, and utilizing community resources to enrich programs and to support the needs of children and their families. The graduate is employed as a pre-kindergarten teacher, or Head Start preschool/childcare administrator, nanny, infant/ toddler care-giver or family childcare provider.

The Early Childhood Development (ECD) program is approved by the Ohio Department of Education for the Pre -Kindergarten Associate Teaching Certificate. This certificate qualifies holders for pre-kindergarten positions in a variety of early childhood settings, including Head Start, public school preschool, inclusive settings with children with special needs, as well as part-day and full day child care programs for children The Early Childhood course of study exceeds the requirements for staff as outlined in the revised Ohio Child Care Licensing Rules.

Upon completion of the Associate Degree in Early Childhood Development, the graduate will be able to:

- Apply principles of human growth. development, and learning to the teaching of young children.
- Demonstrate a respectful and nurturing teaching style.
- Develop appropriate educational practices for young children that foster the growth of skills in problem solving, decision making, critical thinking and communication.
- Recognize individual needs and use appropriate teaching strategies (including identification, selection, and/or preparation of materials and methods) to address children's individual differences in developmental levels, culture, learning styles and activities.
- Recognize and respect unique characteristics of families and use appropriate strategies to address family needs.
- Use a variety of strategies to evaluate children's growth and development with parents and relevant professionals.
- Design a physically safe environment to facilitate children's independence, choices and inner control which will create and sustain positive learning.
- Evaluate professional development of self and role as teacher.

Specific Program Admissions Information
Listed below are additional requirements for formal admission to Early Childhood Development.

- High school graduate or G.E.D. equivalency
- Placement into Beginning Composition - ENGL 101
- Completion of the following four courses with a grade of "C" or above:
- ECD 105 - Self Concept
- ECD 107 - Curriculum Planning
- ECD 203 - Creative Curriculum
- PSY 261 - Introduction to Child Development

Early Childhood Development Program Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
ECD 105	Self Concept	3
ECD 106	Observing and Recording	1
ECD 107	Curriculum Planning	3
Quarter 2		
ENGL 102	Essay & Research	3
PSY 261	Child Development	5
ECD 203	Creative Curriculum	3
ECD 161	ECD Field Seminar I	1
ECD 171	ECD Field Experience I	1
ECD 201	Health and Safety	3
	OR	
	ECD 200 First Aid &	1
	ECD 202 Communicable Disease &	1
	ECD 204 Child Abuse & Neglect	1
Quarter 3		
SOC 101	Introduction to Sociology	5
MATH 101	Business Mathematics	5
ECD 112	Physical Development Curriculum	3
ECD 172	ECD Field Experience II	1
ECD 162	ECD Field Seminar II	1
ECD 103	Cognitive Curriculum	3
Quarter 4		
COMM 105	Speech	3
SSCI 101	Cultural Diversity	5
ECD 109	Language Exp. Early Childhood Programs	3
GER 103	Interpersonal Communications in Human Services	4

Quarter 5		
ENGL 200	Business Communications	3
ECD 206	Social Development Curriculum	3
ECD 110	Infant/Toddler Curriculum	3
GER 203	Family Ecology	3
LCD 173	ECD Field Experience III	1
ECD 163	ECD Field Seminar III	1
Quarter 6		
HUM 1xx	Humanities 111, 112, 113, 151, 152 or 224	5
ECD 205	Parent Involvement in Early Childhood Programs	3
ECD xxx	Technical Elective	3
ECD 208	Young Children with Special Needs	3
ECD 264	ECD Seminar IV	1
ECD 274	ECD Field Experience IV	1
Quarter 7		
NSCI 101	Natural Science	5
ECD 207	Guidance Discipline in Early Childhood	3
ECD 265	ECD Seminar V and	1
ECD 275	ECD Field Experience V	1
	OR	
ECD 267	Student Teaching Seminar and	2
ECD 277	Student Teaching Practicum	3
TOTAL CREDIT HOURS		**105-107**

Technical Elective must be selected from the following courses:

ECD 211	Child Care Administration 3
ECD 209	Early Childhood Staff3
*ECD 115	School Age Child Care 3
*ECD 151	ECD Media Resource I 1
*ECD 152	ECD Media Resource II 1
*ECD 190	Activity Plan Seminar I
***ECD 220**	Special Topics in Early Childhood 1-3

***Not required for graduation**

Electra-Mechanical Engineering Technology

With the rapid growth occurring in automation, robotics, computer integration, product development, and all new processes for manufacturing, research, material movement, and equipment maintenance support, there is an increased demand for individuals who can apply and perform problem-solving duties associated with the integration of electrical and mechanical devices.

The objective of the Electra-Mechanical Engineering Technology program is to educate and prepare students for career opportunities in manufacturing environments where automated and semi-automated machines and processes are used.

Electra-Mechanical Engineering Technicians perform both preventive and corrective maintenance on electro-mechanical systems as well as aiding in the design of such systems.

Upon completion of the Associate Degree in Electra-Mechanical Engineering Technology, the graduate will be able to:

- Read and interpret engineering drawings.
- Select an appropriate electric motor and control based on known functional requirements.
- Identify and troubleshoot hydraulic and pneumatic systems.
- Troubleshoot electric motors.
- Identify and select electro-mechanical components for typical industrial requirements.
- Select and use appropriate power control devices, timers, transducers and sensors.
- Apply servo-mechanisms with regard to accuracy, **overshoot,** and stability of automated equipment.
- Identify closed-loop and open-loop systems and select the type of control required to achieve a given system response.
- Demonstrate skill in applying programmable controllers to operate simple processes.
- Perform preventive and corrective maintenance on electro-mechanical automated systems.

The Electra-Mechanical Engineering Technology also shares related courses with the Electronic Engineering Technology, Mechanical Engineering Technology and Quality Assurance Technology. For additional information refer to those section(s) of the Catalog.

Electra-Mechanical Engineering Technology Associate Degree

COURSE		**CR**
Quarter 1		
MATH 111	Technical Mathematics I	**4**
EET 111	DC Fundamentals	**4**
EET 112	DC Lab	**2**
MECH 110	Introduction to Manufacturing	**3**
MECH 112	Computer Applications in Manufacturing	**3**
Quarter 2		
ENGL 101	Beginning Composition	**3**
MATH 112	Technical Math II	**4**
PHYS 181	Technical Physics (Mechanical)	**4**
EET 120	AC Fundamentals	**4**
EET 121	AC Lab	**2**
Quarter 3		
ENGL 102	Essay and Research	**3**
EET 130	Electronic Devices	**4**
EET 132	Digital Fundamentals	**3**
EET 131	Electronic Lab	**2**
MECH 120	Mechanical Drafting I	**3**
MECH 131	Hydraulics 3	
Quarter 4		
COMM 105		**3**
PHYS 183	Technical Physics (Prop. Mat.)	**4**
EET 243	Digital Devices	**4**
EET 244	Digital Devices Lab	**2**
MECH 243	Robotics	**3**
EMEC 250	Motors & Controls	**3**
Quarter 5		
ENGL 203	Technical Writing	**3**
HUM 1XX	Humanities 111, 112, 113, 151 or 152	**5**
EMEC 251	Electro-Mech. Controls I	**4**
MATH 135	Elementary Statistics	**5**
QUAL 240	Total Quality Management	**3**
Quarter 6		
SSCI 10X	Social Sciences 101, 102, 103 or 104	**5**
MECH 240	Machine Tools	**4**
EMEC 260	Electro-Mech. Controls II	**4**
MECH 260	Basic Mechanisms	**4**
TOTAL CREDIT HOURS		**107**

Electronic Engineering Technology

Electronic Engineering Technology
Associate Degree
Computer Electronics Major

The Electronic Engineering Technology opens numerous doors of opportunity for its graduates. Employment in fields as diverse as avionics, banking, biomedicine, distribution, telecommunications, manufacturing, servicing, radio/TV and audio production await today's graduate. Growth in both the number of positions and variety of opportunities is expected to expand well into the 21st century.

Course work covers the basics of electronics with technical electives available for specialization in computer repair, digital and fiber optic communication, computer aided drafting and control.

Columbus State's Electronic Engineering Technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET). For further information regarding accreditation, contact: Accreditation Director for Engineering Technology, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202.

Graduates who wish to continue their education may transfer their Associate Degree credits to a number of four-year institutions that offer baccalaureate degrees in engineering technology.

Upon completion of the Associate Degree in Electronic Engineering Technology, the graduate will be able to:

Apply technical terms in their proper context when writing or speaking.
Analyze and locate problems in basic electronic circuits.
Demonstrate knowledge of a basic approach to trouble-shooting.
Read and interpret engineering specifications.
Measure electrical quantities (e.g., voltage, current, resistance, frequency, etc.) accurately and draw conclusions.
Collect, compile, and graph experimental data.
Write technical reports.
Use calculators and/or computers for analysis and technical problem solving.
Prepare electronic schematics using manual and computer-aided systems.
Analyze and interpret circuit diagrams.
Apply a knowledge of the basics of electronics to a variety of applications the graduates will see as they work in the profession.

The Electronic Engineering Technology also shares related coursework with the Electra-Mechanical Engineering and Quality Assurance Technologies. For additional information refer to those sections of the Catalog.

Computer Electronics Major

Students interested in combining electronics with computer programming should consider the Computer Electronics Major. This program enables the student to enroll in courses on how to use computers as well as the electronics of the computer. Please contact the chairperson of either the Electronic Engineering Technology or Computer Programming Technology for more information.

In addition to the general Electronic Engineering Technology competencies, a graduate majoring in Computer Electronics will be able to:

- Write, debug, test, maintain and document programs in Assembly, and C++ language programs.
- Write Job Control Language (JCL) necessary to execute typical business applications on an IBM mainframe computer using DOSNSE.
- Use a terminal in an on-line environment (ADR/VOLLIE).
- Use word processing, spreadsheet, and graphic software available for the IBM PC and local area networks.
- Use flow charting.

Specific Program Admission Information
Listed below are additional requirements for admission to the Computer Electronics Major.

- Complete CPT 101 - Computer Literacy 1 or equivalent approved by the Chairperson of Computer Programming Technology

Electronic Engineering Technology
Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 111	Tech Math I	4
EET 110	Electronic Drafting	2
EET 111	Direct Current Fundamentals	4
EET 112	Direct Current Lab	2
COMM 105	Speech	3
Quarter 2		
ENGL 102	Essay & Research	3
MATH 112	Tech Math II	4
PHYS 181	Physics I (Mechanics)	4
EET 120	Alternating Current Fundamentals	4
EET 121	Alternating Current Lab	2
Quarter 3		
ENGL 204	Technical Writing	3
MATH 113	Tech Math III	4
EET 130	Electronic Devices	4
EET 131	Electronic Devices Lab	2
EET 132	Digital Fundamentals	3
EET 1xx	Technical Elective	3
Quarter 4		
EET 240	Calculus for Electronics	5
EET 241	Electronic Devices Circuit Analysis	4
EET 242	Electronic Devices Circuit Anal. Lab	2
EET 243	Digital Devices	4
EET 244	Digital Devices Lab	2
Quarter 5		
PHYS 185	Technical Physics (Heat, Light, Sound)	4
EET 250	Electronics Comm. I	4
EET 251	Electronics Comm. Lab	2
EET 252	Microprocessors	4
EET 253	Microprocessors Lab	2
EET 254	Electronic Fabrication	2
Quarter 6		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
EET 260	Industrial Electronics	4
EET 261	Industrial Electronics Lab	2
EET 2xx	Technical Elective	3
SSCI 10x	101, 102, 103 or 104	5
	TOTAL CREDIT HOURS	**108**

Technical Electives must he selected from the following list of courses:

EET 1xx - select one of the following:		
EET 122	CAD/Electronics	3
EET 144	PC Hardware	3
EET 145	Computer Maintenance	3
EET 146	Computer Network Communications Systems	5
EET 2xx - select one of the following:		
EET 255	Instrumentation and Control	3
EET 262	Digital Comm. & Telecomm.	3
EET 264	Fiberoptic Comm.	3

Electronic Engineering Technology Associate Degree Computer Electronics Major

COURSE		CR
Quarter 1		
MATH 121	Computer Science Math I	
MCT 106	Computer Literacy 2	
ENGL 101	Beginning Composition	3
PHIL 150	Introduction to Logic	5
EET 144	PC Hardware	3
Quarter 2		
MATH 111	Technical Math I	4
CPT 108	Program Design Development	3
EET 111	DC Fundamentals	4
EET 112	DC Laboratory	2
EET 110	Electronic Drafting	2
ENGL 102	Essay & Research	3
Quarter 3		
MATH 112	Technical Math II	4
CPT 111	Assembly Language I	5
EET 120	AC Fundamentals	4
EET 121	AC Laboratory	2
ENGL 204	Technical Writing OR	3
ENGL 200	Business Communications	3
Quarter 4		
EET 130	Electronic Devices	4
EET 131	Electronic Devices Lab	2
EET 132	Digital Fundamentals	3
PHYS 181	Technical Physics (Mechanics)	4
MCT 221	Local Area Networks	3
Quarter 5		
EET 241	Electronic Devices Circuit Analysis	4
EET 242	Electronic Devices Circuit Analysis Lab	2
EET 243	Digital Devices	4
EET 244	Digital Devices Lab	2
EET 254	Electronic Fabrication	2
CPT 251	Intro to C++ Programming	5
Quarter 6		
EET 145	Computer Maintenance	3
CPT 131	Operating Systems	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
SSCI 10x	Social Science 101, 102, 103 or 104	5
COMM 105	Speech	3
TOTAL CREDIT HOURS		**109**

Emergency Medical Services

Emergency Medical Services Associate Degree
EMT-Basic Certificate
EMT-Intermediate Certificate
EMT-Paramedic Certificate
Advanced Cardiac Life Support Certificate
Advanced Rescue Certificate
Basic Trauma Life Support Certificate
CPR Instructor Certificate
EMS Administration Certificate
EMS Dispatcher Certificate
EMS Rescue Certificate
First Responder Certificate
Hazardous Materials Certificate
River Rescue Certificate

Emergency medical technicians work under the direction of a physician to act as the primary pre-hospital care provider in the health care system. They must first make a comprehensive evaluation of the patient's condition and the overall situation. They may then need to provide immediate life-saving care. Technicians must demonstrate a high degree of technical skill, calmness, and professionalism, even under the most adverse conditions .

Columbus State's Associate Degree program in Emergency Medical Services exposes students to a wide variety of victim care situations, including direct patient care in local hospitals and on emergency vehicles. Instructors are highly experienced and active in the field of emergency medicine.

In addition to the Associate Degree, the Emergency Medical Services program offers the EMT- Basic Certificate, the EMT -Intermediate Certificate and the EMT-Paramedic Certificate accredited by the State Board of Emergency Medical Services Nos. 063305 and 5-3-007. The EMT-Paramedic Certificate program is also nationally accredited through the Commission on Accreditation of Allied Health-Education Programs. For information on additional certificates see the Emergency Medical Services Technology Coordinator.

Students in the EMT-Basic Certificate program must first complete the EMT-Basic course, and then pass the State/National EMT-A Certification written and practical exams. By state law, a student must be a certified EMT-Basic before enrolling in the EMT-Intermediate or the EMT-Paramedic Certificate programs.

Good mental and physical health are critical in emergency medical services. Students must have a physical examination and must meet program health requirements before they may participate in clinical laboratory experiences. Because students and workers in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention. In addition, all students must be covered by EMT-student liability insurance while enrolled in the certificate courses.

Upon completion of the Associate Degree requirements in Emergency Medical Services Technology, the graduate will be able to:

- Perform all of the duties included in EMT-Basic and EMT-Paramedic training, after successfully completing State of Ohio/National certification exams in these two areas.
- Demonstrate knowledge of the legal aspects of emergency medical service.
- Prepare for and deal with disasters, including those involving hazardous materials.
- Explain the complexity of emergency medical service.

EMT-Basic Certificate

Students completing the EMT-Basic Certificate will be able to:

- Meet State of Ohio/National requirements to take the EMT-Basic certification examination.
- Evaluate the nature and seriousness of a patient's condition or the state of the patient's injuries and assess requirements for emergency care.
- Administer appropriate emergency care to stabilize the patient's condition, including tracheal intubation and automated external defibrillation.
- Lift, move, position, and otherwise handle the patient in such a way as to minimize discomfort and further injury.

EMT-Intermediate Certificate

Students completing the EMT-Intermediate Certificate will be able to:

- Meet State of Ohio/National requirements to take the EMT-Intermediate certification examination,
- Perform all duties of an EMT-Basic.
- Initiate appropriate intravenous procedures as specifically authorized by medical authority in advance.

EMT-Paramedic Certificate

Students completing the EMT-Paramedic Certificate will be able to:

Meet State of Ohio/National requirements to take the EMT-Paramedic certification examination.

Perform all duties of the EMT-Basic.

Initiate appropriate intravenous procedures as specifically authorized by medical authority in advance.

Initiate and continue emergency medical care under medical control, including recognizing presenting conditions and initiating appropriate invasive and noninvasive therapies (e.g., surgical and medical emergencies, airway and respiratory problems, cardiac dysrhythmias, cardio pulmonary arrest, and psychological crisis), and assessing the response of the patient to that therapy.

For information on additional certificates see the Emergency Medical Services Technology Coordinator.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Emergency Medical Services Technology.

- High school graduate or G.E.D. equivalency
- 18 years of age or older (contact EMS Coordinator)
- Completed health statement
- Contact EMS Technology Coordinator for additional requirements

Emergency Medical Services Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
BIO xxx	Biological & Physical Science Elective	3
MATH 102	Beginning Algebra I	4
EMS 110	EMT- Basic	8
Quarter 2		
BIO 115	General Microbiology	5
ENGL 102	Essay & Research	3
COMM 105	Speech	3
EMS 123	Emergency Psych. Intervention	3
EMS 124	Public Health Education	3
Quarter 3		
ENGL 200	Business Communications	3
EMS 125	Disaster Aid	3
BIO 161	Human Anatomy	5
BIO 169	Human Physiology	5
Quarter 4		
EMS 211	EMT-P I	7
EMS 281	Hospital Clinical I	2
EMS 291	Field Clinical I	1
EMS 126	Advanced Rescue Techniques	4
EMS 127	Handling Hazardous Material Situations	2
EMS xxx	Technical Elective	2
Quarter 5		
EMS 212	EMT-P II	6
EMS 232	Advanced Cardiac Life Support	1
EMS 282	Hospital Clinical II	2
EMS 292	Field Clinical II	1
EMS 121	EMS Systems	3
EMS 122	Legal Principals for EMT	2
Quarter 6		
EMS 213	EMT-P III	5
EMS 283	Hospital Clinical III	2
EMS 293	Field Clinical III	1
SSCI 10x	Social Science 101, 102, 103 or 104	5
Quarter 7		
EMS 214	EMT-P IV	1
EMS 234	Basic Trauma Life Support	1
EMS 284	Hospital Clinical IV	2
EMS 294	Field Clinical IV	2
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
TOTAL CREDIT HOURS		**108**

Technical Electives -

EMS 130	River Rescue	3
EMS 131	Special Topics For EMT	3
EMS 132	EMS Dispatcher	2
EMS 133	Ice & Cold Water Rescue	2
EMS 134	EMS Administration I	4
EMS 135	EMS Administration II	3
EMS 140	Construction/Collapse for Fire/Rescue	3
EMS 141	Hazardous Material (Technician Level)	3
EMS 142	Vertical Rescue	2
EMS 143	Search and Rescue	2
EMS 144	Confined Space Rescue	2
EMS 145	Vehicle Extraction	2
EMS 147	Farm/Agricultural Rescue	2

EMT-Basic Certificate

COURSE		CR
EMS 110	EMT - Basic	8

EMT-Intermediate Certificate

COURSE		CR
EMS 111	EMT - Intermediate	6

EMT-Paramedic Certificate

COURSE	CR	
EMS 211	EMT-P I	7
EMS 281	Hospital Clinical I	2
EMS 291	Field Clinical I	1
EMS 212	EMT-P II	6
EMS 232	Advanced Cardiac Life Support	1
EMS 282	Hospital Clinical II	2
EMS 292	Field Clinical II	1
EMS 213	EMT-P III	5
EMS 283	Hospital Clinical III	2
EMS 293	Field Clinical III	1
EMS 214	EMT-P IV	1

EMS 234	Basic Trauma Life Support	1
EMS 284	Hospital Clinical IV	2
EMS 294	Field Clinical IV	2

EMS-Administration Certificate

COURSE		CR
BMGT 218	Supervisor Training for Managers	5
HRM 121	Human Resources Management	4
MCT 106	Computer Literacy 2	3
EMS 121	EMS Systems	3
EMS 134	EMS Administration I	4
EMS 135	EMS Administration II	3

EMS - Rescue Certification

COURSE	CR	
EMS 130	River Rescue	3
EMS 133	Ice & Cold Water Rescue	2
EMS 140	Construction/Collapse for Fire/Rescue	3
EMS 141	Hazardous Materials (Technician Level)	2
EMS 142	Vertical Rescue	2
EMS 143	Search & Rescue	2
EMS 144	Confined Space Rescue	2
EMS 145	Vehicle Extraction	2

Emergency Medical Service/ Fire Science

(Associate of Technical Studies degree)

In many areas emergency medical services are provided through the fire service agencies. This unique Associate of Technical Studies degree provides the student with the opportunity to combine these two exciting programs into a degree with specific preparation for entering or advancing in such agencies.

The Associate of Technical Studies degree offers the EMT-Basic Certificate, the EMT-Intermediate Certificate and the EMT -Paramedic Certificate accredited by the State Board of Medical Services Nos. 063305 and 5-3-007. The EMT-Paramedic Certificate is also nationally accredited through the Commission on Accreditation of Allied Health Education Programs.

Students must first complete the EMT-Basic course and then pass the State/National EMT-A Certificate written and practical exams. By state law a student must be certified EMT-Basic before enrolling in the EMT-Intermediate or EMT-Paramedic Certificate programs.

Good mental and physical health are critical in emergency services therefore students must have a physical examination, meet the program health requirements and be covered by the EMT-student liability insurance.

Upon completion of the Associate of Technical Studies in Emergency Medical/Fire Science, the graduate will be able to:

- Prepare for and deal with disasters, including those involving hazardous materials.
- Perform all duties included in the EMT-Basic and EMT-Paramedic training after successfully completing the Ohio / National certification exams in these two areas.
- Demonstrate knowledge of the legal aspects of the fire and emergency services.
- Demonstrate the basic knowledge for fire investigation and hazardous materials.
- Prepare themselves for a promotional exam.

For students outcomes for EMT-Basic Certificate, EMT-Intermediate Certificate and EMT-Paramedic Certificate see Emergency Medical Services.

COURSE	CR	
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra	4
EMS 110	EMT Basic	8
Quarter 2		
ENGL 102	Essay & Research	3
CHEM 100	Intro to Chemistry	4
FIRE xxx	Fire Elective	3
COMM 105	Speech	3
Quarter 3		
ENGL 200	Business Communications	3
CHEM 113	General & Biological Chemistry	5
MCT 106	Computer Literacy II	3
FIRE xxx	Fire Elective	3
FIRE xxx	Fire Elective	3
Quarter 4		
PSY 100	Into to Psychology	5
EMS 211	EMT-P I	7
EMS 281	Hospital Clinical	2
EMS 291	Field Clinical	1
FIRE xxx	Fire Elective	3
Quarter 5		
HUM 1xx	Humanities 111, 112, 113, 15 1 or 152	5
EMS 212	EMT-P II	6
EMS 232	Advanced Cardiac Life Support	1
EMS 282	Hospital Clinical II	2
EMS 292	Field Clinical II	1
Quarter 6		
FIRE xxx	Fire Elective	3
FIRE xxx	Fire Elective	3
EMS 213	EMT-P III	5
EMS 283	Hospital Clinical III	2
EMS 293	Field Clinical III	1
Quarter 7		
SSCI 1xx	Social Science 101, 102, 103, or 104	5
FIRE xxx	Fire Elective	3
FIRE xxx	Fire Elective	3
EMS 234	Basic Trauma Life Support	1
EMS 214	EMT-P IV	1
EMS 284	Hospital Clinical IV	2
EMS 294	Field Clinical IV	1
TOTAL CREDIT HOURS		**108**

Technical Electives (FIRE)		
FIRE 101	Introduction to Fire Protection	3
FIRE 102	Fire Inspector I (Prevention Practices)	3
FIRE 104	Fire Investigation Methods	4
FIRE 106	Protection System	3
FIRE 107	Fire Fighting Practices	4
FIRE 108	Fire Fighting Command I	4
FIRE 109	Fire Fighting Command II	3
FIRE 110	Fire Safety Education	3
FIRE 112	Firefighter I & II	12
FIRE 115	Community Affairs I-local Government	3
FIRE 116	Personnel Training Methods	3
FIRE 151	Fire Inspector II (Fire Prevention Codes)	4
FIRE 153	Fire Hydraulics	4
FIRE 202	Hazardous Materials II	4
FIRE 203	Legal Aspects of Fire Protection	3
FIRE 204	Fire Service Rating System (Fire Insurance)	2
FIRE 205	Fire Serv. Company Officer (Superv. Mthds)	3
FIRE 206	Administration of Fire Department	3
FIRE 207	Customer Services for the Fire Services	3
FIRE 208	Fire Code Blueprint Analysis	3
FIRE 209	Fire Fighting Problems	3
FIRE 212	Fire Fighting Practices Lab	2
EMS 140	Construction/Collapse for Fire Rescue	3
EMS 141	Hazardous Materials (Technician level)	4

Environmental Technology

Health & Safety for Hazardous Waste Operations Training Program Certificate

Environmental technicians work in a wide variety of entry-level positions for environmental engineering consulting firms, environmental laboratories, wastewater and water treatment facilities, lead abatement contractors, manufacturing facilities, governmental agencies, and other organizations requiring individuals to work in environmentally related positions. The demand for technicians capable of performing tasks such as sample collection, monitoring, data management, and instrumentation calibration, operation, and maintenance continues to increase. According to recent surveys, and current job placement rates, the job market for environmental technicians in Central Ohio is very strong.

Columbus State's Associate Degree program in Environmental Technology has a diverse curriculum which includes many basic science courses, as well as, courses offered by other engineering technologies. This curriculum provides students with a strong foundation of technical skills necessary for careers in the environmental industry. A summer quarter internship program also offers students hands-on experience in a real work setting.

In additional to providing environmental technicians with entry-level training, the degree provides opportunities for individuals seeking career changes, continuing education and skills enhancement.

For additional information on the Health and Safety for Hazardous Waste Operations Training Program Certificate, or other OSHA training opportunities, see the Environmental Technology Advisor.

Upon completion of the Associate Degree in Environmental Technology, the graduate will be able to:

Compile data and perform data manipulation and reporting tasks using a word processor, spreadsheet and graphics.
Assist the engineer in preparing reports using technical writing skills.
Collect air, water, waste, and soil samples for routine monitoring as required by regulatory agencies.
Review toxic or hazardous waste studies to provide information for compliance with environmental standards.
Assist in the operation and maintenance of systems used to control pollution at the source as required by environmental laws.
Perform duties related to the management, storage, disposal, and emergency response to spills of hazardous materials and toxic substances in accordance with OSHA health and safety requirements.
Collect and compile data necessary for an environmental site assessment.
Utilize basic concepts of geology and hydrology in summarizing data to be used in analyzing the environmental fate and transport of hazardous substances.
Conduct field investigations using environmental instrumentation.

- Understand basic risk assessment and toxic substances exposure analysis techniques.
- Understands duties requiring knowledge of industrial hygiene in hazardous materials, including OSHA legislation.

Environmental Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
ENVR 101	Introduction to Environmental Technology	3
ENVR 158	Environmental Analysis	3
MATH 112	Technical Math II	4
BIO 111	Introductory Biology I	5
Quarter 2		
ENGL 102	Essay & Research	3
ENVR 110	Industrial Pollution Control	3
ENVR 112	Environmental Computer Applications	3
ENVR 130	Environmental Regulations	5
GEOL 101	Earth Systems I	5
Quarter 3		
CHEM 111	Elementary Chemistry I	5
ENVR 111	Hazardous Materials Management	3
ENVR 120	Environmental Aspects of Soils	3
SURV 141	Basic Surveying	4
Summer Quarter (between 1st and 2nd year)		
ENVR 252	Health & Safety Training for Hazardous Waste Operations.	3
Quarter 4		
MATH 135	Elementary Statistics	5
ENVR 224	Environmental Hydrology	3
ENVR 250	Subsurface Investigation Techniques	5
SSCI 104	World Economic Geography	5
Quarter 5		
CIVL 221	Elementary Hydraulics	3
COMM 110	Conference & Group Discussion	3
ENGL 204	Technical Writing	3
ENVR 220	Environmental	5
ENVR 255	Air Monitoring	3
Quarter 6		
ENVR 253	Environmental Systems Analysis	3
ENVR 254	Subsurface Restoration Techniques	5
HUM 152	American Civilization II recommended or Humanities 111, 112, 113, or 151	5
xxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**106**

Technical elective must be selected from the following list of courses:

ENVR 222	Water Treatment Techniques	3
ENVR 223	Wastewater Treatment Techniques	3
ENVR 256	Hazardous Materials Refresher Training	1
ENVR 290	Work Experience Seminar	1
ENVR 291	Field Co-op Experience	4
ENVR 297	Special Topics in Environmental Technology	1
ENVR 298	Special Topics in Environmental Technology	2
ENVR 299	Special Topics in Environmental Technology	3

Health & Safety Training for Hazardous Waste Operations Training Program

COURSE		CR
ENVR 252	Health & Safety Training for Hazardous Waste Operation	3

Facility Management

The types of facilities and range of responsibilities fulfilled by facility managers are staggering in their scope. Facility managers ensure the smooth operation of thousands of residential, commercial, and industrial properties throughout Central Ohio everyday.

The knowledge and expertise required of competent facility managers ranges from understanding the basics of a building's heating, air conditioning, electrical, plumbing and communications systems, to utilizing critical business concepts in accounting/ finance and human resources. Facility managers work with hotels, office buildings, convention centers, sports arenas, shopping malls and on college campuses. Columbus' thriving economy and the current anticipated boom in capital development will increase the need for skilled facility managers for years to come.

Upon completion of the Associate Degree in Facility Management, the graduate will be able to:

Conduct presentations that demonstrate his/her understanding of the basic facility management functions and the organizational framework for the delivery of facility management services.
Apply current management techniques and principles to real life facility management situations.
Assist with facility financial forecasting and budgeting.
Assist with real estate procurement, leasing and disposal.
Competently communicate his/her understanding of the impact of facilities on individual and group performance orally and/or in writing.
Act in accordance with relevant regulatory codes in addressing health, safety and security issues in facility management.
Aid in procurement of furnishings, equipment and outside facility services.
Competently communicate his/her understanding of basic building operations, including utilities and mechanical systems, telecommunications, waste management and general maintenance orally and/or in writing.
Competently read and prepare architectural and engineering documents.

Facilities Management Associate Degree

COURSE		CR
Quarter 1		
ARCH 111	Construction Drafting - Manual I	4
CMGT 121	Building Construction Drawings	3
ENGL 101	Beginning Composition	3
FAC 111	Introduction to Facility Management	3
MATH 135	Elementary Statistics	5
Quarter 2		
ACCT 101	Financial Accounting	4
ENGL 102	Essay & Research	3
FAC 150	Operations and Maintenance	3
MATH 148	College Algebra	5
xxx xxx	Specialty Courses (listed below) or Technical Elective	3
Quarter 3		
ACCT 102	Managerial Accounting	3
ARCH 112	Construction Drafting - CAD I	3
BMGT 111	Management Principles	5
COMM 105	Speech or COMM 110 Conf & Group Discussion	3
CMGT 105	Construction Contract Documents	3
xxx xxx	Specialty Courses (listed below) or Technical Elective	3
Quarter 4		
ARCH 116	Piping Systems	3
BMGT 211	Organizational Behavior	4
FAC 240	Telecommunications	2
REAL 101	Real Estate Principles and Practice	3
xxx xxx	Specialty Courses (listed below) or Technical Elective	3
xxx xxx	Specialty Courses (listed below) or Technical Elective	3
Quarter 5		
ARCH 214	Electricity & Lighting	3
ARCH 232	Building Construction Standards	3
ENGL 204	Technical Writing	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
xxx xxx	Specialty (listed below) or Technical Elective	4
Quarter 6		
FAC 250	Computer Applications for Facility Management	2
FAC 260	Problems in Facility Management	5
HAC 222	Load Calculations I	4
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
REAL 221	Professional Property Management	3
TOTAL CREDIT HOURS		**110**

Specialty or Technical Electives must be selected from the following list of courses: (see program advisor before selecting courses)

Facility Planning Specialty Courses:

COURSE		CR
ARCH 113	Construction Drafting -CAD II	3
ARCH 130	Introduction to Interior Design	4
FAC 270	Programming/Space Planning	3

Energy Management Specialty:

COURSE		CR
HAC 141	Principles of Refrigeration	3
HAC 152	Instrumentation/Combustion Process	3
HAC 183	HAC Wiring Circuits I	3

Construction Management Specialty:

COURSE		CR
CMGT 115	Building Construction Methods	3
CMGT 131	Construction Quantity Survey	3
CMGT 141	Building Estimating	3

General Option Specialty:

COURSE		CR
HRM 121	Human Resources Management	4
ENVR 158	Environmental Analysis	3
BMGT 253	Negotiation Principles	4

Technical Electives:

COURSE		CR
ARCH 100	Introduction To Architectural History	5
ARCH 250	Building Enclosure Materials	3
BMGT 151	Purchasing Principles	4
CMGT 135	Safety & Loss Prevention	3
CMGT 241	Planning & Scheduling	3
CMGT 251	Construction Cost Controls	3
ECON 200	Introduction to Microeconomics	5
ENVR 130	Environmental Laws & Regulations	4
ENVR 255	Air Monitoring	5
HAC 242	HAC Mechanical Standards/Safety	3
HRM 220	Labor Relations	5
SURV 247	Townsite & Urban Development	3

Finance

Today's banking, consumer credit, and commercial credit industries offer outstanding career opportunities for community college graduates. The Associate Degree program in Finance gives students the knowledge and skills they need to succeed in entry-level and management training positions. These may be in finance departments of corporations, government agencies, and departments of banks, savings and loans, mortgage companies, and insurance companies. Examples of these positions include loan processor, loan officer, mortgage banking trainee, credit analyst. insurance analyst, financial planner, collections manager, stockbroker trainee, and financial analyst.

Columbus State's six-quarter program cooperates with the Columbus Chapter of the American Institute of Banking (AIB). Through this arrangement, students may earn AIB certificates of academic achievement, in addition to completing the Associate Degree.

Columbus State is nationally accredited as an associate degree granting institution offering business programs by the Association of Collegiate Business Schools and Programs (ACBSP).

Upon completion of the Associate Degree in Finance, the graduate will be able to:

- Explain the key concepts of financial transactions.
- Explain operational methods of various financial institutions.
- Plan credit investigations and make credit granting decisions for both commercial and consumer credit.
- Analyze financial statements.
- Analyze stocks, bonds, and mutual funds and the interrelationship between them.
- Analyze financial problems with spread sheet software.
- Apply capital budgeting techniques.
- Write financial plans.
- Produce research reports on current topical issues relevant to financial markets.

Finance Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
CPT 101	Computer Literacy I	3
BMGT 111	Management	5
ACCT 101	Financial Accounting	4
Quarter 2		
ENGL 102	Essay & Research	3
MATH 103	Beginning Algebra II	4
ACCT 102	Managerial Accounting	3
MCT 106	Computer Literacy II	3
FMGT 101	Personal Finance	4
Quarter 3		
MATH 135	Elementary Statistics	5
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
FMGT 201	Business Finance	5
ENGL 200	Business Communications	3
Quarter 4		
LEGL 264	Legal Environment of Business	4
FMGT 202	Money & Banking	5
ECON 200	Principles of Microeconomics	5
xxx xxx	Approved Elective	3
Quarter 5		
FMGT 211	Investments	4
FMGT 221	Credit Administration	4
ECON 240	Principles of Macroeconomics	5
MKTG 111	Marketing Principles	5
Quarter 6		
xxx xxx	Approved Elective	5
FMGT 251	Finance Research	2
NSCI 101	Natural Science I	5
BMGT 271	Management Decisions	2
COMM 105	Speech	3
TOTAL CREDIT HOURS		**102**

Business Elective courses may be selected from courses in: Math, Computer Programming, Financial Management, Retail, Real Estate. Accounting. Business Management. and Marketing.

Technical Electives for AIB:

COURSE		CR
FMGT 232	Principles of Bank Operations	4
FMGT 237	Law and Banking	4

Fire Science

Technological advancements and increasing sophistication in tire fighting and prevention have made the role of the professional in this field more complex and requires advanced preparation. This program is designed for firefighters and persons in related fields such as construction engineering, insurance investigation and corporate safety.

The program emphasizes fire lighting techniques, tire prevention, fire protection systems and customer service. Combining these subjects with advanced hazardous material response, building construction and hydraulics gives the student a firm foundation in fire protection and prevention.

Upon completion of the Associate Degree in Fire Science, the graduate will be able to:

- Demonstrate effective communication and interpersonal skills with management, other firefighters and the public.
- Explain the history and basic principles of the fire service to recruits and the public.
- Determine the potential for collapse of and tire spread in structures.
- Demonstrate knowledge of the legal aspects of the fire service.
- Perform all duties of incident command.
- Calculate necessary fireground pump. nozzle and sprinkler pressures.
- Prepare themselves for a promotional exam.

Fire Science Associate Degree

Quarter 1		
COURSE		**CR**
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra	4
FIRE 102	Fire Inspector I	3
CPT 101	Computer Literacy I	3
Quarter 2		
ENGL 102	Essay & Research	3
CHEM 100	Intro to Chemistry	4
LAWE 104	Government and the Law	3
EMS 140	Construction/Collapse for Fire Rescue	3

Quarter 3		
ENGL 200	Business Communications	3
LAWE 268	Hazardous Materials	3
SSCI 1xx	Social Science 101, 102. 103. or 104	5
FIRE 207	Customer Service in Fire Service	3
Quarter 4		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
FIRE 117	Firefighter I & II	12
Quarter 5		
COMM 105	Speech	3
PSY 100	Intro to Psychology	5
FIRE 106	Fire Protection Systems	3
FIRE 204	Fire Service Rating System	2
FIRE 209	Fire Fighting Problems	3
Quarter 6		
FIRE 104	Fire Investigations Methods	4
FIRE 108	Fire Command I	4
FIRE 116	Personnel Training Methods	3
FIRE 205	Fire Service Company Officer	3
EMS 141	Hazardous Materials (Technician Level)	4
Quarter 7		
FIRE 109	Fire Command II	3
FIRE 153	Fire Hydraulics	4
FIRE 203	Fire Prevention-Legal Aspects	3
FIRE 306	Administration of a Fire Department	3
LAWE 266	High Rise Safety	2
TOT.412 CREDIT HOURS		106

Gerontology (Aging Studies)

Gerontology Associate Degree
Gerontology Certificate
Activities Programming for the Elderly in Long Term Care Certificate

Gerontology is the study of the process of aging and includes the interrelationship of physical, psychological, and social aging. The practice of gerontology emphasizes the promotion of independence and self-reliance and attempts to improve social functioning and to foster satisfying relationships between older adults and their environments.

The older population is the fastest growing age group in the nation. Steady growth is expected to continue, and by the year 2000, older persons will represent 12.6% of Ohio's total population. This increased older population has created a need for graduates trained in Gerontology.

In addition to the Associate Degree, the Gerontology program offers a Gerontology Certificate. This certificate is designed for individuals with previous degrees or professional credentials from accredited institutions who wish to work in Gerontology. The Gerontology Certificate consists of 2 parts: 1) required core courses and 2) an emphasis in either Human Services or Business. Life experience credit for emphasis area courses will be evaluated on an individual basis by the Gerontology coordinator. For additional information on the Activities Programming for the Elderly Certificate, see the Gerontology Coordinator.

Graduates are prepared to work with seniors in community centers, social service agencies, home health programs, nutrition projects, or retirement communities. The student is trained to link the elderly with community resources, assist in finding housing or employment, and to provide creative outlets through recreational activities.

Upon completion of the Associate Degree in Gerontology, the graduate will be able to:

- Recognize biological, psychological, social, and psychosexual aspects of aging.
- Acknowledge the later years as a time of growth and development.
- Assess adaptations to aging in terms of interpersonal relationships and personality.
- Support clients and families in the grieving process.
- Address the psychosocial, biological and economic needs of older women in our culture.
- Relate the demographics of a target population to program planning needs.
- Adapt interpersonal communication skills to the needs of older adults.
- Use appropriate interventions to facilitate problem solving: information and referral, advocacy, data gathering, problem identification, and care management.
- Demonstrate an understanding of legal rights of older adults related to income sources, medical services: discrimination, housing, and community services.
- Assist older adults in selecting appropriate housing environments.
- Demonstrate knowledge of diagnostic and assessment processes for organic and functional mental illness that may affect older adults.
- Demonstrate an understanding of the effects of social policy on organizational and operational structures as related to older adults.
- Use appropriate physical, social, and mental health interventions along the continuum of well-elderly to frail-elderly.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Gerontology Program

- High school graduate or G.E.D. equivalency
- Placement into ENGL 101 - Beginning Composition
- Completion of GER 101 - Social Gerontology with a grade of "C" or above
- Completion of DEV 031 - PreAlgebra with a grade of "C" or above

Gerontology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
GER 101	Social Gerontology	3
GER 103	Interpersonal Communication in Human Services	4
Quarter 2		
PSY 240	Human Growth & Development	4
SSCI 101	Cultural Diversity	5
ENGL 102	Essay & Research	3
GER 105	Human Services for the Elderly	4
Quarter 3		
PSY 230	Abnormal Psychology	3
CPT 101	Computer Literacy 1	3
GER 109	Social Work with the Elderly	5
GER 191	Seminar I	2
GER 192	Practicum 1	2
COMM 110	Conference & Group Discussion	3

Quarter 4		
ENGL 202	Writing for the Health & Human Services	3
BIO 101	Anatomy & Physiology	3
GER 291	Seminar II	2
GER 292	Practicum II	2
GER 209	Aging and Mental Health	3
MCT 106	Computer Literacy 2	3
Quarter 5		
GER 213	Aging **and** Physical Health	3
GER 293	Seminar III	2
GER 294	Practicum III	2
GER 207	The Older Woman	3
GER 211	Counseling the Elderly	3
GER XXX	Elective	3
Quarter 6		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
GER 214	Aging, Fitness and Exercise	3
GER 201	Social Policy and Aging	3
GER 204	Death and Bereavement	3
GER 295	Seminar IV	2
GER 296	Practicum IV	2
TOTAL CREDIT HOURS		**99**

Technical Electives Choose 3 to 5 hours from:

COURSE		**CR**
GER 205	Activities Prog. for the Elderly in Long Term Care	9
GER 206	Senior Center Management	5
GER 203	Family Ecology	3

Gerontology Certificate

COURSE		**CR**
GER 101	Social Gerontology	3
GER 105	Human Services for the Elderly	4
GER 201	Social Policy and Aging	3
GER 209	Aging and Mental Health	3
GER 213	Aging and Physical Health	3
GER 291 & 295	Seminar	4
GER 292 & 296	Practicum	4
Emphasis in Human Services		
GER 109	Social Work with the Elderly	5
GER 211	Counseling the Elderly	3
GER 204	Death & Bereavement	3
GER 207	The Older Woman	3
Emphasis in Business		
BMGT 111	Management	5
MKTG 111	Marketing Principles	5
HRM 121	Human Resource Management	4
BMGT 231	Small Business Development	3
BMGT 232	Small Business Operations	3
MULT 272	Health Care Resource Management	4

Graphic Communications Technology

Graphic communications is the transmission of ideas, concepts, and information by word, picture, or symbol from one person to another. New materials, techniques, and processes make graphic communications an ever-expanding, challenging technology. Because the demand for advertising, printing, publishing, packaging, storage and retrieval of information is so high, the communication industry ranks fifth in total income and employment opportunities.

Students enrolled in the Associate of Applied Science degree program in the Graphic Communications Technology receive practical training in all types of print production operations. They also take technical electives in such areas as color photography and advanced publishing. Graduates of the program are qualified to work in any industry where the transmission of ideas, concepts, and information is essential.

Upon completion of the Associate Degree in Graphic Communications Technology, the graduate will be able to:

- Specify type styles and sizes, coordinate colors, and employ the elements of design to communicate effectively.
- Prepare camera-ready mechanicals (including multicolor overlays).
- Prepare flats or image carriers for single and multicolor work; prepare proofs for single and multiple color designs.
- Operate a 35 mm camera, process the film, make enlargements, and perform general darkroom and photo lab duties.
- Calibrate a lithographic camera for proper exposure, develop film, operate film processors, read densitometers, and adjust density range on halftones.
- Operate computer-controlled typesetting equipment, format and tabulate copy, and store and retrieve information on disks.
- Operate single and multicolor offset presses safely and demonstrate knowledge of cylinder packing procedures and fountain chemical solutions.
- Demonstrate knowledge of various text-generating computer graphic technologies and equipment, and relate them to local industry trends.
- Use communication skills (verbal, written, and graphic) to interact effectively with clients, co-workers, and others in the work environment.
- Demonstrate the ability to manage and evaluate print production operations, including estimating the cost of a production order, analyzing specification and production data to assign time and personnel to specific jobs, and applying a working knowledge of the graphics industry to the operation of the business.

Graphic Communication Technology Associate Degree

COURSE		**CR**
Quarter 1		
GRPH 112	Introduction to Computer Graphics	4
GRPH 110	Survey of Graphic Communications	4
GRPH 111	Black and White Photography	4
ENGL 101	Beginning Composition	3
MATH 102	Algebra I	4
Quarter 2		
GRPH 125	Image Assembly	5
GRPH 122	Electronic Publishing	5
ENGL 102	Essay & Research	3
NSCI 101	Natural Science	5
Quarter 3		
GRPH 130	Press Operations	4
GRPH 131	Design and Typography	4
GRPH 132	Paper and Ink	4
COMM 105	Speech	3
MKTG 111	Marketing Principles	5
Quarter 4		
GRPH 243	Computer Graphic Illustration	4
GRPH 242	Image Capture and Conversion	4
BMGT 111	Management	5
GRPH 241	Estimating	4
ENGL 204 or ENGL 200	Technical Writing or Business Communications	3
Quarter 5		
GRPH 251	Electronic Imaging	5
GRPH 244	Quality Control in Graphic Communications	4

ACCT 101	Financial Accounting	4
SSCI 10x	Social Science 101, 102, 103 or 104	5

Quarter 6

GRPH 285	Printing Production Management	4
GRPH xxx	Technical Electives	3
GRPH xxx	Technical Electives	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
TOTAL CREDIT HOURS		**110**

Technical Electives must he selected from the following list of courses:

COURSE		CR
GRPH 270	Advanced Black and White Photography	3
GRPH 271	Studio Photography	3
GRPH 273	Design II	3
GRPH 281	Color Photography	3
GRPH 282	Electronic Publishing II	3
GRPH 284	Presentation Production	4
GRPH 279	Estimating II	3
GRPH 278	Photo Lab	1
GRPH 297, 298,299	Special Topics in Graphic Communications	1-3

Students should request a program plan of study from their faculty advisor.

Health Information Management Technology

Health Information Management Technology Associate Degree
Legal Medical Consulting (ATS) (See Legal Assisting)
Medical Coding Specialist Certificate
Medical Transcription Certificate

The Health Information Management Technology prepares the student to become a professional responsible for maintaining components of health information systems consistent with the medical, administrative, ethical, legal, accreditation, and regulatory requirements of the health care delivery system. In all types of health care facilities, the health information management technician possesses the technical knowledge and skills necessary to process, maintain, compile, and report health information data for reimbursement, facility planning, marketing, risk management, utilization management, quality assessment and research; abstract and code clinical data using appropriate classification systems; and analyze health records according to standards. The health information management technician may also be responsible for functional supervision of the various components of the health information system.

The Medical Transcriptionist Certificate Program prepares students for entry-level skills needed to become a medical transcriptionist. Certificate completion provides an individual with a basic knowledge in medical science, English and skills in computers, and transcribing medical dictation. Accuracy, clarity, timeliness and displaying professional and ethical conduct are qualities required by employers of Medical Transcriptionists.

The Medical Coding Specialist Certificate program prepares students with entry-level skills needed to code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval and statistical analysis. Principles in ICD-9-CM coding, CPT coding, and third-party reimbursement will be emphasized.

Associate Degree, Health Information Management Technology

Upon completion of the Associate Degree in the Health Information Management Technology, the graduate will be able to:

- Review health records for completeness and accuracy.
- Verify components necessary to ensure appropriateness and adequacy of health care documentation.
- Maintain and compile secondary health information.
- Apply legal principles, policies, regulations, and standards for the control, use, and dissemination of health information.
- Collect, compute, analyze, interpret, and present statistical data related to health care services.
- Code, classify, and index diagnoses and procedures for the purpose of reimbursement, standardization, retrieval and statistical analysis.
- Review, retrieve, and compile health data for reimbursement, quality assessment, patient care research, clinical registers, and other identified informational needs.
- Apply principles of supervision and leadership and the tools used to effectively manage human resources.

Completion of the Associate Degree in Health Information Management Technology will permit graduates to transfer to The Ohio State University for a Bachelor of Science Degree in Health Information Administration.

Medical Coding Specialist Certificate

Upon completion of the Medical Coding Specialist Certificate, the graduate will be able to:

- Review health records for completeness and accuracy.
- Identify components of appropriate and adequate documentation of health care.
- Code, classify, and index diagnosis and procedures for the purposes of reimbursement.
- Abstract information from patient records to complete a claim properly.

Medical Transcription Certificate

Upon completion of the Certificate in Medical Transcription, the graduate will be able to:

- Demonstrate a knowledge and usage of medical terminology as it relates to the science of medicine.
- Demonstrate a knowledge of the diagnostic techniques, indications, values and significant results used in clinical diagnosis and treatment of patients.
- Demonstrate a knowledge of surgery, radiology and pathology procedures.
- Demonstrate proper English usage, grammar, spelling, punctuation and sentence structure.
- Demonstrate a knowledge of the equipment used in transcribing dictation and the ability to use it.
- Recognize, discriminate, and clarify inconsistencies and appropriately edit while transcribing.
- Demonstrate accuracy and productivity in transcribing dictation.
- Demonstrate an understanding of medical ethics and medical legal responsibilities of a transcriptionist.
- Demonstrate an awareness of the environment in which the transcriptionist is employed.

Specific Program Admissions Information

Listed are additional requirements for admission to the Health Information Management Technology.

- High school graduate or G.E.D. equivalency
- Required high school (or equivalent) courses:
- Algebra, with a grade of “C” or above
- Biology, with a grade of “C” or above
- Chemistry, with a grade of “C” or above
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 102 - Beginning Algebra I

Health Information Management Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
BIO 121	Anatomy Physiology & Path. I	5
MCT 106	Computer Literacy II	3
HIMT 111	Intro. to Health Info. Management	2
HIMT 121	Advanced Medical Terminology	3
HIMT 123	Health Data Management	3
Quarter 2		
ENGL 102	Essay and Research	3
MATH 102	Beginning Algebra I	4
BIO 122	Anatomy, Physiology & Path. II	5
HIMT 134	Analysis of the Health Record	3
HIMT 141	Pharmacology for HIMT	3
Quarter 3		
ENGL 200	Business Communications	3
HUM xxx	HUM 111, 112, 113, 151, 152	5
HIMT 133	Legal Aspects of the Health Record	3
HIMT 245	ICD-9-CM Coding	5
HIMT 267	Principles of Management	3
Quarter 4		
SSCI 10x	SSCI 101, 102, 103, 104	5
HIMT 132 I	Intro. to Medical Transcription	2
HIMT 243	Ancillary Health Facilities	3
HIMT 255	CPT-4 Coding	5
HIMT 292	Clinical Practicum I	2
Quarter 5		
COMM 110	Conference & Group Discussion	3
HIMT 256	Clinical Data Analysis	3
HIMT 257	Intro. to Health Statistics	3
HIMT 259	Quality and Resource Management	4
HIMT 265	Medical Reimbursement	3
HIMT 294	Clinical Practicum II	2
Quarter 6		
MULT 102	CPR	1
LEGL 238	Insurance Law **or**	3
MCT 141	Adv Data Base Systems **or**	3
OADM 111	Accounting Basics	4
HIMT xxx	Technical Elective	4
	HIMT 291 Health Info. Management Seminar	3
HIMT 296	Clinical Practicum III	2
TOTAL CREDIT HOURS		**104**

Medical Coding Specialist Certificate

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
BIO 121	Anatomy Physiology & Path. I	5
HIMT 121	Advanced Medical Terminology	3
HIMT 134	Analysis of the Health Record	3
Quarter 2		
ENGL 102	Essay and Research	3
BIO 122	Anatomy, Physiology & Path. II	5
MCT 106	Computer Literacy II	3
Quarter 3		
ENGL 200	Business Communications	3
HIMT 141	Pharmacology for HIMT	3
HIMT 245	ICD-9-CM Coding	5
Quarter 4		
HIMT 255	CPT-4 Coding	5
HIMT 256	Clinical Data Analysis	4
HIMT 265	Medical Reimbursement	4
TOTAL CREDIT HOURS		**47**

Medical Transcription Certificate

C O U R S E		CR
Quarter 1		
ENGL 101	Beginning Composition	3
BIO 121	Anatomy Physiology & Path. I	5
MCT 106	Computer Literacy II	3
OADM 131	Keyboarding I	3
HIMT 121	Advanced Medical Terminology	3
Quarter 2		
ENGL 102	Essay and Research	3
BIO 122	Anatomy, Physiology & Path. II	5
HIMT 132	Intro. to Medical Transcription	2
HIMT 141	Pharmacology for HIMT	3
Quarter 3		
ENGL 200	Business Communications	3
HIMT 272	Advanced Medical Transcription Laboratory	4
TOTAL CREDIT HOURS		**37**

Heating, Ventilating and Air Conditioning Technology

Heating, Ventilating and Air Conditioning Technology Associate Degree
High Pressure Boiler License Training Program

The Heating, Ventilating and Air Conditioning Technology prepares graduates for a wide variety of occupations in the 150 billion dollar mechanical environment sciences field. Graduates find employment with large commercial heating and air conditioning contractors, residential mechanical contractors, parts and equipment distributors, large commercial and industrial facility maintenance departments, hospital facilities maintenance departments, custom design or new construction markets.

The large increase in new high rise buildings and real estate development within all major cities is a clear indication of the rapid increase in job market opportunities available. Also many of our graduates find employment with equipment manufacturers in research and development. Today’s society is demanding more emphasis on the ethical, legal and regulatory requirements relating to environmental concerns that are facing the HVAC industry today and in the future.

The degree program offers the training needed to develop a high degree of technical skill, as well as the ability to work with minimal supervision and a strong sense of personal responsibility. Graduates with field experience and further experience in business management can look to ownership of their own I-WAC companies.

The four course High Pressure Boiler License Training program prepares students to take the State of Ohio High Pressure Boiler Operators License examination. Students will still be required to establish actual work experience around high pressure boilers in accordance with State of Ohio requirements. This boiler license program gives technicians the opportunity to progress from licensed boiler operator through many more responsible jobs in industry and commercial applications.

Upon completion of the Associate Degree in Heating, Ventilating and Air Conditioning Technology, the graduate will be able to:

- Create manual and computer graphic representations of HVAC projects.
- Select piping materials and design piping systems.
- Be able to perform designs for commercial and industrial piping systems, including water, steam and refrigeration piping.
- Calculate heat loss and heat gain loads for residential and commercial structures, using National ACCA manuals and computer software.
- Use testing and analyzing instruments, calculate combustion process for various fuels (e.g., natural gas, coal, and fuel oil) to ensure proper operation for the most efficient operation of boilers and furnaces.
- Assist in the selection and application of various residential and commercial HVAC equipment to solve environmental problems.
- Assist in the design of automatic control circuits using electromechanical and electronic control devices.
- Assist in designing preventative maintenance programs for various HVAC systems.
- Research and apply local, state and national codes to various environmental systems.
- Assist in conducting energy audits of residential and commercial structures.
- Test and calculate air flow through system equipment.
- Read control schematics and test control circuits for malfunctions.
- Troubleshoot and repair gas/electric furnaces, fuel oil furnaces, split system air conditioners and heat pumps, humidifiers and electronic air cleaners.

Heating, Ventilating and Air Conditioning Technology Associate Degree

COURSE		CR
Quarter 1		
ARCH 111	Construction Drafting - Manual I	4
CPT 101	Computer Literacy 1	3
ENGL 101	Beginning Composition	3
HAC 141	Principles of Refrigeration	4
HAC 183	HAC Wiring Circuits I	4
Quarter 2		
ENGL 102	Essay & Research	3
MATH 104	Intermediate Algebra	5
ARCH 116	Piping Systems	3
HAC 161	Hand Tools Laboratory	4
HAC 284	HAC Wiring Circuits II	4
Quarter 3		
ARCH 112	Construction Drafting - CAD I	3
ENGL 200	Business Communications	3
HAC 152	Instrumentation/Combustion Process	4
HAC 222	Load Calculations I	4
MATH 148	College Algebra	5
Quarter 4		
COMM 105	Speech	3
EET 101	Basic Electricity	3
HAC 23 1	Load Calculations II	4
HAC 253	Automatic Controls I	3
HAC 254	Heating Systems	4
Quarter 5		
EET 102	Electronics & Digital Fundamentals	3
HAC 242	HAC Mechanical Standards/Safety	3
HAC 244	Heat Pump Systems	4
HAC 256	Automatic Controls II	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
Quarter 6		
CIVL 120	Basic Construction Materials	3
HAC 243	Air Conditioning Systems	4
HAC 266	Advanced Problems	4
HAC xxx	Technical Elective	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
TOTAL CREDIT HOURS		**110**

Technical Elective must be selected from the following list of courses:

HAC 235	Field Co-Op Experience	4
HAC 258	Pneumatic Controls I	4
HAC 263	Energy Management	3
HAC 285	HAC Electronic Controls I	4
HAC 287	Boiler Systems	4
HAC 288	Ammonia Systems	4
HAC 299*	Special Topics in HAC	1-5

* Please see an advisor before scheduling this class.

High Pressure Boiler License Training Program

COURSE		CR
ARCH 116	Piping Systems	3
HAC 152	Instrumentation/Combustion	4
HAC 242	HAC Mechanical Standards/Safety	3
HAC 287	Boiler Systems	4
TOTAL CREDIT HOURS		**14**

Hospitality Management

Hospitality Management Associate Degree
Chef Apprenticeship Major
Dietetic Technician Major
Foodservice/Restaurant Management Major
Travel/Tourism/Hotel Management Major
Dietary Manager Certificate
Travel Industry Certificate

The Hospitality Management program provides the knowledge and skills necessary for success in a wide range of positions in foodservice, lodging and tourism. Several majors leading to Associate Degrees are available for Chef Apprenticeship, Dietetic Technician, Foodservice/Restaurant Management, and Travel/Tourism/Hotel Management. In addition, Dietary Manager and Travel Industry Certificates are available.

The Chef Apprenticeship Major is offered in cooperation with the American Culinary Federation Columbus Chapter. It includes the theory-related classroom instruction and on-the-job training required for the National Apprenticeship Training Program of the American Culinary Federation (ACF). Chef apprentices are placed for employment for three years of on-the job training under a professional chef in a restaurant, club, or hotel. At the same time, the apprentices attend classes at Columbus State one full day each

week to work toward the Associate in Applied Science Degree. The Columbus State program is accredited by the American Culinary Federation Accrediting Commission. Program graduates qualify as Certified Culinarians through the ACF and as Journeyman Chefs through the U.S. Department of Labor Bureau of Apprenticeship and Training..

The Dietetic Technician Major is currently granted approval status by the Commission on Accreditation/Approval for Dietetics Education of The American Dietetic Association. The seven-quarter program provides practicums coordinated with classroom instruction. Graduates are eligible for technician membership in the American Dietetic Association and qualify to take the national registration exam to be credentialed as a Dietetic Technician Registered (DTR).

The Foodservice/Restaurant Management Major combines classroom instruction, laboratory experience, and hospitality industry work experiences. The Associate Degree program prepares graduates for supervisory positions in a variety of foodservice operations. Certificate-bearing courses leading to the completion of the National Restaurant Association Professional Management Development Program are included. This major is accredited by the American Culinary Federation Accrediting Commission, and graduates with appropriate work experience can qualify as Certified Culinarians through the American Culinary Federation.

The Travel/Tourism/Hotel Management Major prepares students for a wide variety of positions in travel agencies, hotels, attractions, and related tourism organizations. Required cooperative work experiences and hands-on instruction in computer reservations systems are included in a course of study appropriate for individual growth and advancement in hospitality and tourism.

The 18-credit Dietary Manager Certificate is approved by the Dietary Managers Association and is recognized by the Ohio Department of Health. It is open to persons working in the foodservice operation of a healthcare facility that employs a Registered Dietitian (who serves as the preceptor to the student). Persons completing the program are eligible to take the national certification exam to become a Certified Dietary Manager (CDM). Credit hours earned may be applied to an Associate in Applied Science Degree in the Dietetic Technician major or in Multi-Competency Health Technology.

The Travel Industry Certificate program consists of four courses that gives students a fundamental core knowledge of the travel industry. It prepares students for entry into travel industry positions such as travel agencies, tour companies, airlines, car rental or other travel organizations. Courses satisfactorily completed can be applied to the Associate in Applied Science Degree in the Travel/Tourism/Hotel Management major at Columbus State.

Upon completion of the Associate Degree in Hospitality Management, the graduate will be able to:

- Maintain appropriate standards of professionalism, including ethical behavior and adherence to dress and grooming codes required for the industry.
- Set and maintain high quality service standards for satisfying diverse customers.
- Demonstrate effective communication and interpersonal skills with management, employees and customers.
- Demonstrate skills in training, coaching, team-building, staffing, motivating and supervising employees.
- Perform basic math skills necessary for the industry.
- Utilize computers and software appropriate to the industry.
- Demonstrate problem solving and critical thinking skills.
- Analyze financial reports and determine appropriate operational procedures.
- Establish and maintain sanitation and safety standards.

Foodservice/Restaurant Management Major

In addition to the general Hospitality Management competencies, a graduate majoring in Foodservice/Restaurant Management will be able to:

- Produce high quality food products using appropriate ingredients and equipment.
- Apply nutrition principles to menu planning and food production for a variety of customers.
- Define concepts and procedures for purchasing, receiving, storage and inventory; and develop specifications for purchase of food and non-food items.
- Demonstrate a knowledge of and an ability to comply with laws, rules and regulations governing foodservice operations.
- Demonstrate the ability to market and sell foodservice products and services.
- Identify methods for controlling bar/lounge operations including beverage identification and responsible legal beverage service.
- Plan, organize, and supervise the production and service of food and beverage to customers.
- Demonstrate a basic knowledge of meeting planning and catering services.

Chef Apprenticeship Major

In addition to the general Hospitality Management competencies, a graduate majoring in the Chef Apprenticeship program will be able to:

- Produce high quality food products using appropriate ingredients and equipment.
- Apply nutrition principles to menu planning and food production for a variety of customers.
- Define concepts and procedures for purchasing, receiving, storage, and inventory; and develop specifications for purchase of food and non-food items.
- Demonstrate a knowledge of and an ability to comply with laws, rules, and regulations governing foodservice operations.
- Identify methods for controlling bar/lounge operations including beverage identification and responsible legal beverage service.
- Demonstrate a basic knowledge of meeting planning and catering services.
- Plan, organize, and supervise the production and service of food and beverage to customers.
- Demonstrate proficiency in all food production departments in a commercial kitchen.
- Work effectively as a first-line supervisor and trainer in food production.

Dietetic Technician Major

In addition to the general Hospitality Management competencies, a graduate majoring in the Dietetic Technician program will be able to:

- Apply nutrition principles to menu planning and food production for a variety of customers.
- Modify diets and menus to meet the needs of persons requiring texture, energy and nutrient modifications.

- Gather and analyze diet history data and apply this information to nutrition care planning for persons on normal and modified diets.
- Provide basic nutrition education for individuals and groups.
- Plan, organize, and supervise the production and service of food and beverage to customers.
- Define concepts and procedures for purchasing, receiving, storage and inventory; and develop specifications for purchase of food and non-food items.
- Produce high quality food products using appropriate ingredients and equipment.
- Demonstrate a knowledge of and an ability to comply with laws, rules and regulations governing foodservice and healthcare operations.
- Monitor and analyze quality of patient care and foodservice operations.

Travel/Tourism/Hotel Management Major

In addition to the general Hospitality Management competencies, a graduate majoring in Travel/Tourism/Hotel Management will be able to:

- Apply destination geography knowledge as required in hotels and tourism.
- Utilize travel industry reference materials.
- Complete detailed customer travel itineraries for individuals and group tours.
- Demonstrate a working knowledge of lodging operations.
- Market and sell hospitality or tourism products and services.
- Demonstrate a knowledge of and an ability to comply with laws, rules and regulations governing hospitality/tourism.
- Demonstrate a basic knowledge of meeting planning and catering services.

Specific Program Admissions Information

Listed are additional requirements for admission to the Chef Apprenticeship Major and the Dietetic Technician Major.

Chef Apprenticeship Major

- High school graduate or G.E.D. equivalency
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 101 - Business Mathematics
- Supplemental application required by the department (May 15 and November 15 deadlines)
- Interview with the Apprenticeship Committee

Dietetic Technician Major

- High school graduate or G.E.D. equivalency
- Recommended high school or equivalent courses: Algebra, Chemistry and Biology
- Completed health statement (see Program Coordinator)
- Placement into DEV 031 or higher
- Placement into ENGL 100 or higher

Chef Apprenticeship Major

Quarter 1		
COURSE		**CR**
HOSP 122	Sanitation & Safety	**3**
HOSP 101	Survey of Hospitality/Tourism Industry	**3**
HOSP 293	Hospitality Co-Op Work Experience I	**3**
HOSP 102	Foodservice Equipment	**2**
Quarter 2		
HOSP 153	Nutrition for a Healthy Lifestyle	**5**
ENGL 101	Beginning Composition	3
Quarter 3		
MATH 101	Business Math	**5**
HOSP 107	Food Principles	**5**
Quarter 4		
HOSP 106	Food Laboratory I	**3**
CPT 101	Computer Literacy 1	**3**
COMM 110	Conference & Group Discussion	**3**
Quarter 5		
HOSP 123	Food Purchasing	**3**
HOSP 216	Food Laboratory II	**3**
HOSP 294	Hospitality Co-Op Work Experience II	**3**
Quarter 6		
ACCT 101	Financial Accounting	**4**
ENGL 102	Essay & Research	**3**
HOSP 121	Computer Applications in Foodservice	**2**
Quarter 7		
HOSP 203	Beverage Management	**3**
BMGT 101	Introduction to Business	**5**
Quarter 8		
HOSP 217	Garde Manger	**3**
NSCI 101	Natural Science I	**5**
Quarter 9		
HOSP 295	Hospitality Co-Op Work Experience III	**3**
HOSP 225	Menu Development	**3**
HUM IXX	HUM 111, 112, 113, 151, or 152	**5**
Quarter 10		
HOSP 205	Records & Cost Controls	**4**
HOSP 218	Baking	**3**
Quarter **11**		
HOSP 271	Meeting Planning & Catering Services	**3**
SSCI 101	Cultural Diversity	**5**
Quarter 12		
HOSP 224	Hospitality Personnel Management	**5**
HOSP 286	Apprenticeship Final Project	**2**
ENGL 200	Business Communications	**3**
TOTAL CREDIT HOURS		**108**

Dietetic Technician Major

Quarter 1		
COURSE		**CR**
HOSP 102	Foodservice Equipment	**2**
HOSP 122	Sanitation and Safety	**3**
DIET 191	Dietetic Technician Practicum I	**1**
ENGL 101	Beginning Composition	**3**
MLT 100	Introduction to Healthcare	**3**
CPT 101	Computer Literacy I	**3**
Quarter 2		
HOSP 107	Food Principles	**5**
HOSP 109	Food Production I	**3**
DIET 192	Dietetic Technician Practicum II	**2**
MULT 101	Medical Terminology	**2**
MATH 102	Beginning Algebra I	**4**
Quarter 3		
HOSP 121	Computer Applications in Foodservice	**2**
HOSP 123	Food Purchasing	**3**
SSCI 101	Cultural Diversity	**5**
DIET 193	Dietetic Technician Practicum III	**2**
HOSP 153	Nutrition for a Healthy Lifestyle	**5**
Quarter 4		
BMGT 101	Introduction to Business	**5**
ENGL 102	Essay & Research	**3**
BIO 101	Intro. to Anatomy & Physiology	**3**
COMM 105	Speech	**3**

Quarter 5		
DIET 297	Dietetic Technician Practicum IV	3
DIET 275	Medical Nutrition Therapy I	5
BIO 169	Human Physiology	5
HOSP 205	Records and Cost Control	4
Quarter 6		
HOSP 225	Menu Development	3
DIET 298	Dietetic Technician Practicum V	2
DIET 276	Medical Nutrition Therapy II	5
ENGL 202	Writing for Health and Human Services	3
HOSP 224	Hospitality Personnel Management	5
Quarter 7		
DIET 265	Dietetic Technician Seminar	1
DIET 299	Dietetic Technician Practicum VI	3
HOSP 219	Food Production Management	4
HUM 1xx	Humanities 111, 112, 113, 151 or152	5
TOTAL CREDIT HOURS		**110**

Foodservice/Restaurant Management Major

Quarter 1		
COURSE		**CR**
HOSP 101	Survey of Hospitality/Tourism Industry	3
HOSP 102	Foodservice Equipment	2
HOSP 122	Sanitation & Safety	3
HOSP 153	Nutrition for a Healthy Lifestyle	5
MATH 101	Business Mathematics	5
Quarter 2		
HOSP 107	Food Principles	5
HOSP 109	Food Production	3
ENGL 101	Beginning Composition	3
ACCT 101	Financial Accounting	4
CPT 101	Computer Literacy I	3
Quarter 3		
HOSP 121	Computer Applications in Foodservice	2
HOSP 123	Food Purchasing	3
NSCI 101	Natural Science I	5
ENGL 102	Essay & Research	3
BMGT 101	Introduction to Business	5
Quarter 4		
HOSP 203	Beverage Management	3
HOSP 205	Records & Cost Controls	4
HOSP 27 1	Meeting Planning & Catering Services	3
COMM 105	Speech	3
SSCI 101	Cultural Diversity	5
Quarter 5		
HOSP 225	Menu Development	3
HOSP 246	Hospitality Sales and Marketing	3
HOSP 293	Hospitality Co-Op Work Experience I	3
HOSP 224	Hospitality Personnel Management	5
ENGL 200	Business Communications	3
Quarter 6		
HOSP 143	Hospitality and Travel	3
HOSP 219	Food Production Management	4
HOSP 294	Hospitality Co-Op Work Experience II	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
BMGT 272	Case Studies in Business Seminar	3

TOTAL CREDIT HOURS 107

Travel/Tourism/Hotel Management Major

Quarter 1		
COURSE		**CR**
ENGL 101	Beginning Composition	3
MATH 101	Business Math	5
HOSP 101	Survey of Hospitality/Tourism Industry	3
HOSP 154	Destination Geography	5
Quarter 2		
HOSP 122	Sanitation & Safety	3
MKTG 111	Marketing Principles	5
HOSP 157	ravel and Tourism Operations	5
CPT 101	Computer Literacy I	3
Quarter 3		
BMGT 101	Introduction to Business	5
MKTG 226	Customer Service Principles	3
HOSP 145	Lodging Operations	4
ENGL 102	Essay & Research	3
Quarter 4		
HOSP 293	Hospitality Co-Op Work Experience I	3
HOSP 294	Hospitality Co-Op Work Experience II	3
Quarter 5		
COMM 110	Conference & Group Discussion	3
PSY loo	Introduction to Psychology	5
HOSP 143	Hospitality & Travel Law	3
HOSP 257	Computer Reservations Systems	3
HOSP 271	Meeting Planning & Catering Services	3
Quarter 6		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
SSCI 101	Cultural Diversity	5
ACCT 101	Financial Accounting	4
ENGL 200	Business Communications	3
Quarter 7		
NSCI 101	Natural Science I	5
HOSP 224	Hospitality Personnel Management	5
HOSP 246	Hospitality Sales and Marketing	3
ACCT 102	Managerial Accounting	3

TOTAL CREDIT HOURS 103

Dietary Manager Certificate

COURSE		**CR**
DMGR 101	Dietary Manager Seminar I	4
DMGR 194	Dietary Manager Co-Op/Work Exp. I	2
DMGR 102	Dietary Manager Seminar II	4
DMGR 195	Dietary Manager Co-Op/Work Exp. II	2
DMGR 103	Dietary Manager Seminar III	4
DMGR 196	Dietary Manager Co-Op/Work Exp. III	2

Travel Industry Certificate

COURSE		**CR**
HOSP 154	Destination Geography	5
HOSP 157	Travel and Tourism Operations	4
HOSP 257	Computer Reservations Systems	3
HOSP 246	Hospitality Sales and Marketing	3

Human Resources Management Technology

Over the last four decades the human resource (personnel) function has evolved from a "hiring/firing paper processing" job to an extremely complex profession. Human resources management requires the ability to understand how all the facets of human resources management impact on one another and on the organization as a whole. The myriad federal and state laws regulating virtually all aspects of the employee/employer relationship, compounded by conflicting judicial interpretations, requires professionals skilled in understanding and applying these laws to day-to-day management decisions. Wrong decisions, by any representative of the organization, in hiring, discipline, termination, or

the way employees are treated may result in a multimillion dollar lawsuit; and, these decisions may cripple a company by costing thousands of dollars even if they win.

In the last two decades senior management has begun to recognize that human resource management professionals, skilled in technical areas such as human resource and labor law, labor relations, policy development and administration, compensation and benefits, and employee counseling, are no longer a cost "drag" on the organization, but make a positive impact on the bottom line. Management has also come to realize that the human resource management professional is everyone in the human resources department, from the secretary, to the benefits administrator, to the employment interviewer, to the director or manager of the department.

Larger companies have human resources management staffs of 5 to 35 people, small and mid-sized companies often have only 1 or 2 people to provide human resources management services; both need skilled human resources professionals to comply with the governmental aspect of the relationship and to minimize the potential for crippling lawsuits.

The purpose of the Human Resources Management Technology is to provide a program that will teach human resources management skills and provide hands-on application in a learning environment that bridges the necessity of academic theory with human resources management in "the real world." Throughout, the program provides for a strong legal foundation in each area of human resources management; then provides for application of that foundation to the human resources management functions.

Upon completion of the Associate Degree in Human Resources Management Technology, the graduate will be able to:

- Demonstrate in-depth knowledge of the laws governing the employment process and apply these laws to employment related decisions; write a legal employment policy and procedure.
- Research human resources laws, cases, and issues using the Internet and other sources.
- Demonstrate knowledge of manual and automated records and information management systems; design systems that meet industry and professional standards, support the key tasks of the human resources department, and meet the legislative requirements with which the organization must comply.
- Demonstrate in-depth knowledge of the legal aspects of interviewing and conduct the various types of interviews used in business; develop interview protocol and outlines for the various types of interviews; develop and use a progressive disciplinary system; develop standards-of-performance (SOP) appraisal system; and develop and train supervisors in proper interviewing methods.
- Demonstrate a knowledge of the symptoms of chemical dependency; the addiction assessment processes; treatment planning, and intervention strategies with the chemical dependent person; the effects of chemical dependency on the work environment; and the community resources available to assist in prevention, education, and treatment for the individual and the family.
- Demonstrate knowledge of the Drug Free Workplace Act; explain the pros and cons of employer drug testing programs, and develop legal drug testing policies and procedures; and write a legal and appropriate drug free workplace policy for an organization.
- Demonstrate in-depth knowledge of the major laws impacting on the relationship between management and organized workers; apply these laws to the organizing, negotiating, grievance, and arbitration processes.
- Demonstrate in-depth knowledge of the Fair Labor Standards Act, and other laws governing monetary compensation, and apply these laws to monetary compensation decisions.
- Develop a job analysis questionnaire, write job descriptions, job specifications, develop a job evaluation system, and price jobs according to the system; develop a market survey instrument, compile and present market data vs. organizational data, and develop and present appropriate recommendations based on survey data.
- Demonstrate knowledge of the laws impacting on benefits; apply these laws to the development and writing of benefit policies, procedures, and plan descriptions for all types of benefit programs.
- Demonstrate in-depth knowledge of the laws governing discrimination, affirmative action, sexual harassment, discipline, termination, and safety; apply these laws to the development and writing of legal policies, procedures, rules, and handbook summaries.

Human Resources Management Technology Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	**3**
MATH 103	Beginning Algebra II	**4**
MCT 106	Computer Literacy 2	**3**
BMGT 111	Management	**5**
Quarter 2		
ENGL 102	Essay and Research	**3**
MATH 135	Elementary Statistics	**5**
HRM 121	Human Resources Management	**4**
MCT 211	Information Presentation	**3**
LEGL 261	Business Law I	**3**
Quarter 3		
COMM 105	Speech	**3**
PSY 100	Psychology	**5**
ECON 200	Microeconomics	**5**
HRM 122	HR Policy and Procedure Writing	**4**
HRM 124	Personnel Interviewing	**4**
Quarter 4		
HUM 1xx	Humanities 111, 112, 113, 151, or 152	**5**
HRM 220	Labor Relations	**5**
HRM 221	Staffing Under the Law	**5**
HRM 224	HR Information Systems	**3**
Quarter 5		
ENGL 200	Business Communications	**3**
BMGT 211	Organizational Behavior	**4**
HRM 222	Monetary Compensation	**4**
HRM 223	Benefits/Non-Monetary Compensation	**4**
HRM 225	Alcohol and Drugs in the Workplace	**4**
Quarter 6		
NSCI 101	Natural Science I	**5**
HRM 240	Administration of HRM	**5**
HRM 242	HRM Practicum	**4**
HRM 243	HRM Practicum Seminar	**2**
TOTAL CREDIT HOURS		**107**

Interpreting/Transliterating

American Sign Language/Deaf Studies Certificate

The Interpreting/Transliterating program prepares graduates for entry-level interpreting/transliterating positions where persons who are deaf or hard of hearing and hearing persons must communicate with each other. The Associate Degree program offers extensive course work in American Sign Language. A language lab helps students develop their skills during six core skill-building courses. A two-quarter practicum gives students opportunities to gain first-hand experience applying their interpreting/transliterating skills and knowledge of professional ethics under the supervision of an agency interpreter.

To qualify for admission to the Associate Degree program, students must (1) have a good command of spoken English; (2) agree to adhere to the Code of Ethics established by the Registry of Interpreters for the Deaf, Inc.; (3) be interviewed by the coordinator during spring quarter; and (4) agree to complete a minimum number of ITT courses each quarter.

For additional information on the American Sign Language/Deaf Studies see the Interpreting /Transliterating Coordinator.

Upon completion of the Associate Degree in Interpreting/Transliterating, the graduate will be able to:

Demonstrate a grasp of the unique skills required for interpreting in specialized settings (e.g., oral, medical, mental health, deaf-blind, etc.).

Demonstrate an understanding of the interpreting/translit

Demonstrate basic competency with American Sign Language (ASL) as well as a basic understanding of signed English.

Put signed ASL messages accurately into spoken English, and put spoken English messages accurately into ASL.

Put signed English messages accurately into spoken English, and put spoken English messages accurately into signed English.

Explain the role of the interpreter/transliterator to both deaf and hearing consumers.

Demonstrate knowledge of the Deaf Community and a sensitivity toward the cultural traditions of the community.

Assess the deaf consumer's preferred mode of communication.

Analyze and adapt the physical aspects of the interpreting setting or be able to adapt to physical aspects that cannot be changed.

Demonstrate knowledge of the various agencies/organizations serving the Deaf Community.

Specific Program Admissions Information

Listed below are additional requirements for admission to Interpreting/Transliterating.

- High school graduate or G.E.D. equivalency
- Placement into ENGL 101 - Beginning Composition or above, DEV 044, and MATH 102 via Compass Test
- Meet with the Interpreting/Transliterating Coordinator during January for an interview
- Submit all college transcripts to the Registrar's Office

Note: American Sign Language/Deaf Studies Certificate candidates do not need to interview with the Interpreting/Transliterating Coordinator.

Interpreting /Transliterating Associate Degree

Quarter 1		
COURSE		CR
ENGL 101	Beginning Composition	3
CPT 101	Computer Literacy 1	3
ITT 110	Introduction to Interpreting/Transliterating	3
ITT 111	Introduction to the Deaf Community	5
ITT 141	American Sign Language I	5
Quarter 2		
ENGL 102	Essay & Research	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
ITT 130	Fingerspelling	2
ITT 142	American Sign Language II	5
Quarter 3		
ITT 120	English for the Interpreter	3
ITT 150	Linguistics of ASL	3
ITT 143	American Sign Language III	5
ITT 201	Interpreting I	3
Quarter 4		
PSY 100	Introduction to Psychology or	
SOC 101	Introduction to Sociology	5
ITT 144	American Sign Language IV	5
ITT 202	Interpreting II	3
ITT 211	Transliterating I	3
Quarter 5		
NSCI 101	Natural Science I	5
ITT 145	American Sign Language V	5
ITT 123	Specialized Interpreting/Transliterating	4
ITT 212	Transliterating II	3
Quarter 6		
COMM 115	Oral Interpretation	3
ITT 203	Interpreting III	3
ITT 220	Sign to Voice Interpreting/Transliterating	4
ITT 292	Practicum I	4
ITT 290	Practicum Seminar I	1
Quarter 7		
ENGL 200	Business Communications	3
ITT 121	Legal & Ethical Aspects of Interpreting	3
ITT 204	Interpreting IV	3
ITT 293	Practicum II	4
ITT 291	Practicum Seminar II	1
TOTAL CREDIT HOURS		**110**

Landscape Design/Build

The Landscape Design/Build program prepares graduates for a wide range of jobs with landscape design firms, materials wholesalers and retailers, commercial and private landscape facilities departments, and with landscape contractors. Landscape Design/Build students learn plant selection, materials specification, landscape design and landscape maintenance procedures. Students in the program share common courses in surveying, materials, estimating, and co-op work experiences with other Construction Sciences Department students giving the students a strong sense of team cooperation.

The Landscape Design/Build program provides students with a solid educational background in communication skills, math, computer literacy and operations, and humanities and behavioral sciences.

Upon completion of the Associate Degree in Landscape Design/ Build, the graduate will be able to:

- Assist in the preparation of contract/design documents and construction specifications.
- Assist landscape professionals in managing and implementing the construction process.
- Select suitable herbaceous and woody plants and properly install these plants.
- Estimate landscape project costs by utilizing take-off and costing methods.
- Be able to read and interpret plans and drawings.
- Assist in the survey and stake out of the job site.
- Create manual and/or computer generated drawings of landscape projects.
- Prepare presentation drawings using a variety of graphic techniques.
- Maintain both commercial and residential landscapes.
- Construct landscapes.
- Design and install irrigation systems.
- Identify pests and diseases as they relate to the landscape.

Landscape Design/Build Associate Degree

COURSE		CR
Quarter 1		
ARCH 111	Construction Drafting -Manual I	4
CIVL 120	Basic Construction Materials	3
ENGL 101	Beginning Composition	3
LAND 101	Landscape Principles	3
MATH 104	Intermediate Algebra	5
Quarter 2		
ENGL 102	Essay & Research	3
xxx xxx	Basic Science*	4
CPT 101	Computer Literacy 1	3
LAND 102	Residential Landscape Design	4
MATH 148	College Algebra	5
Quarter 3		
BIO 125	General Botany	5
LAND 105	Spring Landscape Plants	4
LAND 107	Landscape Maintenance	3
SURV 141	Basic Surveying	4
Summer Quarter between 1st and 2nd year		
LAND 291	Field Co-op Experience	4
Quarter 4		
ENGL 204	Technical Writing	3
LAND 152	Site Planning	4
LAND 205	Autumn Landscape Plants	4
LAND 206	Landscape Graphics	4
LAND 207	Landscape Structures	3
Quarter 5		
COMM 105	Speech or COMM 110 Conf & Group Discussion	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
LAND 20 1	Landscape Pest Control	3
LAND 202	Planting Design	4
LAND 203	Landscape Irrigation	3
Quarter 6		
LAND 108	Herbaceous Plants	3
LAND 222	Landscape Operations	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
xxxx xxx	Technical Elective	3
TOTAL CREDIT HOURS		**108**

***Basic Science** - **select from** CHEM 100 Introduction to Chemistry 4, ENVR 120, Environmental Aspects of Soil or GEO 121, Physical Geology

Technical Elective must be selected from the following list of courses:

ARCH 112	Construction Drafting -CAD I	3
ARCH 113	Construction Drafting - CAD II	3
LAND 104	Specialty Gardens	3
LAND 109	Landscape Arboriculture	3
LAND 110	Landscape Computer Applications	3
LAND 200	Landscape Practicum	4
LAND 204	Turf Grass Management	3
LAND 208	Interior Plants	3
LAND 210	Evergreen Landscape Plants	4
LAND 214	Landscape Lighting	2

Law Enforcement

Law Enforcement Associate Degree
Corrections Major
Law Enforcement Major
Law Enforcement Management Major
Law Enforcement Major - Academy Track

Persons trained for the law enforcement field are in high demand in many public and private organizations. Columbus State's Law Enforcement program teaches students the technical skills they need to enter or advance in a wide variety of positions in criminal justice. Four Associate Degree majors give students a range of options to meet their personal career goals.

The Law Enforcement major prepares students for a variety of careers in federal, state, or local law enforcement agencies. The Law Enforcement Major -Academy Track offers additional training required by the Ohio Peace Officers Training Council (OPOTC) for certified peace officers. Graduates of the Academy track are eligible to take the OPOTC certification exam.

The Law Enforcement Management Major is intended for students who currently possess Ohio Peace Officer Certification or an Associate Degree or higher. At least one year of law enforcement work experience is highly recommended before entering. This major is designed to prepare in-service officers to assume managerial positions within law enforcement agencies.

Students enrolling in the Academy track must meet the following admissions requirements: (1) have a high school diploma or GED certificate; (2) pass a physical; (3) take a personality factor inventory; (4) submit to a criminal history check (students with prior felony convictions may be excluded from the program; contact the department chairperson for more information); (5) possess a valid Ohio drivers license; and (6) complete a supplemental application required by the department.

The Corrections major trains students for careers in probation, parole, correctional institutions, community-based correctional programs, and social service agencies.

Upon completion of the Associate Degree in Law Enforcement, the graduate will be able to:

- Locate and apply criminal law correctly.
- Prepare required reports accurately and in a concise, readable style.
- Prepare cases for trial and professionally testify in a court of law.

Corrections Major

In addition to the general Law Enforcement competencies, a graduate majoring in Corrections will be able to:

- Prepare presentence reports and other required reports accurately.
- Demonstrate knowledge of effective correctional institution security measures.

Law Enforcement Major

In addition to the general Law Enforcement competencies, a graduate majoring in Law Enforcement will be able to:

- Demonstrate proper arrest procedures.
- Locate applicable case law.
- Process information at an accident scene and correctly complete required reports.
- Identify hazardous materials and initiate proper response.

Law Enforcement Management Major

In addition to the general Law Enforcement competencies, a graduate majoring in Law Enforcement Management will be able to:

- Develop contingency plans for emergencies or other events requiring rapid and/or extensive deployment of police resources.
- Effectively utilize research in reaching managerial decisions.
- Prepare a community policing strategy to meet the needs of a specific neighborhood.
- Participate in a collective bargaining process.
- Recognize areas of potential legal liability and prepare policies, directives and training programs to minimize exposure to litigation.
- Demonstrate effective managerial decision-making skills.

Law Enforcement Major - Academy Track

In addition to the general Law Enforcement competencies, and the Law Enforcement major competencies, a graduate majoring in Law Enforcement - Academy Track will be able to:

- Understand and handle safely the double action revolver, the semi-automatic pistol, and the shotgun.
- Demonstrate proficiency with the handgun and shotgun to current Ohio Peace Officer Training
- Council (OPOTC) standards for qualification.
- Perform safe and effective driving maneuvers to current OPOTC standards.
- Demonstrate basic crowd control techniques and riot formations.
- Demonstrate recommended self defense techniques.

Law Enforcement, Corrections Major, Associate Degree

COURSE		CR
First Quarter		
ENGL 101	Beginning Composition	3
LAWE 101	Introduction to Criminal Justice	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
CPT 101	Computer Literacy I	3
Second Quarter		
ENGL 102	Essay & Research	3
LAWE 208	Community Based Corrections	3
MATH 101	Business Mathematics	5
ANTH 240	Forensic Anthropology	5
LAWE 204	Juvenile Procedures	3
Third Quarter		
COMM 105	Speech	3
LAWE 121	Juvenile Delinquency	3
LAWE 124	Penology	3
SSCI 101	Cultural Diversity	5
LAWE xxx	Law Enforcement Elective	3
Fourth Quarter		
LAWE 268	Hazardous Materials	3
LAWE 212	Ohio Criminal Code	4
LAWE 110	Criminal Investigation I	4
LAWE 210	Crisis Intervention	3
LAWE 128	Special Category Offenders	3
Fifth Quarter		
ENGL 204	Technical Writing OR	3
ENGL 200	Business Communications	3
LAWE 112	Criminal Investigation II	4
LAWE 219	Correctional Law	4
LAWE 211	Institutional Corrections	3
NSCI 101	Natural Science I	5
Sixth Quarter		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
LAWE 221	Counseling-Probation & Parole	4
LAWE 223	Correctional Administration	3
LAWE 256	L.E. Practicum	2
LAWE 251	L.E. Practicum Seminar	1
LAWE 271	Contemporary Issues in CJ	3
Technical Electives		
LAWE 102	Patrol Procedures	3
LAWE 111	Criminalistics I	3
LAWE 115	Community & Personal Relations	3
LAWE 220	Constitutional Law	4
LAWE 241	Correctional Internship I AND	1
LAWE 249	Corrections Seminar II	1
LAWE 252	Police Administration	3
LAWE 253	Criminal Procedure	3
LAWE 260	Criminal Evidence & Trial	3
LAWE 299	Special Topics in Law Enforcement	3

Law Enforcement Major

COURSE		CR
First Quarter		
ENGL 101	Beginning Composition	3
LAWE 101	Introduction to Criminal Justice	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
LAWE xxx	Law Enforcement Elective	3
LAWE 253	Criminal Procedure	3
Second Quarter		
ENGL 102	Essay & Research	3
CPT 101	Computer Literacy I	3
LAWE 115	Community & Personal Relations	3
MATH 101	Business Mathematics	5
LAWE 204	Juvenile Procedures	3
Third Quarter		
COMM 105	Speech	3
LAWE 125	Traffic Accident Investigation	3
LAWE 102	Patrol Procedures	3
LAWE 252	Police Administration	3
SSCI 101	Cultural Diversity	5
Fourth Quarter		
LAWE 110	Criminal Investigation I	4
LAWE 268	Hazardous Materials	3
LAWE 212	Ohio Criminal Codes	4
LAWE 111	Criminalistics I	3
LAWE 210	Crisis Intervention	3
Fifth Quarter		
ENGL 204	Technical Writing OR	3
ENGL 200	Business Communications	3
LAWE 112	Criminal Investigation II	4
NSCI 101	Natural Science I	5
ANTH 240	Forensic Anthropology	5

Sixth Quarter		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
LAWE 220	Constitutional Law	3
EMS 100	Crash Injury Management	2
LAWE 256	LE Practicum I	2
LAWE 257	LE Practicum Seminar I	1
LAWE 211	Contemporary Issues in CJ	3
TOTAL CREDIT HOURS		105

Technical Electives

COURSE		CR
LAWE 113	**Criminalistics II**	2
LAWE 121	Juvenile Delinquency	3
LAWE 124	Penology	3
LAWE 128	Special Category Offender	3
LAWE 205	Contemporary Corrections	3
LAWE 208	Community Based Corrections	3
LAWE 211	Institutional Corrections	3
LAWE 219	Correctional Law	3
LAWE 221	Counseling Probation and Parole	4
LAWE 223	Correctional Administration	3
LAWE 260	Criminal Evidence and Trial	3
LAWE 299	Special Topics in Law Enforcement	3

Law Enforcement, Law Enforcement Management Major, Associate Degree

COURSE		CR
First Quarter		
ENGL 101	Beginning Composition	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
LAWE 150	Administration of Justice	3
LAWE 252	Police Administration	3
Second Quarter		
ENGL 102	Essay and Research	3
CPT 101	Computer Literacy 1	3
MATH 101	Business Math	5
LAWE 155	Managing Police Operations	4
LAWE 218	Supervision of Public Service Personnel	3
Third Quarter		
COMM 105	Speech	3
HRM 121	Human Resources Management	4
LAWE 153	Civil Liability in Law Enforcement	4
SSCI 103	Social Problems	5
Fourth Quarter		
HRM 220	Labor Relations	5
LAWE 273	Legal Computing	2
LAWE 232	Task Force/Major Case Management	3
ACCT 106	Introduction to Accounting	5
Fifth Quarter		
ENGL 200	Business Communications OR	3
ENGL 208	Communications for Mass Media	3
LAWE xxx	Law Enforcement Elective	3
LAWE 23 1	Criminal Justice Plan and Analysis	3
LAWE 220	Constitutional Law	3
NSCI 101	Natural Science I	5
Sixth Quarter		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
LAWE xxx	Law Enforcement Elective	3
LAWE 242	Community Policing	4
LAWE 275	Police Management Assessment	4
LAWE 27 1	Contemporary Issues in Criminal Justice	2
TOTAL CREDIT HOURS		102

Technical Electives

COURSE		CR
LAWE 243	Forensic Science for Law Enforcement Managers	3
LAWE 244	Budget & Grant Writing for Criminal Justice Administrators	3
LAWE 245	Media and the Police	3
ANTH 240	Forensic Anthropology	5

Law Enforcement Major - Academy Track

COURSE		CR
First Quarter		
ENGL 101	Beginning Composition	3
LAWE 101	Introduction to Criminal Justice	3
LAWE 104	Government and the Law	3
LAWE 120	Criminology	3
LAWE 253	Criminal Procedure	3
Second Quarter		
ENGL 102	Essay and Research	3
MATH 101	Business Mathematics	5
LAWE 204	Juvenile Procedures	3
SSCI 101	Cultural Diversity or	5
SOC 101 I	Introduction to Sociology	5
Third Quarter		
COMM 105	Speech	3
NSCI 101	Natural Science I	5
CPT 101	Computer Literacy I	3
LAWE 124	Penology	3
Fourth Quarter		
LAWE 111	Criminalistics I	3
LAWE 268	Hazardous Materials	3
LAWE 271	Contemporary Issues in Law Enforcement	3
LAWE 265	Police Physical Fitness	3
Fifth Quarter		
ENGL 200	Business Communications OR	3
ENGL 204	Technical Writing	3
LAWE 103	Academy Orientation	2
LAWE 256	LE Practicum I	2
LAWE 257	LE Practicum Seminar I	1
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
Sixth Quarter		
* LAWE 110	Criminal Investigation I	4
* LAWE 220	Constitutional Law	3
* LAWE 102	Patrol Procedures	3
* LAWE 125	Traffic Accident Investigation	3
* LAWE 26 1	Defensive Driving and Emergency Response	2
* LAWE 210	Crisis Intervention	3
Seventh Quarter		
* LAWE 264	Police Firearms	3
* LAWE 263	Arrest and Control	4
* LAWE 212	Ohio Criminal Codes	4
* LAWE 112	Criminal Investigation II	4
* LAWE 115	Community & Personal Relations	3
TOTAL CREDIT HOURS		106

*These classes contain SPOs & attendance must be maintained.

Legal Assisting

Workers' Compensation Certificate

Due to the explosive growth of legal services now being requested in all sectors of our economy, there is a continuous demand for well trained personnel in all facets of the legal assisting process. The need for legal assistants is so great that it is estimated that one paralegal will assist every three or four attorneys and in some areas of practice, such as corporate legal departments, there will be one legal assistant hired for every attorney.

The nature of the Legal Assistants position in the legal community requires individuals with a well rounded educational background. Critical thinking and excellent communication skills are

essential competencies of a Legal Assistant and are included in courses in English, Mathematics, Humanities, Social Science and Basic Science.

The technical curriculum has been designed to provide students with knowledge and skills in the areas of the role of a legal assistant, ethical requirements, legal research, analysis, the preparation of legal documents, litigation practice and procedure, real estate transactions, family law, administrative law, criminal law, and probate law and practice.

Legal assistants have traditionally been utilized in legal environments that are intensive in both client contact and document preparation. Workers' compensation is an example of a legal arena that has a history of legal assistant employment. The workers' compensation system processes and adjudicates claims, as well as investigates abuses in the system, establishes premiums, and works with self-insured and state fund employers. The Columbus State Community College Legal Studies Department offers a Departmental Certificate designed to teach legal assistants the skills they need to obtain employment from state agencies, third party administrators, attorneys, and employers. In order to enroll for the Workers' Compensation Certificate, the student must have completed an Associate or Bachelor Degree in Legal Assisting, or apply to the Legal Studies Department Chairperson for permission to take courses based on legal assisting work experience.

Upon completion of the Associate Degree in Legal Assisting, the graduate will be able to:

- Demonstrate proficiency in manual and computer assisted research of legal questions and incorporate the same into properly cited memoranda of law.
- Demonstrate an understanding of the legal and ethical responsibilities of a legal assistant.
- Demonstrate an ability to use municipal, county, state, and federal clerks of court and other recording offices.
- Prepare deeds, notes, and other documents for residential real estate transfer.
- Draft documents required to complete family law matters.
- Draft pleadings, motions and other documents within the applicable rules of evidence and procedure to prepare and complete civil and criminal litigation.
- Prepare documents for use in corporate, partnership and other business related matters.
- Draft wills, trusts, and other documents necessary for estate administration.
- Describe the legislative and judicial functions of administrative agencies.

NOTE: Legal assistants may not sign legal documents, appear in court or give legal advice. All activities in legal matters must be supervised by a licensed attorney.

Legal Assisting Associate Degree

COURSE		CR
First Quarter		
ENGL 101	Beginning Composition	3
OADM 131	Keyboarding I OR	3
OADM 164	Wordperfect for Windows	3
LEGL 101	Introduction to Legal Assisting	4
LAWE 104	Government and the Law	3
LEGL 102	The Legal System	2
LEGL 103	Law Office Procedures and Management	3
Second Quarter		
ENGL 102	Essay & Research	3
MATH 101	Business Mathematics	5
CPT 101	Computer Literacy	3
LEGL 111	Legal Research & Writing I	4
LEGL 114	Family Law	3
Third Quarter		
ENGL 200	Business Communications	3
SOC 101	Introduction to Sociology	5
LEGL 112	Legal Research & Writing II	4
LEGL 119	Real Estate Transactions	3
LEGL 226	Administrative Law	3
Fourth Quarter		
COMM 105	Speech OR	3
COMM 110	Conference & Group Discussion	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
LEGL 205	Litigation Practices and Procedures I	3
LEGL 20 1	General Practice	4
LEGL 210	Criminal Law and Procedure	3
Fifth Quarter		
NSCI 101	Natural Science I	5
PSY 100	Introduction to Psychology	5
LEGL 251	Computer Assisted Legal Research	2
LEGL 215	L.A. Practicum I	2
LEGL 216	L.A. Practicum Seminar I	1
Sixth Quarter		
LEGL 224	Probate Law and Practice	3
LEGL 220	Business Organizations	3
xxx xxx	Electives	5
LEGL 227	L.A. Practicum II	2
LEGL 228	L.A. Practicum Seminar II	1
TOTAL CREDIT HOURS		**101**

Recommended Electives		
LEGL 113	Legal Research and Writing III	5
LEGL 230	Special Problems in Legal Assisting	2
LEGL 234	Litigation II	3
LEGL 238	Insurance Law	3
LEGL 240	Professional Malpractice	3
LEGL 243	Alternative Dispute Resolution	3
LEGL 232	Taxation	3
LEGL 244	Debtor/Creditor Relations	3
LEGL 252	Survey of Advanced Legal Technology (CALR II)	2
LEGL 253	Legal Assisting Law Journal	2
LAWE 220	Constitutional Law	3
ACCT 101	Financial Accounting	4
ACCT 102	Managerial Accounting	3
ACCT 111	Principles of Accounting I	5
ACCT 112	Principles of Accounting II	5

* LEGL 261, LEGL 262, LEGL 263, LEGL 264, AND LEGL 265 ARE NOT ELECTIVES FOR LEGAL ASSISTING, CREDIT TOWARD GRADUATION WILL NOT BE GIVEN.

Workers' Compensation Certificate

COURSE		CR
LEGL 255	Introduction to Workers' Compensation Law	4
LEGL 256	Introduction to BWC Claims Processing	4
LEGL 257	Workers' Compensation Adjudication	4
LEGL 258	Workers' Compensation Rating System	4
LEGL 259	Workers' Compensation Practice and Procedure	4

Legal Medical Consulting
(Associate of Technical Studies degree)

Many changes are occurring within the health care industry resulting in the need to expand the skills necessary to be a productive health care professional. An integration of legal and medical

training gives either the legal assistant or health care professional the skills necessary to broaden the opportunities for medicolegal employment. A legal medical consultant is a professional with sufficient legal and medical knowledge to understand both the legal and medical implications of health related issues. Insurance underwriters, personal injury attorneys, workers' compensation and social security administrators, and hospital risk managers are only a few of the employment possibilities for a student graduating with a degree in Legal Medical Consulting. The combination of the legal assisting and health information management curriculum provides the basic proficiencies the student will need to be successful in this profession.

The nature of the legal medical consultant's position in the medicolegal community requires individuals with a well-rounded educational background. Critical thinking and excellent communication skills are essential competencies of a legal medical consultant and are included in courses in English, mathematics, humanities, social science and basic science.

The technical curriculum has been designed to provide students with knowledge and skills in the area of: the role of a legal medical consultant, ethical requirements, legal research, analysis, the preparation of legal documents, litigation practice and procedure.

Upon completion of the Associate Degree in Legal Medical Consulting the graduate will be able to:

- Demonstrate proficiency in manual and computer-assisted research of legal questions and incorporate the same into properly cited memoranda of law.
- Demonstrate an understanding of the legal and ethical responsibilities of a legal medical consultant.
- Demonstrate an ability to use municipal, county, state, and federal clerks of court and other recording offices.
- Draft pleadings, motions, and other documents within the applicable rules of evidence and procedure to prepare and complete civil litigation.
- Describe the legislative and judicial functions of administrative agencies.
- Review health records for completeness and accuracy.
- File, maintain, and compile primary and secondary health information.
- Apply legal principles, policies, regulation, and standards for the control and use of health information.
- Collect, compute, analyze, interpret, and present statistical data related to health care services.
- Review, retrieve, and compile health data for reimbursement, quality assessment, patient care research, clinical registers, and other identified informational needs.

NOTE: Legal Medical Consultants may not give any legal advice. All activities in legal matters must be supervised by a licensed attorney.

Legal Medical Consulting, Associate of Technical Studies Degree

COURSE		CR
First Quarter		
ENGL 101	Beginning Composition	3
LEGL 101	Introduction to Legal Assisting	4
LEGL 102	Legal Systems	2
MCT 106	Computer Literacy 2	3
HIMT 121	Advanced Medical Terminology	3
Second Quarter		
ENGL 102	Essay and Research	3
LEGL 111	Legal Research and Writing I	4
LEGL 201	General Practice	4
BIO 121	Anatomy, Physiology & Pathology I	5
Third Quarter		
ENGL 200	Business Communications OR	
ENGL 204	Technical Writing	3
LEGL 112	Legal Research and Writing II	4
BIO 122	Anatomy, Physiology & Pathology II	5
HIMT 133	Medicolegal Aspects of the Record	3
Fourth Quarter		
COMM 110	Conference & Group Discussion	3
LEGL 251	Computer Assisted Legal Research	2
LEGL 205	Litigation Practice & Procedure I	3
HIMT 134	Analysis of the Health Record	3
MATH 101	Business Math	5
Fifth Quarter		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
LEGL 240	Professional Malpractice	3
HIMT 245	Inpatient Coding	5
HIMT 141	Pharmacology for Health Information Mgmt. Tech.	3
Sixth Quarter		
LEGL 226	Administrative Law	3
LEGL 238	Insurance Law	3
LEGL 266	Liability Issues in Health Professions	3
HIMT 255	Ambulatory Coding	5
Seventh Quarter		
SSCI 1xx	Social Sciences 101. 102. 103 or 104	5
LEGL xxx	Technical Elective	3
BMGT 216	Business Ethics	3
HIMT 259	Health Info. Registries & Quality Improvement	4
Technical Electives		
LEGL 113	Legal Research and Writing III	5
LEGL 230	Special Problems in Legal Assisting	2
LEGL 243	Alternative Dispute Resolution	3
LEGL 252	Survey of Advanced Legal Technology (CARII)	2
HIMT 123	Health Data Management	3
HIMT 243	Ancillary Health Facilities	3
HIMT 257	Introduction to Health Statistics	3

Logistics

Logistics Associate Degree Purchasing Major

Logistics (or distribution) is the term used to describe all of the activities related to the movement of materials from the time they're manufactured to when they reach their ultimate consumer. Logistics professionals manage all aspects of the "pipeline" that keeps goods and services moving. Columbus' central location has seen its development as a strategic distribution hub. The greater Columbus metropolitan area is home to many distribution operations including centers for The Limited Inc., Spiegel, Eddie Bauer, JCPenney, Consolidated Stores Corporation and McGraw-Hill Companies.

The Purchasing Major is designed to provide focused skills in purchasing and negotiation to students interested in this field. This major is built upon a solid foundation in current logistics management theory and practice.

Logistics graduates may expect entry-level, first-line management positions as supervisors and managers in such areas as traffic and

transportation, inventory control, warehousing, purchasing, materials control, traffic and operations management.

Columbus State Community College is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the Associate of Arts, Associate of Science, and Associate of Applied Science degrees.

Upon completion of the Associate of Applied Science Degree in Logistics, the graduate will be able to:

Describe the various functions that comprise logistics and describe the interrelationship between them and other functional areas within a company.

Be able to make channel-related decisions to satisfy industrial and consumer wants in both domestic and international markets.

Demonstrate knowledge of logistics terminology and technologies including inventory techniques, bar-coding systems, picking and delivery processes, and storage and sorting systems.

Demonstrate knowledge of the function and operation of warehouses and distribution facilities.

Explain the role of inventory and production control.

Describe the traffic management function and its role in carrier selection and rate determination and negotiation.

Demonstrate knowledge of state and federal laws that impact the distribution function, including knowledge of common carrier obligations.

Participate in the development of an integrated plan of action consistent with established logistics goals.

Understand the analytical tools useful in logistics and describe the relationship between them and other functional areas within a company.

Purchasing Major

In addition to the Logistics competencies, a graduate with a Purchasing major will be able to:

- Explain the legal aspects of purchasing, and regulatory laws and agencies that affect shipping and purchasing.
- Describe the interrelationship between purchasing and inventory control, manufacturing, quality assurance and physical distribution functions.
- Design and implement purchasing policies and procedures for the acquisition of capital goods and services.
- Negotiate purchasing contracts.
- Demonstrate the use and need for purchasing management information systems.

Logistics Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MKTG 111	Marketing Principles	5
LOGI 100	Principles of Logistics	5
MCT 098	Spreadsheets	1
MCT 099	Word Processing	1
LEGL 264	Legal Environment of Business	4
Quarter 2		
ENGL 102	Essay & Research	3
ACCT 106	Intro. to Accounting I	5
LOGI 110	Transportation/Traffic Mgt.	3
COMM 105	Speech	3
MATH 103	Beginning Algebra II	4
Quarter 3		
MKTG 226	Customer Service Principles	3
ACCT 107	Intro to Accounting II	5
HUM 1xx	Humanities 111, 112, 113, 151, or 152	5
MATH 135	Statistics	5
LOGI 210	Warehouse Management	3
Quarter 4		
FMGT 201	Business Finance	5
ENGL 200	Business Communications	3
HRM 121	Human Resources Management	4
LOGI 151	Purchasing Principles	3
LOGI 208	Production	4
Quarter 5		
BMGT 253	Negotiation Principles	3
BMGT 218	Management Train. For Supvsors	5
NSCI 101	Natural Science I	5
LOGI 211	Inventory Control	4
Quarter 6		
LOGI 27 1	Advanced Logistics	5
LOGI xxx	Elective	3
ECON 200	Microeconomics	5
MKTG 229	Business-to-Business Marketing	3
TOTAL CREDIT HOURS		**110**

Technical Electives

COURSE		CR
LOGI 152	Purchasing Principles II	3
LOGI 205	Freight Claims	2
LOGI 209	Quant. Methods for Logistics	5
LOGI 225	Export/Import	3
LOGI 240	Transport Law/Regulations	2
LOGI 241	Logistics Practicum	4
LOGI 242	Logistics Seminar	2
LOGI 245	Transportation Rates/Pricing	2
LOGI 256	Advanced Purchasing	3
LOGI 297	Special Topics in Logistics	1-3
QUAL 240	Total Quality Management	3
ENVR 252	Hazardous Material Handling	3

Purchasing Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MKTG 111	Marketing Principles	5
LOGI 100	Principles of Logistics	5
MCT 098	Spreadsheets	1
MCT 099	Word Processing	1
LEGL 264	Legal Environment of Business	4
Quarter 2		
ENGL 102	Essay & Research	3
ACCT 106	Intro. to Accounting I	5
LOGI 110	Transportation/Traffic Mgt.	3
COMM 105	Speech	3
MATH 103	Beginning Algebra II	4
Quarter 3		
MKTG 226	Customer Service Principles	3
ACCT 107	Intro to Accounting II	5
HUM 1xx	Humanities 111, 112, 113, 151, or 152	5
MATH 135	Statistics	5
LOGI 210	Warehouse Management	3
Quarter 4		
FMGT 201	Business Finance	5
ENGL 200	Business Communications	3
LOGI 151	Purchasing Principles	3
LOGI 211	Inventory Control	4
Quarter 5		
BMGT 253	Negotiation Principles	3
ECON 200	Microeconomics	5
LOGI 152	Purchasing Principles II	3
NSCI 101	Natural Science I	5

Quarter 6		
LOGI 256	Advanced Purchasing Seminar	3
LOGI xxx	Elective	3
ECON 240	Principles of Macroeconomics	5
MKTG 229	Business-to-Business Marketing	3
TOTAL CREDIT HOURS		**103**

Technical Electives

COURSE		CR
LOGI 205	Freight Claims	2
LOGI 209	Quantitative Methods for Logistics	5
LOGI 225	Export/Import	3
LOGI 240	Transport Law/Regulations	2
LOGI 241	Logistics Practicum	4
LOGI 242	Logistics Seminar	2
LOGI 245	Transportation Rates/Pricing	2
LOGI 297	Special Topics in Logistics	1-3
ENVR 252	Hazardous Materials Handling	3
QUAL 240	Total Quality Management	3

Marketing

Marketing Associate Degree
Customer Service Major
Direct Marketing Major

Marketing is at the heart of what every business must do to be successful: get and keep customers. Marketing professionals are responsible for knowing how to produce, price, promote and distribute goods and services. Program graduates enjoy tremendous career opportunities in such diverse areas as product management, advertising, market research, public relations, customer service and sales.

The Marketing program provides a strong foundation in fundamental marketing concepts and principles. The advanced courses provide the opportunity for studying topics of particular interest to the student in such areas as consumer behavior, public relations, and advanced sales techniques.

The Customer Service and Direct Marketing majors build on a solid foundation in marketing to provide advanced skills in these specialized areas. The Customer Service major focuses on customer retention, call center supervision, and customer loyalty and the specific financial impact of these areas on corporate profitability. The Direct Marketing major provides graduates a survey of the major components of direct marketing including creative design, list selection, database management and financial evaluation of direct marketing programs. Particular emphasis is placed on interactive technologies and their impact on direct marketing.

Columbus State Community College is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the Associate of Arts, Associate of Science, and Associate of Applied Science Degrees.

Upon completion of the Associate Degree in Marketing, the graduate will be able to:

- Demonstrate knowledge of the issues involved in making marketing decisions and the environmental forces that impact these decisions.
- Demonstrate a knowledge of the major marketing communications functions (e.g. advertising, public relations).
- Understand the major components of the marketing mix: price, product, promotion and distribution.
- Understand the market research process and be able to use market research results to effect market decisions.
- Demonstrate a knowledge of how consumer behavior impacts overall marketing strategy.
- Comprehend the sales process and know how to prepare effective sales presentations.
- Identify issues that arise in global marketing and describe the basic mechanisms for entering foreign markets.
- Understand various consumer and industrial systems of distribution.
- Understand the basics of customer service for both internal and external customers.
- Participate in the development of an integrated plan of action that is consistent with established marketing goals and strategies.

Customer Service Major

In addition to the Marketing competencies, a graduate with a Customer Service major will be able to:

- Analyze customer requirements.
- Handle problem transactions and difficult customers.
- Apply oral and written communication skills to problem solving.
- Describe the elements of effective customer service as they relate to customer acquisition, growth and retention.
- Understand the basic operations of a telephone call center.
- Demonstrate the interpersonal and supervisory skills necessary for successful communication among employees and between customer service and customers.
- Be able to lead, motivate and empower teams of call service representatives.

Direct Marketing Major

In addition to the Marketing competencies, a graduate with a Direct Marketing Major will be able to:

- Define and develop a target market and select the most appropriate methods to reach it.
- Select and use the appropriate methodology to assess the costs of direct marketing efforts.
- Understand and be able to utilize interactive direct marketing media.
- Plan and implement telemarketing campaigns for purposes of direct selling, fund-raising, and business-to-business sales.
- Integrate creative activities and outcomes with appropriate direct marketing techniques.

Marketing Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 102	Beginning Algebra I	4
MKTG 111	Marketing Principles	5
BMGT 111	Management	5
MCT 098	Introduction to Spreadsheets	1
MCT 099	Introduction to Word Processing	1
Quarter 2		
ENGL 102	Essay and Research	3
ECON 200	Principles of Microeconomics	5
MKTG 140	Advertising & Promotion	5
MKTG 122	Business & the Internet	3
ACCT 106	Intro to Accounting I	5

Quarter 3

COMM 105	Speech	3
ACCT 107	Intro. to Accounting II	5
RETL 101	Introduction to Retailing	5
MKTG 131	Market Research Principles	3

Quarter 4

ENGL 200	Business Communication	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
LOGI 100	Principles of Logistics	5
MKTG 221	Consumer Behavior	3
FMGT 201	Business Finance	5

Quarter 5

LEGL 264	Legal Environment of Business	4
MKTG 226	Customer Service	3
MKTG 223	Sales	3
MKTG 236	Direct Marketing	3
NSCI 101	Natural Science I	5

Quarter 6

MKTG 271	Advanced Marketing	5
MKTG 241	Marketing Practicum I	4
MKTG 242	Marketing Seminar I	2
MKTG xxx	Approved Elective	**3**

TOTAL CREDIT HOURS **109**

Technical Electives

Any advisor approved courses from the following list can be used for the Marketing Elective:

MKTG 224	Public Relations	**3**
MKTG 227	Customer Service Case Studies	**3**
MKTG 228	Advanced Sales	**3**
MKTG 229	Business-to-Business Marketing	**3**
MKTG 230	Small Business Marketing	**3**
MKTG 237	Database Marketing	**3**
MKTG 260	DM Using Electronic Media	**3**
MKTG 261	Fin. Analy. of Direct Mkt. Results	**2**
MKTG 262	Telemarketing	**2**
MKTG 263	Direct Marketing Creative	**2**
MKTG 285	The Internet &Advertising/Promotion	1
MKTG 286	The Internet & Customer Service	1
MKTG 287	The Internet & Public Relations	1
MKTG 288	The Internet & Market Research	1
MKTG 289	The Internet & Direct Marketing	1
HRM 121	Human Resources Management	**4**
MATH 135	Elementary Statistics	**5**
MKTG 251	Practicum II	**4**
MKTG 252	Seminar II	**2**

Customer Service Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	**3**
MATH 102	Beginning Algebra I	**4**
MKTG 111	Marketing Principles	**5**
BMGT 111	Management	**5**
MCT 098	Introduction to Spreadsheets	1
MCT 099	Introduction to Word Processing	1
Quarter 2		
ENGL 102	Essay and Research	**3**
ECON 200	Principles of Microeconomics	**5**
MKTG 140	Advertising & Promotion	**5**
MKTG 122	Business & the Internet	**3**
MKTG 226	Customer Service	**3**
Quarter 3		
COMM 105	Speech	**3**
ACCT 106	Intro to Accounting I	**5**
RETL 101	Introduction to Retailing	**5**
MKTG 131	Market Research Principles	**3**
NSCI 101	Natural Science I	**5**
Quarter 4		
ENGL 200	Business Communication	**3**
HUM 1xx	Humanities 111, 112, 113, 151, or 152	**5**
MKTG 221	Consumer Behavior	**3**
MKTG 227	Customer Svce Case Studies	**3**
ACCT 107	Intro. to Accounting II	**5**
Quarter 5		
MKTG 264	Call Center Operations	**3**
FMGT 201	Business Finance	**5**
HRM 121	Human Resources Mgmt	**4**
MKTG 262	Telemarketing	**3**
Quarter 6		
MKTG 291	Advanced Customer Service	**5**
MKTG 241	Marketing Practicum I	**4**
MKTG 242	Marketing Seminar I	**2**
MKTG xxx	Approved Elective	**3**
TOTAL CREDIT HOURS		**107**

Technical Electives

Any advisor approved courses from the following list can be used for the Marketing Elective,:

MKTG 224	Public Relations	**3**
MKTG 228	Advanced Sales	**3**
MKTG 229	Business-to-Business Marketing	**3**
MKTG 230	Small Business Marketing	**3**
MKTG 236	Direct Marketing Principles	**3**
MKTG 237	Database Marketing	**3**
MKTG 285	The Internet & Advertising/Promotion	1
MKTG 286	The Internet & Customer Service	1
MKTG 287	The Internet & Public Relations	1
MKTG 288	The Internet & Market Research	1
MKTG 289	The Internet & Direct Marketing	1
BMGT 272	Case Studies	**3**
MATH 135	Elementary Statistics	**5**
LOGI 100	Principles of Logistics	**5**

Direct Marketing Major

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	**3**
MATH 102	Beginning Algebra I	**4**
MKTG 111	Marketing Principles	**5**
BMGT 111	Management	**5**
MCT 098	Introduction to Spreadsheets	1
MCT 099	Introduction to Word Processing	1
Quarter 2		
ENGL 102	Essay and Research	**3**
ECON 200	Principles of Microeconomics	**5**
MKTG 140	Advertising & Promotion	**5**
MKTG 122	Business & the Internet	**3**
MKTG 226	Customer Service Principles	**3**
Quarter 3		
COMM 105	Speech	**3**
ACCT 106	Intro. to Accounting I	**5**
RETL 101	Introduction to Retailing	**5**
MKTG 131	Market Research Principles	**3**
NSCI 101	Natural Science I	**5**
Quarter 4		
ENGL 200	Business Communication	**3**
MKTG 221	Consumer Behavior	**3**
MKTG 262	Telemarketing	**3**
ACCT 107	Intro. to Accounting II	**5**
MKTG 236	Direct Marketing Principles	**3**
Quarter 5		
MKTG 263	Direct Marketing Creative	**3**
MKTG 237	Database Marketing	**3**
MKTG 261	Financial Analy. Of DM Results	**3**
FMGT 201	Business Finance	**5**
HUM 1xx	Humanities 111, 112, 113, 151, or 152	**5**
Quarter 6		
MKTG 28 1	Advanced Direct Marketing	**5**
MKTG 24 1	Marketing Practicum I	**4**
MKTG 242	Marketing Seminar I	**2**
MKTG 260	Direct Marketing Using Electronic Media	**3**
TOTAL CREDIT HOURS		**109**

Direct Marketing Certificate

COURSE		CR
MKTG 236	Direct Marketing Principles	3
MKTG 231	Database Marketing	3
MKTG 263	Direct Marketing Creative	3
MKTG 260	DM Using Electronic Media	3
MKTG 261	Financial Analysis of Direct Marketing Results	3
MKTG 262	Telemarketing	3

Mechanical Engineering Technology

The Mechanical Engineering Technology program is designed to train students in technology based, entry-level, occupations related to the mechanical and manufacturing engineering fields. Many diverse occupations find their origins in the mechanical field. These occupations include a variety of titles in the areas of drafting, production, testing, design, and analysis, to name but a few. Students graduating with an Associate of Applied Science Degree in the Mechanical Engineering Technology are qualified to play a support role in engineering professions in the industrial, consulting, scientific research, and manufacturing communities.

Upon completion of the Associate Degree in Mechanical Engineering Technology, the graduate will be able to:

- Discuss and apply basic knowledge of mechanical technology to assist in the solution of engineering problems, follow engineering procedures, use engineering symbols, read and relate to engineering publications, and understand the role of professional societies.
- Demonstrate basic knowledge of manufacturing practices used in the production of raw materials and products made from those materials.
- Read and interpret engineering blueprints, drawings, and specifications; assist in the establishment of tolerances related to the production of products.
- Apply basic knowledge of orthographic and isometric drawing techniques along with other drafting fundamentals to the creation and revision of mechanical drawings using manual and computer techniques.
- Apply a basic knowledge of physics to the solution of problems involving bodies at rest or in motion.
- Use knowledge of a material's properties and performance in the selection and design of components and systems.
- Apply knowledge of hydraulic components and systems for use in the manufacturing environment and in manufactured products.
- Apply, program and/or operate a variety of manual and automated production devices in the production of products.
- Make contributions to the improvement of products, and systems in manufacturing by applying knowledge of Statistical Process Control and other quality tools.
- Apply computers to solve engineering and related problems using knowledge of computer language, computer operating systems, spreadsheets, word processors, and database applications software packages.
- Apply a basic knowledge of cost estimating procedures to new designs, selection of equipment, and the application of manufacturing processes.
- Utilize a variety of communications skills (verbal, written, and graphic) to communicate effectively with clients, coworkers and others in the work environment.

Mechanical Engineering Technology Associate Degree

COURSE		CR
Quarter 1		
MATH 111	Technical Math I	4
MECH 110	Introduction to Manufacturing Technology	3
MECH 111	Manufacturing Processes	3
ENGL 101	Beginning Composition	3
MECH 112	Computer Applications in Manufacturing	3
Quarter 2		
MATH 112	Technical Math II	4
PHYS 181	Physics (Mechanics)	4
EET 101	Basic, Electricity	3
MECH 120	Mechanical Drafting I	3
QUAL 240	Total Quality Management	3
Quarter 3		
ENGL 102	Essay and Research	3
COMM 105	Speech	3
MATH 113	Technical Math III	4
EET 102	Electronic/Digital Fund	3
MECH 131	Hydraulics	3
MECH 250	Materials Science	3
Quarter 4		
ENGL 204	Technical Writing	3
MECH 240	Machine Tools	4
MECH 251	Computer Aided Drafting I	3
MECH 243	Robotics	3
MECH 130	Statics	3
Quarter 5		
HUM 1Xx	Humanities 111, 112, 113, 151 or152	5
MECH 252	Computer Programming for Technicians	3
MECH 253	Numerical Control	3
MECH 244	Statistical Process Control	3
MECH 242	Strength of Materials	3
MECH 262	Computer Aided Drafting II	3
Quarter 6		
SSCI 10x	Social Sciences 101, 102, 103 or 104	5
MECH 260	Basic Mechanisms	4
MECH 261	Machine Design	4
MECH 263	Computer Aided Manufacturing	4
MECH 264	Computer Aided Drafting III	3
TOTAL CREDIT HOURS		**109**

Medical Assisting

The Medical Assisting program prepares graduates to work as medical assistants primarily in ambulatory settings such as medical offices and clinics. Medical assistants are multi-skilled professionals who assist in patient care management. They perform a broad range of clinical and administrative duties, including scheduling and receiving patients, establishing and maintaining medical records, performing secretarial skills, handling telephone calls, writing correspondence and managing finances. Medical assistants are a valuable member of the health-care team, and job opportunities are numerous in central Ohio and nationwide. Graduates of the program are eligible to take the National Certification examination administered twice yearly.

Upon completion of the Associate Degree in Medical Assisting Technology, the graduate will be able to:

- Prepare and maintain records.
- Apply computer concepts for office procedures.
- Perform medical transcription.
- Take vital signs.
- Perform first aid and CPR.

Interview, take patient histories and prepare patients for procedures.
Assist the physician with examinations and treatments.
Use quality control.
Perform selected tests that assist with diagnosis and treatment.
Screen and follow up patient test results.
Prepare and administer medication as directed by the physician.
Dispose of controlled substances in compliance with government regulations.
Inventory equipment and supplies.
Instruct patients with special needs.
Teach patients methods of health promotion and disease protection.
Implement Current Procedural Terminology and ICD-9 coding.
Analyze and use current third party guidelines for reimbursement.
Provide necessary leadership, direction and documentation to effectively supervise people.

Medical Assisting Associate Degree

Quarter 1		
COURSE		**CR**
MCT 106	Computer Literacy II	3
ENGL 101	Beginning Composition	3
MAT 100	Introduction to Medical Assisting	2
MULT 101	Medical Terminology	2
BIO 101	Introduction to Anatomy & Physiology	3
MULT 190	Radiation Protection for General Machine Operator	2

Quarter 2		
COURSE		**CR**
MATH 101	Business Mathematics	5
HIMT 121	Advanced Medical Terminology	3
MAT 110	Clinical Procedures	4
MULT 102	Cardiopulmonary Resuscitation	1
MAT 112	Diseases of the Human Body	3

Quarter 3		
COURSE		**CR**
ENGL 102	Essay & Research	3
MATH 100	Calculations and Dosages	2
MAT 120	Office Procedures	4
MULT 103	Responding to Emergencies	2
HIMT 132	Introduction to Medical Transcription	2
HIMT 245	Inpatient Coding	5

Quarter 4		
COURSE		**CR**
COMM 105	Speech **OR**	
COMM 110	Conference and Group Discussion	3
HIMT 255	Ambulatory Coding	5
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
MAT 140	Physician's Office Laboratory	5

Quarter 5		
COURSE		**CR**
HIMT 265	Medical Reimbursement	3
MAT 130	Pharmacology	4
PSY 100	Introduction to Psychology	5
MAT 150	Advanced Clinical Procedures	5

Quarter 6		
COURSE		**CR**
ENGL 200	Business Communications **OR**	
ENGL 202	Writing for Hlth and Human Serv	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
MAT 190	Practicum	3
MAT 195	Seminar	2
MAT 160	Ethical and Professional Principles of the Medical Office	2
TOTAL CREDIT HOURS		99

Medical Laboratory Technology

Medical laboratory technicians play an important role in the diagnosis and treatment of disease. They perform a variety of laboratory tests, such as chemical analysis of body fluids, classification of blood cells, identification of disease producing microorganisms, and the selection of compatible donor blood for transfusion. The Medical Laboratory Technology Associate Degree program prepares students to work in a variety of laboratory settings. Graduates are employed in hospitals, independent laboratories, and clinics, as well as veterinary, research, environmental science and quality assurance laboratories. They also pursue careers in technical consultation, customer service, marketing and sales.

The first six quarters of the Medical Laboratory program provide the students with entry-level knowledge and skills in clinical chemistry, clinical microbiology, hematology, immunohematology, immunology, and phlebotomy in a classroom laboratory setting. This training is enriched during the seventh quarter of the program when the students have the opportunity to apply their previously acquired knowledge and skills in an actual working environment. Affiliated hospital and private laboratories in and surrounding Columbus within an approximate sixty-mile radius will be utilized for this ten-week clinical practicum. Because of the nature of the work, the program emphasizes safety and accident prevention.

Graduates are eligible to take the American Society of Clinical Pathologists Board of Registry Medical Laboratory Technician Examination, and the National Certification Agency for Clinical Laboratory Technology Registry Examination. Graduates may also advance in the field to become a technologist or specialist by pursuing additional education or technical experience.

The Medical Laboratory Technology program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). The program has produced over 700 graduates in the past 25 years who have consistently met or exceeded the national average on credentialing examinations. It is recognized as a "Program of Excellence" by the Ohio Board of Regents.

Upon completion of the Associate Degree in Medical Laboratory Technology, the graduate will be able to:

- Perform routine collection and processing procedures for biological specimens.
- Perform routine analytical techniques on body fluids using automated equipment and/or manual methods with accuracy and precision.
- Follow prescribed strategies to recognize technical or instrumental problems, identify direct causes, and make simple corrections when they are indicated.
- Perform and monitor quality control to evaluate analytical procedures within predetermined parameters.
- Perform preventive maintenance of laboratory instruments by referring to appropriate sources/reference materials.
- Relate laboratory findings to common disease processes.
- Log in specimens, keep accurate records, prepare reports, and transmit reports clearly and completely.
- Follow prescribed safety procedures in all areas of laboratory work.

Meet requirements to take a national certifying examination for medical laboratory technicians.
Apply basic scientific principles in learning new techniques and procedures.
Demonstrate professional conduct and interpersonal communication skills with patients, co-workers, and other health care professionals. Recognize and act upon one's need for continuing education as a function of growth and maintenance of professional competence.

Specific Program Admissions Information
Listed below are additional requirements for admission to the Medical Laboratory Technology.

- High school graduate or G.E.D. equivalency
- Required high school (or equivalent) courses:
  Algebra, grade of "C" or above
  Biology, grade of "C" or above
  Chemistry, grade of "C" or above
- Placement into ENGL 101, Beginning Composition
- Placement into MATH 103 - Beginning Algebra II
- Completed health statement

Medical Laboratory Technology Associate Degree

COURSE		CR
Quarter 1		
MLT 141	Hematology I (Admission to Program)	6
MATH 103	Beginning Algebra II	4
MLT 100	Introduction to Health Care	3
CHEM 113	General & Biological Chemistry	5
Quarter 2		
MLT 130	Immunology	5
ENGL 101	Beginning Composition	3
BIO 169	Human Physiology	5
MLT 120	Role & Resp. of MLT	2
xxx xxx	Technical Elective	2
Quarter 3		
MLT 260	Clinical Chemistry	6
BIO 115	General Microbiology	5
CPT 101	Computer Literacy 1	3
Quarter 4		
MLT 250	Clinical Microbiology	8
COMM 105	Speech	3
SSCI 10x	SSCI 101, 102, 103 or 104	5
Quarter 5		
MLT 220	Immunohematology	8
ENGL 102	Essay & Research	3
HUM 1xx	HUM 111, 112,113, 151 or 152	5
Quarter 6		
MLT 240	Hematology II	6
MLT 242	Body Fluids	4
MLT 244	Case Studies	2
ENGL 200	Business Communications	3
MULT 116	Venipuncture for Health Care Providers	3
Quarter 7		
MLT 270	Clinical Practicum	5
MLT 271	Clinical Seminar	2
TOTAL CREDIT HOURS		**105**

Mental Health/ Chemical Dependency/ Mental Retardation

Mental Health Track
Chemical Dependency Track
Mental Retardation Track
Advanced Level Chemical Dependency Certificate
Community Living Specialist Certificate
Entry Level Chemical Dependency Certificate
Foster Parent Treatment Specialist Certificate

With social, economic, and moral issues constantly changing, society is faced with increasingly complex problems which require professional, caring helpers. This has created a high demand for Human Service specialists. These Human Service specialists have a professionally and personally challenging role in providing services to both children and adults with a variety of problems and/or disabilities. Graduates work with persons with mental retardation and/or developmental disabilities, emotional/ mental difficulties, and chemical dependency. Specialists also work in consultation with psychologists, educators, psychiatrists, and social workers.

Innovative educational approaches, including videotaping, simulated situations, role-playing and discussion in small group seminars, are used to help students develop the knowledge, therapeutic skills and necessary attitudes to succeed in this profession. The program stresses the characteristics graduates will need to be effective helpers.

The Associate Degree program enables students to specialize in one of the following educational tracks during their second year: Mental Health, Chemical Dependency, and Mental Retardation. The six-quarter, three-track program includes 560 hours of hands-on experience under the direct supervision of professionals in local agencies. Internships include the following community placements: mental health centers, group homes, state psychiatric hospitals, schools, workshops, private hospitals, rehabilitation facilities and drug and alcohol treatment centers.

Graduates who complete the Associate Degree program are eligible to apply for a Certificate of Registration as a social worker assistant with the State of Ohio Counselor and Social Worker Board. The Mental Health/Chemical Dependency and Mental Retardation program is accredited by the Council for Standards in Human Service Education.

The program also offers the following certificate programs:

Advanced Level Chemical Dependency Certificate
Fifty five (55) credit hour program for students with an associate, bachelor or master degree in a related field. Completion of this certificate will meet 270 hours of acceptable chemical dependency training for CCDC II and CCDC III. Students will have three supervised clinical placements including one with dual-diagnosed client population.

Community Living Specialist Certificate
Forty one (41) credit hour program for students who have, in the past, struggled with their own severe mental illness. Students will make use of their coping skills to work effectively with persons with severe mental illness. Students will do two clinical placements on a mental health community treatment team.

Entry Level Chemical Dependency Certificate
Forty eight (48) credit hour program for students who are currently employed as a primary counselor in the chemical dependency field, with no prior college degree. Completion of this certificate will meet acceptable chemical dependency training for CCDC I and CCDC II levels. Students will have two supervised clinical placements with clients who are chemically dependent.

Foster Parent Treatment Specialist Certificate
Fifty four (54) credit hour program for students who desire to be a foster parent to youths who have special needs. Students will have a supervised practicum experience in a community agency that serves the needs of youths. Students must be 21 years of age, have space in their home for a young person, and meet additional licensing requirements of the Ohio Department of Human Services.

COURSES MHCR 112, MHCR 115, MHCR 135, MHCR 191, MHCR 241, MHCR 247, MHCR 258, MHCR 291 AND MHCR 298 ARE APPROVED BY OHIO DEPARTMENT OF MENTAL RETARDATION AND DEVELOPMENTAL DISABILITIES IN OBTAINING ADULT SERVICE CERTIFICATION.

ALL TECHNICAL COURSES IN THE CHEMICAL DEPENDENCY TRACK ARE ACCEPTED BY THE OHIO CHEMICAL DEPENDENCY COUNSELOR'S CREDENTIALING BOARD AND FOR RENEWAL OF SOCIAL WORK LICENSURE.

Upon completion of the Associate Degree in Mental Health/ Chemical Dependency/Mental Retardation, the graduate will be able to:

Gather client data using observation, interviewing, standardized assessment tools, activities, and/or record review.
Keep data and monitor progress.
Formulate client assessments using an adaptive or social functional skill model
Develop treatment programs and discharge plans based on assessments of client needs.
Teach clients to perform and utilize a variety of activities.
Use counseling skills (including reflection of feelings, encouraging, paraphrasing, summarizing, reflection of meaning, interpretation, directives, logical sequences, self-disclosure, information/advice, feedback, confrontation, immediacy and concreteness).
Write progress reports, social histories, transfer/closing summaries, and documentation forms.
Make client referrals to and follow up on appropriate resources in the community.
Systematically train clients in job skills.
Use anger management skills.
Use service coordination/case management skills.
Co-lead educational, support, activity and substance abuse groups in a variety of settings.
Assemble and complete a portfolio.

In addition to the general Mental Health/Chemical Dependency/ Mental Retardation competencies, a graduate in the Mental Health/ Mental Retardation Tracks to provide supported employment to persons with MR/DD and/or severely mentally disabled persons will be able to:

- Utilize job development and job coaching skills to provide support employment to persons with MR/DD and/or severely mentally disabled persons.
- Develop and implement activities to utilize as a tool in helping relationships,
* Plan for, co-lead, and process therapeutic groups.
- Teach/train severely mentally disabled persons and or persons with MR/DD to perform activities of daily living.

In addition to the general Mental Health/Chemical Dependency/ Mental Retardation competencies, a graduate in the Chemical Dependency Track will be able to:

- Recognize and identify significant signs and symptoms of chemical dependency using a variety of assessment tools.
- Identify varying levels of care for chemical dependency treatment and common criteria for appropriate referral.
- Identify relapse dynamics/triggers and utilize a variety of intervention strategies.
- Describe the philosophy and benefits of 12-step support groups in the recovery process.
- Plan for, co-lead, and process therapeutic groups.

MH/CD/MR has articulation agreements with the following four year colleges/universities: Ohio Dominican College, Otterbein College, Capital University, Franklin University, and University of Cincinnati.

Because students and workers in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention.

Specific Program Admissions Information
Listed below are additional requirements for admission to the Mental Health/Chemical Dependency/Mental Retardation program.

- High school graduate or G.E.D. equivalency
- Completion of the following five courses with a grade of "C" or above:
  MHCR 111 - Introduction to Mental Health
  MHCR 112 - Introduction to MR/DD
  MHCR 114 - Introduction to Chemical Dependency
  MHCR 115 - Interviewing in Human Services
  MHCR 117 - Documentation Skills
- Must meet requirements as outlined in the program Admissions Policy
- Interview with the Mental Health/Chemical Dependency/Mental Retardation Admissions Coordinator, following satisfactory completion of all of the above.

Core curriculum for Mental Health/Chemical Dependency/ Mental Retardation

Mental Health and Mental Retardation Tracks

Quarter 1		
COURSE		**CR**
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
MHCR 111	Into. to Mental Health	3
MHCR 112	Intro. to Mental Retardation	3
MHCR 114	Intro. to Chemical Dependency	4
Quarter 2		
ENGL 102	Essay & Research	3
HUM xxx	Humanities 111, 112, 113, 151, or 152	5
CPT 101	Computer Literacy 1	3
MHCR 115	Interviewing in Human Services	3
MHCR 117	Documentation Skills	2
Quarter 3		
PSY 230	Abnormal Psychology	3
PSY 240	Human Growth & Dev. Through the Life Span	4
MHCR 135	Intervention Strategies	3
MHCR 191	Fund. In Human Services Practice	8

Quarter 4		
SSCI 101	Cultural Diversity	5
MHCR 241	Counseling Skills	4
MHCR 247	Teaching and Supporting People	3
MHCR 291	Field Practicum in Teaching/ Supporting People with Disabilities	4
Quarter 5		
COMM 105	Speech	3
ENGL 202	Writing for Health and Human Services	3
MHCR 25 1	Social Policy & Programs	4
MHCR 253	Therapeutic Group Work Skills	4
MHCR 295	Field Practicum in Group Work	4
Quarter 6		
BIO 112	Human Biology	5
MHCR 242	HIV/AIDS in Human Serv. Practice	4
MHCR 258	Service Coordination/Case Management	3
MHCR 298	Field Practicum in Service Coord/Case Mgmt.	4
MHCR 299	Portfolio Completion/Capstone	1
TOTAL CREDIT HOURS		**103**

Students who wish to pursue a Mental Health focus will do their practicums at Mental Health agencies.

Students who wish to pursue a Mental Retardation focus will do their practicums at agencies that serve people with Mental Retardation and other Developmental Disabilities.

Chemical Dependency Track

Quarter 1		
COURSE		**CR**
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
MHCR 111	Into. to Mental Health	3
MHCR 112	Intro. to Mental Retardation	3
MHCR 114	Intro. to Chemical Dependency	4
Quarter 2		
ENGL 102	Essay & Research	3
CPT 101	Computer Literacy 1	3
HUM xxx	Humanities 111, 112, 113, 151 or 152	5
MHCR 115	Interviewing in Human Services	3
MHCR 117	Documentation Skills	2
Quarter 3		
PSY 230	Abnormal Psychology	3
PSY 240	Human Growth & Dev. Through the Life Span	4
MHCR 135	Intervention Strategies	3
MHCR 191	Fund. In Human Services Practice	8
Quarter 4		
SSCI 101	Cultural Diversity	5
MHCR 241	Counseling Skills	4
MHCR 245	Chemical Dependency I	3
MHCR 293	Field Practicum in Chemical Dependency I	4
Quarter 5		
COMM 105	Speech	3
ENGL 202	Writing for Health and Human Services	3
MHCR 251	Social Policy & Programs	4
MHCR 253	Therapeutic Group Work Skills	4
MHCR 295	Field Practicum in Group Work	4
Quarter 6		
BIO 112	Human Biology	5
MHCR 242	HIV/AIDS in Human Serv. Practice	4
MHCR 265	Chemical Dependency II	3
MHCR 296	Field Practicum in Chemical Dependency II	4
MHCR 299	Portfolio Completion/Capstone	1
TOTAL CREDIT HOURS		**103**

Students who wish to pursue in-depth training may choose course number MHCR 274 and/or MHCR 284 Special Studies in MH/CD/MR 1-4

Foster Parent Treatment Specialist Certificate

COURSE		**CR**
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
MHCR 111	Introduction to Mental Health	3
MHCR 112	Introduction to MR/DD	3
MHCR 114	Introduction to Chemical Dependency	4
MHCR 115	Interviewing in Human Services	3
MHCR 117	Documentation Skills	2
MHCR 135	Intervention Strategies	3
MHCR 191	Fundamentals in Human Service Practice	8
MHCR 245	Chemical Dependency I	3
PSY 240	Human Growth and Development	4
MHCR 258	Service Coordination/Case Management	3
MHCR 274	Special Studies in MH/CD/MR	4
SSCI 101	Cultural Diversity	5

Community Living Specialist Certificate

COURSE	**CR**	
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5 OR
PSY 240	Human Growth & Development Through the Life Span	4
MHCR 111	Introduction to Mental Health	3
MHCR 112	Introduction to MR/DD	3 OR
MHCR 114	Introduction to Chemical Dependency	4
MHCR 115	Interviewing in Human Services	3
MHCR 117	Documentation Skills	2
MHCR 135	Intervention Strategies	3
SSCI 101	Cultural Diversity	5
MHCR 191	Fundamentals in Human Service Practice	8
MHCR 242	HIV AIDS in Human Service Practice	4
MHCR 284	Special Studies/Clinical Placement	4

Advanced Level Chemical Dependency Certificate

COURSE		**CR**
MHCR 114	Introduction to Chemical Dependency	4
MHCR 115	Interviewing in Human Services	3
MHCR 117	Documentation Skills	2
SSCI 101	Cultural Diversity	5
MHCR 191	Fundamentals in Human Service Practice	8
MHCR 135	Intervention Strategies	3
MHCR 24 1	Counseling Skills	4
MHCR 245	Chemical Dependency I	4
MHCR 293	Field Practicum in Chemical Dependency I	4
MHCR 253	Therapeutic Group Work Skills	4
MHCR 295	Field Practicum in Therapeutic Group Work Skills	4
MHCR 242	HIV AIDS in Human Service Practice	4
MHCR 265	Chemical Dependency II	3
MHCR 296	Field Practicum in Chemical Dependency II	4

Entry Level Chemical Dependency Certificate

COURSE		**CR**
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
MHCR 114	Introduction to Chemical Dependency	4
MHCR 115	Interviewing in Human Services	3
MHCR 117	Documentation Skills	2
SSCI 101	Cultural Diversity	5
MHCR 191	Fundamentals in Human Service Practice	8
MHCR 135	Intervention Strategies	3
MHCR 241	Counseling Skills	4
MHCR 242	HIV AIDS in Human Service Practice	4
MHCR 245	Chemical Dependency I	3
MHCR 293	Field Practicum in Chemical Dependency I	4

Microcomputing Technology

PC Hardware/Software Installation and Maintenance Certificate
Also see: Computer Programming Technology

Revolutionary new computer hardware and software programs have created a growing demand for computer-literate administrative assistants and microcomputer support professionals. Many businesses, especially smaller companies, are looking for individuals who have the computer skills and knowledge to increase the productivity and efficiency of their organization.

Columbus State Community College offers a two-year Associate of Applied Science degree in Microcomputing Technology. The six-quarter program is designed to provide students with the opportunity to develop increased skills in a variety of business-related applications including Word Processing, Spreadsheet, Database, Graphics, Communications, Networking, and Information Presentation.

Columbus State Community College is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the Associate of Arts, Associate of Science, and Associate of Applied Science Degrees.

Upon completion of the Associate Degree in Microcomputing Technology, the graduate will be able to:

- Understand and use the basic terms and concepts of information systems for business applications. *Keyboard 45 words per minute.
- Prepare letters, reports, tabulations, and business forms using various word processing software.
- Create and modify spreadsheets, including graphics, database, and export/import functions of Excel. *Create and modify database files, select and sort data, and produce reports using appropriate database software.
- Create and modify presentation graphics, including group presentations.
- Browse the Internet using on-line communication facilities, to select appropriate information relative to a specific topic.
- Use Operating System commands to perform basic system operations, such as: formatting disks; copying, moving, deleting, and renaming files; creating and changing file directories; backing up and restoring system files; creating and modifying Configuration Files.
- Demonstrate an understanding of the importance of human relations and positive attitudes in working with others and for others, and work effectively as a part of a group on a typical business system project. *Understand the basic principles of Local Area Networks, including various topologies, types of communication, security operations, and available diagnostics.
- Select (with justification), install, configure, operate, and provide operational maintenance of a personal computer system (including hardware and software) for business applications.
- Be able to specify the requirements for a personal computer system, including hardware, software, data management, data processing policies and procedures, training, operation and maintenance.

Specific Program Admissions Information
Listed below are additional requirements for admission to the Microcomputing Technology.

- Placement into MATH 102 - Beginning Algebra I, or completion of DEV 031 - Pre-Algebra
- OADM 131 - Keyboarding I

Microcomputing Technology Associate Degree

Quarter 1		
COURSE		**CR**
CPT 101	Computer Literacy 1	3
MATH 102	Beginning Algebra I	4
xxx xxx	Basic Education Electives	3
OADM 132	Keyboarding II	3
ENGL 101	Beginning Composition	3
Quarter 2		
MCT 106	Computer Literacy 2	3
MCT 121	PC Operating Systems	3
ACCT 101	Financial Accounting	4
ENGL 102	Essay & Research	3
BMGT 101	Introduction to Business	5
Quarter 3		
MCT 131	Advanced Excel	3
MCT 141	Advanced Access	3
OADM 192	Advanced Word	3
MCT 231	Introduction to Internet	3
ACCT 102	Managerial Accounting	3
Quarter 4		
MCT 211	Advanced Information Presentation	3
MCT 215	Microcomputer Fundamentals	3
MCT 221	Local Area Networks	3
MCT 205	Page Design and Electronic Publishing	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
Quarter 5		
MCT 251	Introduction to Systems Analysis	3
MCT 241	Intranet for Business Applications	3
MCT 261 I	Introduction to Visual BASIC	3
COMM 105	Speech	3
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
Quarter 6		
MCT 281	Final Project	5
MCT xxx	Technical Elective	3
xxx xxx	Basic Education Electives	3
ENGL 200	Business Communications	3
TOTAL CREDIT HOURS		97

Technical Electives must be selected from the following list of courses:

COURSE		**CR**
MCT 091	Computer Concepts	1
MCT 092	Introduction to HTML	1
MCT 093	Introduction to M/S Project	1
MCT 094	Internet Fundamentals	1
MCT 095	Introduction to Windows 95	1
MCT 096	Introduction to Information Presentation	1
MCT 097	Introduction to Database	1
MCT 098	Introduction to Spreadsheets	1
MCT 099	Introduction to Word Processing	1
MCT 235	WEB Page Design	3
MCT 255	Integrated PC Applications	3
CPT 241	Introduction to AS/400	3
CPT 291	Special Topics in CS 1	1
CPT 292	Special Topics in CS 2	2
CPT 293	Special Topics in CS 3	3
CPT 294	Special Topics in CS 4	4
CPT 295	Special Topics in CS 5	5
CPT 296	Special Topics in CS 6	6
CPT 297	Computer Science Internship/Field Experience 1	1
CPT 298	Computer Science Internship/Field Experience 2	2
CPT 299	Computer Science Internship/Field Experience 3	3
EET 144	PC. Hardware	3

PC Hardware/Software Installation and Maintenance Certificate

Quarter 1		
COURSE		**CR**
CPT 101	Computer Literacy 1	3
MATH 102	Beginning Algebra I	4
OADM 131	Keyboarding I	3
Quarter 2		
MCT 106	Computer Literacy 2	3
MCT 121	PC Operating Systems	3
EET 144	PC Hardware	3
Quarter 3		
MCT 215	Microcomputer Fundamentals	3
MCT 221	Local Area Networks	3
MCT 231	Introduction to the Internet	3
TOTAL CREDIT HOURS		28

Multi-Competency Health

EMT-Paramedic Degree Track
Histology Degree Track
Patient Care Degree Track
Animal Assisted Therapy in Education Certificate
Basic Electrocardiography Certificate
EMT-Basic Certificate
EMT-Intermediate Certificate
Health Care Manager Certificate
Histology Certificate
Home Health Aide Certificate
Mammography Certificate
Nurse Aide Training Program Certificate
Phlebotomy Certificate
Registered Nurse First Assistant Certificate
Registered Nurse Home Care Certificate
Respiratory Care Rehab/Home Care Certificate
Sleep Studies Certificate
Train the Trainer Certificate

Many health care facilities have reorganized. The job roles within these systems have adjusted to provide care and services based on patient needs. Many employment opportunities have been created for the individual who has documented competencies in a variety of health care skills. Multi-Competency Health provides the flexibility for students to gain these important skills in health care. The student has many options from which to choose in Multi-Competency Health.

Option 1 Associate Degree
An Associate Degree in Multi-Competency Health can be obtained by:

a) Completing one of two established tracks, Histology or Emergency Medical Technician/Paramedic. The Histology Program is accredited by the National Accrediting Agency for Clinical Laboratory Services. The Emergency Medical/Paramedic Program is accredited by the Commission on Accreditation of Allied Health Programs. Along with the identified technical courses, the student must complete the required general education courses, the required basic related courses, the technical core courses and at least 6 hours of technical options courses.

b) A student may also choose the Patient Care Track. This track was designed to allow the student to build a degree by choosing two or more Multi-Competency certificate programs and at least 6 hours of technical options courses for a minimum of 49 technical hours. The student also completes the required general education courses, the required basic related courses and the required technical core courses. This track allows the student to choose the multi-skill grouping of certificates and courses that best suits his/her interest or employer needs.

Upon completion of the Associate Degree requirements in Multi-Competency Health, the graduate will be able to:

- Use medical terminology correctly.
- Recognize life-threatening situations and administer necessary first aid and/or CPR.
- Demonstrate an understanding of medical ethics, medical legal responsibilities, and safety procedures, as well as professional attitudes.
- Demonstrate entry level competence in a major and a technical elective.

*** Curriculum plans are available in the Multi-Competency Health office.**

Option 2 Certificate Programs
Many certificate programs are offered through Multi-Competency Health. These are focused technical programs that result in a certificate of completion. The certificate programs range from those designed for anyone interested to those that require completion of a health care program or specific licensure. Many area health care employers are interested in students who have successfully completed one or more of these certificates.

Option 3 Enhance or Complement Primary Skills in Nursing or Allied Health
There are many courses within Multi-Competency Health that can be taken in association with the degree option, as a complement to a certificate program or as stand-alone courses that meet a professional need or personal interest.

* The requirements for each course vary. Many of these courses are open to all students and have no requirements. Others require completion of a health record.

For information on additional certificates see the Multi-Competency Health Coordinator.

EMT-Paramedic Degree Track
A student completing the EMT-Paramedic Degree Track will be able to:

- Meet the requirements for the Associate Degree in Multi-Competency Health
- Meet State of Ohio requirements to take the EMT-Paramedic certification examination.
- Perform all duties of the EMT-Basic.
- Initiate appropriate intravenous procedures as specifically authorized by medical authority in advance. Initiate and continue emergency medical care under medical control, including recognizing presenting conditions and initiating appropriate invasive and noninvasive therapies (e.g., surgical and

medical emergencies, airway and respiratory problems, cardiac dysrhythmias, cardiac pulmonary arrest, and psychological crisis), and assessing the response of the patient to that therapy.

Histology Degree Track
A student completing the Histology Degree Track will be able to:
- Meet the requirements for the Associate Degree in Multi-Competency Health
- Meet the specific Histology Certificate requirements

Patient Care Degree Track
A student completing the Patient Care Degree Track will be able to:
- Meet the requirements for the Associate Degree in Multi-Competency Health
- Work in a health care organization under professional supervision in the role of a PCA or technician. *Understand and work with various patient populations.
- Practice multiple patient skills, interpersonal communications and infection control.

Animal Assisted Therapy in Education Certificate
A student completing the Animal Assisted Therapy in Education Certificate will be able to:
- Promote understanding of the mutually nurturing relationship between people and animals and to explore services by animals to aid people with physical, cognitive, and emotional challenges.
- Complete the Delta Society's Pet Partners introductory animal handler skills course.
- Explore the techniques for the therapeutic use of companion animals and the conduct of Animal Assisted therapist in a variety of settings.

Basic Electrocardiography (EKG) Certificate
A student completing the EKG Certificate will be able to:
- Position leads and use electrocardiographic equipment correctly.
- Obtain and prepare an electrocardiography recording for analysis by a physician.
- Recognize and correct technical errors in an electrocardiography recording.
- Recognize and call attention to life-threatening abnormalities of an electrocardiograph.
- Provide safe, professional direct patient contact, specifically in the areas of infection control, electrical safety, privacy and environmental safety.

EMT-Basic Certificate
A student completing the EMT-Basic Certificate will be able to:
- Meet State of Ohio requirements to take the EMT-Basic certification examination.
- Evaluate the nature and seriousness of a patient's condition or the state of the patient's injuries and assess requirements for emergency care.
- Administer appropriate emergency care to stabilize the patient's condition.
- Lift, move, position, and otherwise handle the patient in such a way as to minimize discomfort and further injury.

EMT-Intermediate Certificate
A student completing the EMT-Intermediate Certificate will be able to:
- Meet State of Ohio requirements to take the EMT-Intermediate certification examination.
- Perform all duties of an EMT-Basic.
- Initiate appropriate intravenous procedures as specifically authorized by medical authority in advance.

Health Care Manager Certificate
A student completing the Health Care Manager Certificate will be able to:
- Apply theories and principles of human resource management to real life health care situations.
- Generate action plans, implementation activities, and evaluation processes to assure continuous quality improvement in health care institutions.
- Apply strategies, processes and current trends in health care management.
- Understand risk management and the underlying legal principles inherent in the health care system.

Histology Certificate
A student completing the Histology Certificate will be able to:
- Identify the source of the tissue and correlate tissue identification with function.
- Prepare stain solutions and fix tissue while utilizing universal precautions and following OSHA and CDC guidelines.
- Prepare and stain slides of organs or tissues safely and correctly for examination by a pathologist.
- Identify inadequate staining preparations and make corrections to improve quality of slides to the satisfaction of the pathologist.
- Complete requirements to take the certification exam in histology administered by the American Society of Clinical Pathologists.

Home Health Aide Certificate
A student completing the Home Health Aide Certificate will be able to:
- Work for an organization under professional supervision in the role of homemaker-home health aide. *Understand and work with various client populations.
- Identify and practice skills in home management, personal care, interpersonal communications, and infection control.
- Meet the requirements published by the National Home Caring Council.

Mammography Certificate
A student completing the Mammography Certificate will be able to:
- Independently perform breast imaging techniques and related procedures for interpretation and/or intervention by or at the request of a licensed physician.
- Provide for the physical, psychological, and educational needs of mammography clients essential to the delivery of mammographic services, to include breast self-examination techniques.
- Coordinate, operate, and maintain a mammographic facility in compliance with federal regulatory standards and professional guidelines to assure safe, accurate, and reliable breast imaging and/or interventional procedures.
- Exercise professional judgement in providing quality patient care and maintaining confidentiality in accordance with accepted ethical standards.

Nurse Aide Training Program Certificate
A student completing the Nurse Aide Certificate will be able to:
- Effectively communicate in the health care setting.
- State and demonstrate principles of medical asepsis and universal precautions.
- Identify and demonstrate the principles of safe resident care.
- Discuss and demonstrate correct basic nursing skills.
- Meet the requirements set forth in the Omnibus Budget Reconciliation Act of 1987.
- * Meet the eligibility requirements needed to apply to take the state test for nurse aides.

Phlebotomy Certificate
A student completing the Phlebotomy certificate will be able to:
- Collect a quality blood specimen by venipuncture and capillary puncture using the appropriate collection equipment with minimum trauma to the patient.
- Demonstrate professional conduct and interpersonal communication skills with patients, laboratory personnel and other health care professionals.
- Identify problems which may occur during blood collection and handle them effectively and correctly in a professional manner.
- Perform all duties utilizing standard precautions while conforming to current OSHA, CDC and NCCLS guidelines.

Registered Nurse First Assistant Certificate
A student completing the Registered Nurse First Assistant Certificate will be able to:
- Act effectively and safely as a first assistant in surgery.
- Meet eligibility requirements to take the RNFA certificate examination.

Registered Nurse Home Care Certificate
A student completing the Registered Nurse Home Care Certificate will be able to:
- Provide safe client care in the home.
- Communicate effectively with other home care providers.
- Perform the necessary documentation for compliance with government and private regulatory bodies.

Respiratory Care Rehabilitation/Home Care Certificate
A student completing the Respiratory Care Rehabilitation/Home Care Certificate will be able to:
- Educate patient and care-giver in disease process, medications, equipment care, and available resources. *Monitor patient's equipment needs.
- Establish and maintain records as required for patient care, billing records, and governmental records.

Sleep Studies Certificate
A student completing the Sleep Studies Certificate will be able to:
Level I Technician
- Prepare equipment and instrumentation for proper setup with patients.
- Under the guidance of credentialed personnel assess individual needs of the patient in relation to equipment and instrumentation in he sleep lab and integrate these needs into the patient preparation process.

Level II Technician
- Work as a Level II Technician in a polysomnography (Sleep) laboratory using instrumentation to assess patient status and score sleep study results.
- Under the supervision of credentialed personnel, assist with treatment based on sleep study scores.
- After completing one year of on-the-job experience, will be eligible to take the national credentialing examination for polysomnography.

Train the Trainer
A student completing the Train the Trainer Certificate will be able to:
- Teach, coordinate and supervise a Nurse Aide Training Program.
- Meet the requirements established by the Ohio Department of Health.

Specific Program Admissions Information
Listed below are additional requirements for admission to the degree programs in Multi-Competency Health Technology.
- High school graduate or G.E.D. equivalency
- Recommended high school (or equivalent) courses:
- Algebra
- Biology
- Chemistry
- Completed health statement (See Coordinator for detailed requirements)

Multi-Competency Health Associate Degree

General Education Requirements

COURSE		CR
ENGL 101	Beginning Composition	3
ENGL 102	Essay & Research	3
COMM 105	Speech	3
HUM lxx	Humanities 111, 112, 113,151 or 152	5
SSCI 10x	Social Science 101, 102, 103 or 104	5
ENGL 200	Business Communications	3

Basic Studies Requirements

COURSE		CR
MATH 102	Beginning Algebra I	4
BIO 115	Microbiology	5
BIO 161	Human Anatomy OR	5
BIO 121	Anatomy, Physiology & Pathology I	5
BIO 169	Human Physiology OR	5
BIO 122	Anatomy, Physiology & Pathology II	5
CHEM 113	General & Biological Chemistry	5
BIO 170	Human Pathophysiology	5

*These requirements may vary according to major/plan of study.

Technical Studies Core - Required

COURSE		CR
MULT 101	Medical Terminology	2
MULT 102	Cardiopulmonary Resuscitation (CPR)	1
MULT 180	Professionalism for Health Care Providers	2

Students must select a minimum of 6 credit hours from technical options courses.

Technical Option Course

Any Multi-Competency course will be accepted as a Technical Options course (when not used as part of a student's identified certificate program).

COURSE		CR
MULT 103	Responding to Emergencies	2
MULT 108	Twelve Lead Electrocardiography	2
MULT 110	Basic Electrocardiography	6
MULT 112	Identifying Cardiac Rhythms	2
MULT 114	Phlebotomy Practicum II	1
MULT 115	Phlebotomy	1
MULT 116	Venipuncture for Health Care Providers	2

MULT 120	Nurse Aide Training Program	5
MULT 121	Nurse Aide to Home Health Aide	2
MULT 122	Home Health Aide	5
MULT 123	Waived Lab Tests for Health Care Providers	3
MULT 125	Information Processing Assisting in Health Svc. Org.	5
MULT 126	Patient Care Skills I	4
MULT 127	Patient Care Assistant	4
MULT 128	Patient Care Assistant	5
MULT 129	Patient Care Skill: Rehab Techniques	4
MULT 130	Acute Care Skills for Patient Care Assistants	1
MULT 131	Referral Strategies for Chronically III Clients	3
MULT 133	Success Strategies for Patient Care Assistants	2
MULT 135	Basic PCA/MSP Training	3
MULT 136	Advanced Patient Care Assistant	2
MULT 137	Phlebotomy Training	2
MULT 138	EKG Training	1
MULT 139	Basic PCA Training	4
MULT 140	Patient Care Technician Training	3
MULT 142	Home Care Skills for Nurses	3
MULT 143	Advanced Skills for Home Health Aides	3
MULT 153	Point-of-Care Testing	1
MULT 160	Tissue Identification	3
MULT 161	Chemistry of Stains	3
MULT 162	Chemistry of Stains II	2
MULT 163	Basic Histology Techniques I	4
MULT 165	Case Study Review	3
MULT 166	Seminar II	3
MULT 167	Histology Clinical Experience I	4
MULT 168	Histology Clinical Experience II	8
MULT 169	Introduction to Histology	2
MULT 170	Cancer Prevention, Diagnosis & Treatment	1
MULT 171	Current Issues: HIV	1
MULT 172	HIV and AIDS: Skills for the Helping Professional	1
MULT 174	Personal Health	3
MULT 175	Principles of Homeopathy	4
MULT 176	Fundamentals of Herbology	4
MULT 177	Holistic Healing Methods	4
MULT 178	Animals and Nature - Therapeutic Programs	3
MULT 179	Companion Animals and Health	2
MULT 181	Introduction to the Human-Animal Interaction	2
MULT 183	Introduction to Inpatient Coding	1
MULT 184	Introduction to Ambulatory Coding	1
MULT 185	Introduction to Third-Party Reimbursement	1
MULT 190	Radiation Protection for General Machine Operator	1
MULT 203	Diagnostic and Intervention Proc. for the Mammographer	2
MULT 205	Mammographic Physics and Quality Assessment	4
MULT 207	Clinical Experience in Mammography	3
MULT 221	Introduction to Sleep Problems	2
MULT 223	Level I Polysomnography Technician	2
MULT 224	Level I Polysomnography Technician Clinical	4
MULT 225	Polysomnography Level II Technician	2
MULT 226	Level II Polysomnography Technician Clinical	2
MULT 228	Polysomnography Current Topics	2
MULT 231	Maternal Child Home Care	2
MULT 233	Pediatric Home Health Care	3
MULT 245	RN First Assistant Program	5
MULT 246	RNFA Experience in the Operating Room	4
MULT 250	N.A.T.P. Train the Trainer	3
MULT 270	Human Resources Management for Health Services	4
MULT 272	Health Care Resources Management	4
MULT 274	TQM/UM Accreditation	4
MULT 275	Advanced Homeopathic Theories	4
MULT 276	Legal Aspects and Risk Management	3

EMT-Paramedic Degree Track Requirements

COURSE		CR
EMS 211	EMT-P I	7
EMS 281	Hospital Clinical I	2
EMS 291	Vehicle Clinical II	1
EMS 212	EMT-P II	7
EMS 282	Hospital Clinical II	2
EMS 292	Vehicle Clinical II	1
EMS 213	EMT-P III	5
EMS 283	Hospital Clinical III	2
EMS 293	Vehicle Clinical III	1
EMS 214	EMT-P IV	2
EMS 284	Hospital Clinical IV	2
EMS 294	Vehicle Clinical IV	2
EMS 110	EMT - Basic	8

*Curriculum plans are available in the Multi-Competency Health Office

Histology Degree Track Requirements

*This certificate begins summer quarter and is offered every *odd* numbered year.

COURSE		CR
MLT 100	Introduction to Health Care	3
MULT 169	Introduction to Histology	2
MULT 160	Tissue Identification	3
MULT 161	Chemistry of Stains	3
MULT 162	Chemistry of Stains II	2
MULT 163	Basic Histology Techniques I	4
MULT 164	Basic Histology Techniques II	3
MULT 165	Histology Seminar I	
MULT 167	Histology Clinical Experience I	4
MULT 166	Histology Seminar II	3
MULT 168	Histology Clinical Experience II	8

*Curriculum plans are available in the Multi-Competency Health Office

Patient Care Degree Track Requirements

Two or more Multi-Competency Health certificate programs and at least six hours of Technical Options courses for a minimum of 52 technical hours.

* Suggested curriculum plans available.

Animal Assisted Therapy in Education Certificate

COURSE		CR
MULT 181	Introduction to Human-Animal Interaction	2
MULT 179	Companion Animals and Health	2
MULT 178	Animals & Nature - Therapeutic Programs	3

Basic EKG Certificate

COURSE		CR
MULT 110	Electrocardiography (EKG) OR	6
MULT 108	Twelve Lead EKG	2

EMT-Basic Certificate

COURSE		CR
EMS 110	EMT-Basic	8

EMT-Intermediate Certificate

COURSE		CR
EMS 111	EMT-Intermediate	6

Health Care Manager Certificate*

* This certificate begins autumn quarter every even year.

COURSE		CR
CPT 101	Computer Literacy	3
BMGT 218	Management Training for Supervisors	3
MULT 270	Human Resource Mgmt. in Health Services Organ.	4
MULT 272	Health Care Resource Management	4
MULT 274	TQM/UM/Accreditation	4
MULT 276	Legal Aspects and Risk Management	3

Histology Certificate

COURSE		CR
MLT 100	Introduction to Health Care	3
BIO 161	Human Anatomy	5
MULT 101	Medical Terminology	2
MULT 169	Introduction to Histology	2
MULT 160	Tissue Identification	3
MULT 161	Chemistry of Stains	3
MULT 162	Chemistry of Stains II	2
MULT 163	Basic Histology Techniques I	4
MULT 164	Basic Histology Techniques II	3
MULT 165	Histology Seminar I	1
MULT 167	Histology Clinical Experience I	4
MULT 166	Histology Seminar II	3
MULT 168	Histology Clinical Experience II	8

*Curriculum plans are available in the Multi-Competency Health Office

Home Health Aide Certificate

COURSE		CR
MULT 122	Home Health Aide	5

Mammography Certificate

COURSE		CR
MULT 203	Diagnostic and Intervent. Proc. for the Mammographer	3
MULT 205	Mammographic Physics and Quality Assessment	4
MULT 207	Clinical Experience in Mammography	1-3

Nurse Aide Certificate

COURSE		CR
MULT 120	Nurse Aide Training Program	5

Phlebotomy Certificate

COURSE		CR
MULT 115	Phlebotomy	6
MULT 114	Phlebotomy Practicum II	1

Registered Nurse First Asst. Certificate

COURSE		CR
MULT 245	Registered Nurse First Assistant	5
MULT 246	Registered Nurse First Assistant Practicum	2

Registered Nurse Home Care Certificate

COURSE		CR
MULT 142	Home Care Skills for Nurses	3
MULT 231	Maternal Child Home Care	2
MULT 233	Pediatric Home Health Care	3

Respiratory Care Rehabilitation/Home Care

COURSE		CR
RESP 251	Respiratory Rehabilitation Home Care Techniques	3
RESP 252	Patient Management in Respiratory Rehabilitation	3
RESP 253	Respiratory Rehabilitation Home Care Administrator	4

Sleep Studies Certificate

COURSE		CR
MULT 221	Introduction to Sleep Problems	2
MULT 223	Level I Polysomnography Technician	2
MULT 225	Level II Polysomnography Technician	2
MULT 224	Level I Polysomnography Technician Clinical	2
MULT 226	Level II Polysomnography Technician Clinical	2
MULT 228	Polysomnography Current Topics	2

Train the Trainer Certificate

COURSE		CR
MULT 250	NATP Train the Trainer	3

Multimedia Production Technology

Multimedia Production Technology Associate Degree
Authoring Systems Track
Computer Graphics Track

The Multimedia Production Technology program provides the community with well-trained individuals who can create and assemble multimedia products for corporate interactive training, advertising, and marketing, including executive and instructional presentations. Students are able to develop and produce scripts and computer animation for the television and entertainment industries. Students apply multimedia technology to assemble graphics, text, sound, and video into meaningful productions. The program provides the opportunity for specialization in either a multimedia authoring or computer graphics track.

The program supports an industry need to provide multimedia production technicians to work in the ever-expanding market of integrated and interactive media communications. The multimedia products and services market is expected to increase from $8.5 billion to $95.8 billion by the year 2000.

As manufacturers have given way to a post industrial service sector age, the hardware-based computer age is now giving way to a software-based computer age. Job postings are becoming more common for positions available in multimedia related production and information engineering technology. Advertisements for multimedia designers, 2D and 3D programmers, game designers, computer animators and web page designers are becoming more common.

The jobs available in multimedia production are varied. Typical job possibilities for program graduates include: multimedia technician; multimedia specialist; multimedia developer; media specialist; digital prepress technician; instructional designer; program authoring specialist; computer graphic artist; 3D computer animator; multimedia illustrator; desktop media publisher; interface designer; animator; script integrator; digital journalist; presentation artist; video maintenance technician; and interactive systems designer.

Upon completion of the Associate Degree program in Multimedia Production Technology, the graduate will be able to:

- Explain the use and function of various multimedia components.
- Define and implement hypertext and hyperlinks.
- Create navigation controls.
- Edit audio and video digital media.
- Formulate electronic imaging and image processing solutions.
- Develop interactive multimedia presentations for distributions on CD-ROM disks.
- Integrate multimedia hardware systems to meet customer needs.

- Produce multimedia authoring, bringing together text, graphic animation, screen images, video, and audio.
- Plan and implement a multimedia production project.

Authoring Systems Track

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 111	Technical Math I	4
MCT 106	Computer Literacy 2	3
MMPT 101	Introduction to Multimedia	5
Quarter 2		
ART 111	Fundamental Concepts of Art	5
ENGL 102	Essay & Research	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
MMPT 111	Multimedia Systems	5
Quarter 3		
ART 122	Two-Dimensional Design	5
COMM 105	Speech	3
MMPT 116	Information Logistics	5
MKTG 111	Principles of Marketing	5
Quarter 4		
ENGL 204	Technical Writing or	3
ENGL 200	Business Communications	3
ART 230	Color Composition	5
MMPT 226	Multimedia Telecom/Network	5
MMPT 131	Multimedia Project Planning	5
Quarter 5		
MMPT 201	Multimedia Authoring with Director	5
MMPT 231	2D/3D Technical IIlustration	5
MMPT 206	Multimedia Authoring with Authorware	5
Quarter 6		
MMPT 211	Multimedia Scripting	5
MMPT 241	Multimedia Authoring for WWW	5
MMPT 251	Multimedia Practicum	4
MMPT 252	Multimedia Seminar	2
TOTAL CREDIT HOURS		**100**

Computer Graphics Track

Quarter 1		
ENGL 101	Beginning Composition	3
MATH 111	Technical Math I	4
MCT 106	Computer Literacy II	3
MMPT 101	Introduction to Multimedia	5
Quarter 2		
ART 111	Fundamental Concepts of Art	5
ENGL 102	Essay & Research	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
MMPT 111	Multimedia Systems	5
Quarter 3		
ART 122	Two-Dimensional Design	5
COMM 105	Speech	3
MMPT 116	Information Logistics	5
MKTG 111	Principles of Marketing	5
Quarter 4		
ENGL 204	Technical Writing or	3
ENGL 200	Business Communications	3
ART 230	Color Composition	5
MMPT 226	Multimedia Telecom/Network	5
MMPT 131	Multimedia Project Planning	5
Quarter 5		
MMPT 231	2D/3D Technical Illustration	5
MMPT 216	Still Digital Video Image Editing	5
MMPT 217	Digital AV Editing	5
Quarter 6		
MMPT 236	Modeling	5
MMPT 237	Animation Development	5
MMPT 25 1	Multimedia Practicum	4
MMPT 252	Multimedia Seminar	2
TOTAL CREDIT HOURS		**100**

Nursing

Nursing Associate Degree
Home Health Aide Certificate
(see Multi-Competency Health)
Nurse Aide Training Program Certificate
(see Multi-Competency Health)
Registered Nurse First Assistant Certificate
(see Multi-Competency Health)
Registered Nurse Home Care Certificate
(see Multi-Competency Health)

Columbus State's Associate Degree Program in Nursing prepares graduates to provide health care services to clients of all ages located in a variety of settings in the community and home.

The seven quarter program integrates theory from biological and social sciences with reasoning and communication skills to develop a graduate who can think critically, solve problems, and communicate effectively. Nursing classes are structured to promote student participation and learning through seminar, laboratory practice, and clinical experiences. These learning opportunities are designed to encourage the student to apply concepts and utilize critical thinking skills in the promotion, maintenance, and restoration of health of clients. Students learn to work collaboratively with other health team members within the health care delivery system.

Students take 53 credit hours of nursing courses and 56 credit hours in the arts and sciences. They participate in 4-18 hours of clinical experience each week in a variety of health care settings under the direction of a registered nurse.

Students who successfully complete the Associate Degree program are qualified to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). The Nursing program at Columbus State is accredited by the National League for Nursing Accrediting Commission at 61 Broadway New York, N.Y. 10006, telephone (212)363-5555 and the North Central Association of Colleges, and is approved by the Ohio Board of Nursing.

Upon completion of the Associate Degree in Nursing, the graduate will be able to:

- Value the role of the Associate Degree nurse.
- Plan care for persons of all ages using the nursing process.
- Demonstrate safe, competent, nurturing care in the practice of nursing.
- Communicate effectively, including the use of teaching and counseling techniques, in the promotion, maintenance, and restoration of health.
- Manage nursing care for a diverse population of clients in a variety of practice settings.

- Synthesize knowledge from nursing and related disciplines using critical thinking skills.
- Analyze legal, ethical, and economic concepts that influence nursing practice.
- Account for competence and personal growth.

Program Admissions Information
Listed below are general requirements for admission to the Nursing program. For specific directions see Nursing Admission requirements document available in Nursing program, Registration, Counseling and Admissions Office.

High school graduate or G.E.D. equivalency
Required high school (or equivalent) courses:
Algebra, grade of "C" or above
Biology, grade of "c" or above
Chemistry, grade of "C" or above
Placement into ENGL 101 - Beginning Composition or ENGL 111 - English Composition or completion of ENGL 100 - Language Development with a grade of "C" or above
Placement above Math 103 Beginning Algebra II or completion of MATH 103 - Beginning Algebra II, with a grade of "c" or above
Placement out of reading course requirement or completion of DEV 044 Critical Thinking and Reading with a grade of "C" or above
Completion of the following courses:
MULT 120 - Nurse Aide Training Program, MULT 126 - Patient Care Skills, CHEM 113 - General and Biological Chemistry
Submit a copy of current Ohio Nurse Aide Registry Certificate
Attend Nursing Information session
Completed health statement
Grade point average of 2.0 or better through most recently completed coursework

Nursing Associate Degree

COURSE		CR
Quarter 1		
Nurs 110	Introduction to Nursing	3
Nurs 120	Health Assessment in Nursing I	2
Engl 101	Beginning Composition	3
Psy 100	Introduction to Psychology	5
*Bio 161	Human Anatomy	5
Quarter 2		
Nurs 111	Health Promotion of Women and Families	4
Nurs 121	Health Assessment in Nursing II	2
Nurs 130	Concepts of Pharmacology I	
*Bio 169	Human Physiology	5
*Psy 240	Human Growth and Development Through the Life Span	4
Quarter 3		
Nurs 112	Introduction to Nursing Concepts of Health Maintenance and Restoration	6
Nurs 113	Nursing Skills	2
Nurs 131	Concepts of Pharmacology II	
*Bio 170	Human Pathophysiology	
Quarter 4		
Nurs 210	Nursing Concepts of Health Maintenance and Restoration I	6
Engl 102	Essay and Research	
*Bio 115	General Microbiology	5
Nurs 190	Nursing Special Topic **or**	2
Nurs 191	Special Topics in Nursing: Basics of Gerontology or	2
Nurs 192	Special Topics in Nursing	1-5
Nurs 193	Special Topics in Nursing	1-5
Nurs 194	Special Topics in Nursing	1-5
Quarter 5		
Nurs 211	Nursing Concept of Health Maintenance and Restoration II	6
Engl 200	Business Communication or	
Engl 202	Writing for Health and Human Services	3
SSCI 10x	Social Sciences 101, 102, 103, or 104	5
Quarter 6		
Nurs 212	Nursing Concepts of Health Maintenance and Restoration III	6
*Math 135	Elementary Statistics	5
Comm 105	Speech or	
Comm 110	Conference and Group Discussion	3
Quarter 7		
Nurs 213	Concepts of Nursing Management	8
HUM lxx	Humanities 111, 112, 113, 151 or 152	5

*** Note a C or better is required to continue in sequence**

TOTAL CREDIT HOURS **109**

Office Administration

Office Administration Associate Degree
Administrative Assistant Major
Administrative Assistant Medical Cognate
Administrative Assistant Legal Cognate
Word Processing Certificate

The Occupational Outlook Handbook printed by the United States Government, Department of Labor, has forecast that there will be a shortage of office workers well into the new millennium. This handbook indicates that these office workers will need technical skills as well as management skills in order to be successful. The Business Management/Office Administration Department is now offering an Associate Degree in Office Administration with an Administrative Assistant Major that would enable students to have not only keyboarding skills and software knowledge but also management and team-building skills. Students also receive instruction in personalized/interpersonal skills so that they may become an integral part of any management team. These skills will enable an employee to assume responsibility without direct supervision, display initiative, exercise judgment, and prepare written/oral presentations.

Students may wish to select the Legal Cognate which prepares students to work in law offices, various courts or the legal departments of corporations, by providing specialized knowledge of legal procedures and court structure. Or students may select the Medical Cognate which prepares students to work in medical settings such as hospitals, physician offices, nursing homes, clinics, dental offices, and insurance companies.

A Word Processing Certificate program is also available. The four-quarter Word Processing Certificate program prepares students for entry-level positions in word processing centers and general offices. Students develop skills and knowledge in keyboarding, word processing basics, information management, and accounting.

Columbus State is accredited as an associate degree granting institution offering business programs by the Association of Collegiate Business Schools and Programs (ACBSP).

Upon completion of the Associate Degree in Office Administration, the graduate will be able to:

- Maintain a filing system (alphabetic, numeric, geographic, and/or by subject).
- Write or draft responses to routine correspondence, use correct grammar, and use punctuation rules accurately.
- Perform basic accounting tasks.
- Prepare written and oral presentations using currently accepted presentation software.
- Demonstrate management and team-building skills.

Administrative Assistant Major

In addition to the general Office Administration competencies, a graduate in the Administrative Assistant Major will be able to:

- Understand and use Excel for Windows to create and revise spreadsheets.
- Use Windows commands to operate microcomputers effectively.
- Prepare graphics and present information.
- Research information using a variety of resources including the Internet.
- Use computers to integrate graphics into documents.
- Transcribe a variety of documents accurately and at an acceptable production rate.
- Use Microsoft Office software efficiently.

Administrative Assistant Legal Cognate

In addition to the general competencies, a graduate choosing the Legal Cognate will be able to:

- Demonstrate a basic knowledge of court structure and court proceedings at the federal, state, and local levels.
- Demonstrate a knowledge of law office procedures and management.
- Demonstrate an understanding of the rules and documents involved in litigation.
- Demonstrate an understanding of criminal law OR the basics of legal research, depending on which additional class the student chooses.

Administrative Assistant Medical Cognate

In addition to the general competencies, a graduate choosing the Medical Cognate will be able to:

- Demonstrate an understanding of the structure and organization of current health care systems.
- Demonstrate the ability to spell, pronounce, and define basic medical terminology.
- Demonstrate an introductory understanding of human anatomy and body systems, demonstrate the ability to transcribe basic medical records, OR demonstrate a knowledge of the basics of inpatient, ambulatory, or insurance coding, depending upon which additional classes are chosen.

Administrative Assistant Major

Quarter 1		
COURSE		**CR**
OADM 101	Business Grammar Usage	3
OADM 111	Accounting Basics	4
OADM 121	Records Management	3
OADM 132	Keyboarding II	3
CPT 101	Computer Literacy I	3

Quarter 2	
BMGT 101	Introduction to Business*
BMGT 102	Managing Interpersonal Skills
OADM 102	Editing Business Documents
OADM 133	Keyboarding III
OADM 191	Microsoft Word I

Quarter 3	
MATH 101	Business Math
ENGL 101	Beginning Composition
OADM 134	Keyboarding IV
OADM 151	Computer Transcription
OADM 192	Microsoft Word II

Quarter 4	
BMGT 111	Management*
OADM 172	Microsoft Excel
OADM 261	Electronic Office Procedures
OADM 167	Desktop Publishing
BMGT 211	Organizational Behavior*

Quarter 5	
NSCI 101	Natural Science I
OADM 164	WordPerfect
ENGL 102	Essay & Research
LEGL 264	Legal Environment of Business
x x x x x x	Technical Elective

Quarter 6	
BMGT 216	Business Ethics
ENGL 200	Business Communications
COMM 105	Speech OR
COMM 110	Conference & Group Discussion
MCT 211	Information Presentations
BMGT XXX	Business Elective*
HUM 1XX	111, 112, 113, 151, or 152

TOTAL CREDIT HOURS **108**

***TECHNICAL COGNATE**
Students specializing in legal or medical will substitute from the cognate lists for this course.

TECHNICAL ELECTIVES:		
OADM 139	Keyboarding Improvement	3
OADM 144	Notetaking Using SuperWrite	3
OADM 165	Advanced WordPerfect	3
OADM 224	Field Experience	2
BMGT 103	Managing Interpersonal Skills II	3
HRM 121	Human Resource Management	3
HRM 124	Personnel Interviewing	3

Administrative Assistant Legal Cognate

The following 4 courses are required:		
LEGL 102	The Legal System	2
LEGL 103	Law Office Procedures and Mgt.	3
LEGL 201	General Practice	4
LEGL 205	Litigation Practice & Procedure	3

Choose 3 or more additional credit hours from the following courses:		
LEGL 210	Criminal Law and Procedure	3
LEGL 111	Legal Research and Writing	4

Administrative Assistant Medical Cognate

The following 2 courses are required:		
MLT 100	Introduction to Health Care	3
MULT 101	Medical Terminology	2
Choose 10 or more additional credit hours from the following courses:		
BIO 161	Human Anatomy	5
HIMT 111	Intro. to Health Information Mgmt.	2
HIMT 121	Advanced Medical Terminology	3
HIMT 132	Intro. to Medical Transcription*	2
HIMT 134	Analysis of the Health Record*	3
MULT 183	Intro. to Inpatient Coding	1
MULT 184	Intro. to Ambulatory Coding	1
MULT 185	Intro. to Third-Party Reimbursement	1

*Check prerequisites; signature may be required to enroll in this class.

Word Processing Certificate

Quarter 1		
COURSE		**CR**
CPT 101	Computer Literacy I	
MATH 101	Business Mathematics	5
OADM 101	Business Grammar	
OADM 121	Records Management	
OADM 132	Keyboarding II	3
Quarter 2		
ENGL 101	Beginning Composition	3
OADM 102	Editing Business Documents	3
OADM 111	Accounting Basics	4
OADM 133	Keyboarding III	
OADM 144	Notetaking Using SuperWrite	3
Quarter 3		
BMGT 102	Managing Interpersonal Skills	3
COMM 105	Speech OR	
COMM 110	Conference & Group Discussion	3
OADM 134	Keyboarding IV	3
OADM 151	Computer Transcription	4
OADM 164	WordPerfect OR	
OADM 191	Word I	3
Quarter 4		
OADM 112	Computerized Accounting	
OADM 165	Advanced WordPerfect OR	
OADM 192	Word II	3
OADM 167	Desktop Publishing	3
OADM 172	Advanced Microsoft Excel	3
TOTAL CREDIT HOURS		59

Quality Assurance Technology

Increasing requirements for quality in the goods and services consumers buy has created additional demand for trained technicians and supervisors who are responsible for monitoring, testing, and continuously improving the quality of those goods and services. Individuals entering the field of quality assurance must be skilled in the areas of quality transformation, teamwork, statistical process control, product and service improvement, cost reduction, reliability development, and quality planning and management.

This program is designed to meet the employment needs of business and industry. Students work on quality improvement projects for local organizations as part of their course work. They apply the techniques being studied in class, and practice teamwork and communications skills in real life settings while developing a portfolio to demonstrate their expertise. Graduates are qualified for a wide range of positions such as quality control technician, inspector, quality/reliability analyst, value engineering analyst, cost improvement or statistical process control coordinator, or methods planner.

The Quality Assurance program was originally designed to meet increasing needs for quality assurance personnel in manufacturing. Many courses in the program, however, address quality needs of the service industries. Students and prospective students interested in pursuing a quality assurance program in any of the following options: banking, insurance, food processing, chemical processing, or another option not listed are encouraged to contact the Chairperson to set up an individual program which meets their specific needs.

Upon completion of the Associate of Applied Science Degree in Quality Assurance Technology, the graduate will be able to:

- Demonstrate skill in applying fundamental principals of project management and total quality management. *Use and apply statistical and problem-solving techniques to products and services in manufacturing and service environments.
- Read and interpret engineering blueprints, drawings, and specifications.
- Apply a basic knowledge of physics and electronics, and manufacturing processes to solve problems. *Demonstrate basic knowledge of manufacturing practices used in the production of raw materials and products using those materials.
- Make contributions to the improvement of products and systems by applying methods of statistical process control.
- Apply knowledge of sampling plans and testing techniques to the analysis for materials, structures and components.
- Apply basic knowledge of cost estimating and cost containment procedures to new and existing products and systems, while maintaining quality.
- Utilize a variety of teamwork and communication skills (verbal, written, and graphic) to communicate effectively with clients, co-workers and others in the work environment.

The Quality Assurance Technology also shares related courses with the Electronic Engineering Technology and the Mechanical Engineering Technology. For additional information refer to Electronic Engineering Technology and Mechanical Engineering Technology which are listed in this section of the Catalog.

Quality Assurance Technology Associate Degree

COURSE		**CR**
Quarter 1		
ENGL 101	Beginning Composition	3
MATH 111	Technical Math I	4
EET 111	DC Fundamentals	4
EET 112	DC Lab	2
MECH 110	Introduction to Manufacturing	3
MECH 112	Computer Applications in Manufacturing	3
Quarter 2		
ENGL 102	Essay and Research	3
MATH 112	Technical Math II	4
PHYS 181	Technical Physics (Mechanics)	4
QUAL 240	Total Quality Management	3
MECH 244	Statistical Process Control	3
Quarter 3		
MATH 135	Elementary Statistics	5
MECH 120	Mechanical Drafting I	3
EET 120	AC Fundamentals	4
EET 121	AC Lab	2
MECH 250	Materials Science	3
Quarter 4		
COMM 105	Speech	3
PHYS 185	Technical Physics (heat, light & sound)	4
MECH 111	Manufacturing Processes	4
QUAL 150	Quality Transformation	4
EET 132	Digital Fundamentals	3
Quarter 5		
ENGL 204	Technical Writing	3
HUM 1XX	Humanities 111, 112, 113, 151, or 152	5
QUAL 251	Value Engineering	3
EET 130	Electronic Devices	4
EET 131	Devices Lab	2
Quarter 6		
SSCI 10X	Social Science 101,102, 103, or 104	5
MECH 240	Machine Tools	4
QUAL 260	Reliability and System Maintainability	3
QUAL 261	Project Management	3
QUAL 250	Metrology	3
109	**TOTAL CREDIT HOURS**	**109**

Radiography

Radiographers are highly skilled professionals qualified by education to perform imaging examinations and accompanying responsibilities at the request of a physician. A radiographer is able to perform diagnostic imaging, fluoroscopy, trauma, surgical, and portable radiography. Specialized areas in the curriculum include: Computed tomography, vascular and digital imaging and magnetic resonance imaging.

Technology classes begin in the summer quarter. Admission to the program is competitive with completed applications received annually. Because students and health care workers in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention.

Upon completion of the Associate Degree in Radiography, the graduate will be able to:

- Apply knowledge of anatomy, physiology, positioning, and radiographic techniques to accurately show anatomical structures on an image.
- Determine exposures that achieve optimum images with minimum radiation to the patient.
- Act as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment management of the patient.
- Evaluate radiographic images for appropriate positioning and image quality.
- Apply the principles of radiation protection for the patient, staff and others.
- Provide patient care and comfort during procedures.
- Recognize emergency patient conditions and initiate lifesaving first aid and basic life-support procedures.
- Evaluate the performance of radiologic systems, know the safe limits of equipment operation, and report malfunctions to the proper authority.
- Exercise independent judgement and discretion in the performance of medical imaging procedures.
- Participate in radiologic quality assurance programs.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Radiography program.

- High school graduate or G.E.D. equivalency
- Required high school (or equivalent) courses:
- Algebra, grade of "C" or better
- Biology, grade of "C" or better
- Chemistry, grade of "C" or better
- Physics, grade of "C" or better
- 3.0 G.P.A. is preferred but not required
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 135/148 - College Algebra
- Written statement relevant to interest and intent in Radiography
- Health care experience or volunteer service
- Completed health statement
- Attend radiography advising session

The course consist of all the performance and knowledge objectives in the current NFPA Standard 1001 for firefighter I and II including but not limited to: fire department organization, Safety, fire alarm, fire behavior, extinguishers, rope, ladders, hose streams, fire control, salvage and rescue. This course is required for full-time firefighters. The content of this course will enable students to obtain State of Ohio certification for Firefighter I & II levels (240 hour firefighter course).

Radiography Associate Degree

COURSE		CR
Quarter 1		
BIO 161	Anatomy	5
MATH 148	College Algebra **or**	
MATH 135	Elementary Statistics	5
MULT 101	Medical Terminology	2
RAD 111	Introduction to Radiologic Technology	3
RAD 141	Radiographic Procedures I	4
Quarter 2		
BIO 169	Physiology	5
RAD 142	Radiographic Procedures II	4
RAD 261	Clinical I	2
MCT 106	Computer Literacy II	3
Quarter 3		
BIO 170	Human Pathophysiology	5
RAD 113	Radiologic Science	5
RAD 143	Radiographic Procedures III	4
RAD 262	Clinical II	2
Quarter 4		
ENGL 101	Beginning Composition	3
RAD 118	Radiographic Exposure and Processing	5
RAD 148	Special Radiologic Procedures	3
RAD 263	Clinical III	2
Quarter 5		
ENGL 102	Essay & Research	3
RAD 254	Seminar I	1
RAD xxx	Elective	3
Quarter 6		
SSCI 10X	Social Science 101, 102, 103 or 104	5
RAD 126	Radiation Biology and Processing	3
RAD 211	Sectional Anatomy	1
RAD 222	Computerized Imaging	1
RAD 255	Seminar II	1
RAD 265	Clinical V 3	
Quarter 7		
ENGL 200	Business Communications	3
HUM lxx	Humanities 111, 112, 113, 151 or 152	5
RAD 123	Advanced Exposure and Processing	4
RAD 231	Radiographic Pathology	3
RAD 256	Seminar III	1
RAD 266	Clinical VI	3
Quarter 8		
COMM 105	Speech	3
xxx xxx	Elective	3
TOTAL CREDIT HOURS		**108**

Students should request a program plan of study from their faculty advisor,

Technical electives

COURSE		CR
RAD 264	Clinical IV - elective	3
RAD 257	Seminar IV - elective	1
RAD 267	Clinical VII - elective	3
RAD 268	Clinical IV-B	4
MULT 120	Nurse Aid Training	5
MULT 203	Diagnostic & Interventional Procedures for the Mammographer	3

Real Estate

The Associate Degree program in Real Estate offers the course work that meets the standards of professionalism in the real estate industry. The program follows a "blueprint" for real estate education developed by the Ohio Association of Realtors. Courses meet the educational requirements for real estate licensure in the State of Ohio.

The program meets the career objective of persons interested in real estate sales or other allied professional opportunities in real estate. For students seeking to enter the real estate field, it offers formal education that meets the industry's goals of professionalism. For licensed real estate brokers and sales associates, it provides training to upgrade their professional competence and to meet future educational requirements of the profession. For students who plan to continue their education beyond the Associate Degree, it offers credit courses that transfer to some four-year colleges and universities.

Prospective real estate students who plan to take the real estate licensing exam are more successful when they take courses as shown in the plan of study.

Only courses approved by the Ohio Division of Real Estate qualify for continuing education credit for licensed professionals. Please check for course approval before enrolling. Courses required for licensing do not qualify for continuing education credit. The date on which individuals complete 10 hour post-licensure course determines the date by which continuing education requirements must be completed.

Before students schedule classes, they should contact their advisor if they are interested in taking (1) only the sequence of courses to prepare for specific real estate licensing exams, (2) only selected courses to meet continuing education requirements of the Ohio Division of Real Estate or courses to meet the various appraisal classifications.

Upon completion of the Associate Degree in Real Estate, the graduate will be able to:

- *To* demonstrate understanding of key principles and concepts involved in a real estate transaction.
- *To* prepare and present correctly all forms necessary to complete a real estate transaction.
- Create effective promotional plans to market property.
- Identify and explain different types of construction materials.
- Apply one of three appraisal techniques to the evaluation of a residential or commercial property.
- Utilize current industry techniques, conduct an investment analysis of a selected property.
- Manage a real estate property sales force effectively.
- *To* apply relevant formulas and microcomputer applications to the practice of real estate.

Real Estate Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
PSY 100	Introduction to Psychology	5
CPT 101	Computer Literacy I	3
REAL 101	Real Estate Principles & Practices	3
REAL 102	Real Estate Law	3
REAL 104	Real Estate Math	3
Quarter 2		
ENGL 102	Essay & Research	3
HUM lxx	Humanities 111,112, 113, 151 or 152	5
BMGT 101	Introduction to Business	5
REAL 111	Real Estate Finance	3
REAL 112	Real Estate Appraisal	3
Quarter 3		
ENGL 200	Business Communications	3
LEGL 262	Business Law II	3
ACCT 111	Principles of Accounting	5
REAL 121	Residential Sales Practices	3
REAL 123	Real Estate Marketing	3
Quarter 4		
COMM 105	Speech	3
BMGT 216	Business Ethics	3
CMGT 253	Residential Construction	3
REAL 202	Real Estate Commercial Investment	5
REAL 236	Real Estate Development	3
Quarter 5		
ECON 200	Principles of Microeconomics	5
FMGT 201	Business Finance	5
REAL 212	Income Property Appraisal	3
REAL 213	Advanced Real Estate Investment Analysis	3
Quarter 6		
NSCI 101	Natural Science I	5
REAL xxx	Technical Elective	3
REAL 221	Professional Property Management	3
REAL 234	Human Resource Management	4
TOTAL CREDIT HOURS		**104**

Technical Elective courses must be selected from the following list:

COURSE		CR
REAL 281	Real Estate Today Seminar I	1
REAL 282	Real Estate Today Seminar II	2
REAL 283	Real Estate Today Seminar III	3
REAL 284	Uniform Standards of Professional. Appraisal Practice	2

Prelicensure Courses

REAL 101	Real Estate Principles & Practices	3
REAL 102	Real Estate Law	3
REAL 111	Real Estate Finance	3
REAL 112	Real Estate Appraisal	3

Respiratory Care

Registered Respiratory Therapist Program
Registered/Graduate Nurse to the Registered Respiratory Therapist Program
Respiratory Care Rehabilitation/Home Care Certificate (See Multi-Competency Health)

Respiratory therapists are life support specialists concerned with managing, controlling, and treating problems related to the cardiopulmonary system. Respiratory care practitioners serve beside the physician, nurse, and other health care personnel.

The complexity of the respiratory care worker's responsibility requires extensive training, dedication, and professionalism. Respiratory care takes place in such settings as the newborn nursery, surgical and medical units, emergency rooms, outpatient departments, and intensive care units of hospitals.

In addition to their classroom learning, students enrolled in the Respiratory Care program gain hands-on experience while working in area health care facilities, under the supervision of qualified instructors. These clinical experiences teach students to ap-

ply their knowledge and skills in actual work environments. Because students and workers in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention.

The Registered Nurse/Graduate Nurse to the Registered Respiratory Therapist (RN/RRT) Program is being offered to enhance nurses' employment opportunities and to assist health care employers who want cross-trained workers. This program is offered *only* to graduates of associate degree nursing programs (A.D.N.), or graduates of bachelors degree nursing programs (B.S.N.), who plan to work in critical care, subacute care, home care, or pulmonary physician offices. Participants in this program can complete an Associate of Applied Science degree in respiratory care and be eligible for the registry as a Respiratory Therapist with only an additional 36 hours of credit. *This program starts during summer quarter*

Columbus State's program is accredited by the Committee on Accreditation for Respiratory Care.

Upon completion of the Associate Degree in Respiratory Care, the graduate will be able to:

- Review existing data in patient medical record and recommend diagnostic procedures based on available patient information.
- Collect and evaluate pertinent clinical information.
- Perform diagnostic procedures and interpret results.
- Determine appropriateness of prescribed respiratory care plan, recommend modifications where indicated, and participate in the development of respiratory care plan.
- Select and obtain equipment, and assure cleanliness of equipment appropriate to the respiratory care plan.
- Assemble, check for proper function, identify malfunctions of equipment, and take action to correct malfunctions of equipment.
- Explain planned therapy and goals to patient, maintain records and communication; and protect against patient nosocomial infections.
- Conduct therapeutic procedures to achieve maintenance of a patient airway, including the care of artificial airways; to achieve the removal of secretions.
- Conduct therapeutic procedures to achieve adequate spontaneous and artificial ventilation.
- Conduct therapeutic procedures to achieve adequate arterial and tissue oxygenation.
- Evaluate and monitor patient's response to respiratory care.
- Make necessary modifications in therapeutic procedures, and recommend respiratory care plan modifications based on patient response.
- Initiate and conduct, or modify respiratory care techniques in an emergency setting.
- Demonstrate personal and professional behaviors required for successful employment.
- Apply the principles of continuous quality improvement and quality assurance to work situations.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Respiratory Care program.

- High school graduate or G.E.D. equivalency
- Placement into MATH 135 - Elementary Statistics
- Placement into ENGL 101 - Beginning Composition
- High school Biology with a "C" or better
- Chem 113 with a "C" or better
- MULT 120 with a "C" or better
- MULT 126 with a "C" or better
- Completed health statement

Respiratory Care Associate Degree

Quarter 1		
COURSE		**CR**
BIO 161	Human Anatomy	5
MATH 135	Elementary Statistics	5
HIMT xxx	HIMT 112 or HIMT 113	2
RESP 100	Introduction to Respiratory Care	5
Quarter 2		
ENGL 101	Beginning Composition	3
BIO 115	General Microbiology	5
BIO 169	Human Physiology	5
RESP 114	Introduction to Pulmonary Disease	4
RESP 150	Introduction to Pharmacology	2
Quarter 3		
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
RESP 130	Patient Assessment	2
RESP 152	Case Management I	2
RESP 196	Clinical Practice I	8
Quarter 4		
ENGL 102	Essay & Research	3
RESP 132	Patient Assessment II	2
RESP 154	Case Management II	2
RESP 198	Clinical Practice II	8
Quarter 5		
COMM 105	Speech	3
RESP 230	Patient Assessment III	2
RESP 256	Case Management III	2
RESP 290	Clinical Practices III	8
Quarter 6		
ENGL 200	Business Communications	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
RESP 270	Current Issues in Respiratory Care	2
RESP 292	Clinical Practices IV	8
Quarter 7		
RESP xxx	Technical Elective	3
RESP 295	Clinical Experience	4
TOTAL CREDIT HOURS		**108**
Technical Electives		
EMS 232	Advanced Cardiac Life Support	1
RESP 170	Mechanical Ventilation	1
RESP 232	Pediatric Respiratory Care	3
RESP 238	Pulmonary Functions	3
RESP 251	Respiratory Care Home Care Techniques	3
RESP 260	Respiratory Care Seminar	2
MULT 221	Introduction to Sleep Problems	2

Registered Nurse/Graduate Nurse to the Registered Respiratory Therapist Program

COURSE		**CR**
RESP 132	Patient Assessment II	2
RESP 230	Patient Assessment III	2
RESP 256	Case Management III	2
RESP 270	Current Issues in Respiratory Care	2
RESP 198	Clinical Practice II	8
RESP 290	Clinical Practice III	8
RESP 292	Clinical Practice IV	8
RESP 295	Clinical Practicum	4
TOTAL CREDIT HOURS		**36**

Retail Management

Retailing is the final link in the chain that reaches from producer to the customer. One of every five American workers is involved in the retailing field. Department of Labor statistics indicate that by the year 2005 retail employment will increase to 24 million workers, offering motivated individuals significant career opportunities.

Students in Columbus State's two-year Associate Degree program in Retail Management begin with a strong foundation in basic business principles as well as in-depth exposure to retail management principles. An internship program supported by many of the city's leading retail operations provides students the opportunity to put classroom knowledge to work.

Columbus State Community College is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the Associate of Arts, Associate of Science, and Associate of Applied Science Degrees.

Upon completion of the Associate Degree in Retail Management, the graduate will be able to:

- Explain all facets of the buying and selling of merchandise.
- Exhibit a knowledge of merchandise management including planning, control, and evaluation of the merchandise mix.
- Identify the various types of stock control systems.
- Perform the various functions of store operations.
- Develop and execute sales promotional activities including merchandise presentations.
- Describe the logistics of dealing with suppliers, merchandise handling, receiving and stocking.
- Demonstrate an understanding of all phases of basic store operations.
- Demonstrate an understanding of consumer buying behavior and the psychological factors influencing a customer's decision as to where to shop.
- Comprehend retail information systems and demonstrate the ability to use the data productively in problem solving and decision making.
- Demonstrate an understanding of mathematical tools that aid in merchandise planning, selection and pricing.

Retail Management Associate Degree

Quarter 1		
COURSE		**CR**
ENGL 101	Beginning Composition	3
MATH 101	Business Math	5
RETL 101	Introduction to Retailing	5
MKTG 111	Marketing Principles	5
MCT 098	Introduction to Spreadsheets	
MCT 099	Introduction to Word Processing	
Quarter 2		
ENGL 102	Essay & Research	3
BMGT 111	Management	5
MKTG 223	Sales	3
ACCT 106	Intro. to Accounting I	5
MKTG 122	Business & the Internet	3
Quarter 3		
COMM 105	Speech	**3**
HRM 121	Human Resources Mgmt	**4**
REL 213	Retail Buying	**3**
RETL 205	Quantitative Methods in Retail	**5**
Quarter 4		
ENGL 200	Business Communication	3
HUM 1xx	Humanities 111, 112, 113, 151, or 152	5
BMGT 218	Mgt. Training for Supervisors	5
MKTG 226	Customer Service Principles	3
Quarter 5		
FMGT 201	Business Finance	5
NSCI 101	Natural Science I	5
RETL 281	Retail Internship I	4
RETL 285	Special Problems in Retail I	2
Quarter 6		
RETL 271	Store Operations and Control	4
RETL 288	Merchandising	4
RETL xxx	Approved Electives	8
TOTAL CREDIT HOURS		102

Approved Electives

COURSE		**CR**
RETL 223	Textiles	4
RETL 282	Retail Internship II	4
RETL 283	Retail Internship III	4
RETL 286	Special Problems in Retail II	2
RETL 287	Special Problems in Retail II	2
RETL 297	Special Topics in Retail	1-3
MKTG 227	Customer Service Case Studies	3
MKTG 228	Advanced Sales	3
MKTG 236	Direct Marketing	3
MKTG 237	Database Marketing	3
MKTG 262	Telemarketing	3
MKTG 285	The Internet & Advertising/Promotion	1
LOGI 100	Principles of Logistics	5

Sports & Fitness Management

Exercise Specialist Certificate
Massage Therapy-Certificate

The Sports and Fitness Management prepares students to work in health and/or fitness centers. From private clubs to public facilities, trained managers are needed to develop, train, staff, and implement programming to address the needs of the general public or specific clients, in compliance with state and federal guidelines. Risk management, anatomy, physiology, exercise science, and sports business courses will develop the skills necessary to gain a managerial or technical position within the sport and fitness field.

Upon completion of the Associate Degree in Sports & Fitness Management, the graduate will be able to:

- Effectively communicate current information on exercise, nutrition, and health promotion.
- Facilitate effective recreational, fitness, and health activities in the community.
- Assess fitness levels by evaluating and monitoring client physiological responses and adaptations in the apparently healthy.
- Design sports and fitness programs for individuals and/or groups by utilizing appropriate assessment data.
- Assess and maximize potential for behavioral change to enhance fitness level.
- Instruct individual(s) in a variety of activities by describing and demonstrating acceptable and proper usage and techniques in the industry, modifying activity when indicated.
- Possess the ability to prevent and manage emergency situations by applying safety procedures in accordance with federal, state, and local guidelines.

- Exhibit organizational and administrative leadership in delivery of sports and fitness programs by establishing program direction, serving as a role model, and maintaining professional ethics.
- Embrace diversity with the ability to work with persons of diverse needs and modeling nondiscriminatory behaviors.

Specific Program Admissions Information
Listed below are additional requirements for admission to the Sport & Fitness Management.

- High school graduate or G.E.D. equivalency
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 101 - Business Math

Sport & Fitness Management Associate Degree

COURSE		CR
Quarter 1		
SFMT 100	Personal Fitness Concepts	3
MULT 171	Current Issues: HIV/AIDS	1
ENGL 101	Beginning Composition	3
MATH 101	Business Math	5
HOSP 153	Nutrition	5
Quarter 2		
SFMT 101	Introduction to Sport & Fitness Mgmt.	3
ENGL 102	Essay & Research	3
BIO 121	Anatomy, Physiology and Pathology I	5
ACCT 101	Financial Accounting	4
LEGL 261	Business Law I	3
Quarter 3		
SFMT 115	Introduction to Weight Training	2
SFMT xxx	Technical Elective	2
BMGT 111	Business Management	5
BIO 122	Anatomy, Physiology and Pathology II	5
ACCT 102	Managerial Accounting	3
Quarter 4		
SFMT 224	Sport Management Foundations	5
SFMT 233	Outdoor Community Recreation	3
SFMT xxx	Technical Elective	2
SFMT 235	Sport Law	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
Quarter 5		
SFMT 234	Sport Marketing	5
SFMT 230	Fitness Concepts for Special Populations	1
SFMT 231	Exercise Physiology	5
SFMT 292	Sports & Fitness Management Practicum I	3
COMM 105	Speech	3
Quarter 6		
SFMT 226	Care and Prevention of Athletic Injuries	3
SFMT xxx	Technical Elective	2
SFMT 294	Sports & Fitness Management Practicum II	3
MULT 103	Responding to Emergencies	2
HUM 1xx	Humanities 111, 112, 113, 151 or 152	5
ENGL 200	Business Communications	3

TOTAL CREDIT HOURS 105
Students should request **a** plan of study from their faculty advisor.

Technical Electives must be selected from the following list of courses

SFMT 113	Aquatics Management	2
SFMT 114	Introduction to Dance (Exercise)	2
SFMT 222	Court Sports I (Tennis)	2
SFMT 232	Court Sports II (Racquetball)	2
SFMT 116	Golf Management	2
SFMT 117	Introduction to Tae Kwon Do	2
SFMT 215	Advanced Weight Training	3
SFMT 241	Kinesiology	5
SFMT 298	Special Topics in Sports	3
SFMT 213	Aquatic Program for Individuals with Disabilities	3
SFMT 225	Athlete Intervention	3

Exercise Specialist Certificate

COURSE		CR
Quarter 1		
SFMT 100	Personal Fitness Concepts	3
SFMT 230	Fitness Concepts for Special Populations	1
SFMT 231	Exercise Physiology	5
Quarter 2		
SFMT 101	Introduction to Sport & Fitness Management	3
SFMT 241	Kinesiology	5
MULT 103	Responding to Emergencies	2
MULT 171	Current Issues: HIV/AIDS	1
Quarter 3		
SFMT 215	Advanced Weight Training	3
SFMT 234	Sport Marketing	5
SFMT 292	Sport & Fitness Management Practicum I	3
Quarter 4		
SFMT 294	Sport & Fitness Management Practicum II	3
SFMT 298	Special Topics in Sport	3

TOTAL CREDIT HOURS 37

Massage Therapy Certificate

COURSE		CR
Quarter 1		
SFMT 261	Massage Technique I	6
SFMT 271	Massage Anatomy & Physiology I	5
Quarter 2		
SFMT 262	Massage Technique II	6
SFMT 272	Massage Anatomy & Physiology II	5
Quarter 3		
SFMT 236	Medical Ethics for Massage Therapists	3
SFMT 273	Massage Anatomy & Physiology III	5
SFMT 292	Sport & Fitness Management Practicum I	3
MULT 171	Current Issues: HIV/AIDS	1
HIMT 123	Storage & Retrieval Systems	3
Quarter 4		
SFMT 231	Exercise Physiology	5
SFMT 235	Sport Law	3
SFMT 294	Sport & Fitness Management Practicum II	3

TOTAL CREDIT HOURS **48**

Surgical Technology

In order to meet the high technical skill levels placed on health care organizations offering surgical services throughout the country; hospitals, medical centers, and ambulatory surgery centers have responded by employing additional Allied Health professionals. The surgical services areas have reacted to the need of providing patients safe and effective technical support staff for surgical interventions by attempting to employ an increased number of Nursing Assistants, Patient Care Assistants, and Surgical Technologists who have the knowledge and skills to meet the critical demands of surgical health care.

Columbus State Community College offers a six (6) academic/clinical quarter Associate of Applied Science Degree program with direct patient care focus on needed skills for immediate application, competency, and employment as a Surgical Technologist. This six-quarter program provides students with coursework that includes General, Basic Science, and Technical related health-oriented courses which encompass lecture, discussion, seminar, and recitation educational experiences all in support of direct

patient care laboratory, practicum, and clinical applications in a variety of hospital-based and outpatient ambulatory care surgery units. Throughout each quarter of the program, students will gain from educational experiences in direct patient care instruction under the supervision of the programs faculty and our clinical affiliate preceptors.

Graduates of the program are eligible to take the national certification examination administered by the Liaison Council on Certification for the Surgical Technologist (LCC-ST).

Upon completion of the Associate Degree in Surgical Technology, the graduate will be able to:

- Apply the Principles of Asepsis in a knowledgeable manner to provide optimum patient care.
- Apply basic scientific principles related to anatomy, physiology, and pathophysiology for safe transfer, positioning, prepping, and draping for surgical patients.
- Identify emergency situations and exercise sound clinical judgment in instituting established procedures.
- Demonstrate respect for the patient's inherent right of privacy, dignity, and safety.
- Recognize the safety of patients, self, and others while practicing within the legal and ethical parameters of the Surgical Technology profession.
- Describe the actions and use of Anesthetic and Pharmacological agents in the care of surgical patients.
- Perform surgicalskills by assembling and preparing common equipment, supplies, and instrumentation used in surgical procedures.
- Differentiate and perform Sterilization and Disinfection methods for special equipment and instruments necessary for surgery.
- Demonstrate surgical skill dexterity development that use economy in time, motion, and materials when performing in the role of "scrub" and "circulator" as a Surgical Technologist.
- Explain the goals and surgical sequence of specific procedures across a variety of surgical service areas.
- Anticipate the needs of the surgery team while performing in the role of the "scrub" Surgical Technologist throughout surgical interventions.
- Realize the importance of teamwork with a surgical patient centered focus.

Specific Program Admission Information
Listed below are additional requirements for admission to the Surgical Technology Program.

- Submission of High school graduate or G.E.D. equivalency transcripts
- Completion of High School courses:
  Beginning Algebra, grade of "C" or better, or equivalent college math course
  Biology, grade of "C" or better, or equivalent college course (BIO 100)
  Chemistry, grade of "C" or better within the past three (3) years, or equivalent course (CI-IBM 100)
- College placement testing into ENGL 101 - Beginning Composition
- College placement testing into and completion of Beginning Algebra II (MATH 103)
- Completion of Nurse Aide Training for State of Ohio or equivalent college course (MULT 120)
- Current Cardiopulmonary Resuscitation Certification equivalent to the American Heart Association Certification for Health Care Providers or the equivalent college course (MULT 102)
- Completion of the Advanced Medical Terminology (HIMT 121) course
- Completion of College Health records requirements

Surgical Technology Associate Degree

COURSE		CR
Quarter 1		
SURG 110	Surgical Technology I	**6**
MULT 126	Patient Care Skills	4
CHEM 113	General & Biological Chemistry	5
ENGL 101	Beginning Composition	3
Quarter 2		
SURG 120	Surgical Technology II	6
BIO 115	General Microbiology	5
BIO 161	Human Anatomy	5
ENGL 102	Essay & Research	3
Quarter 3		
SURG 130	Surgical Technology III	7
HIMT 141	Pharmacology	3
BIO 169	Human Physiology	5
COMM 105	Speech or	
COMM 110	Conference & Group Discussion	3
Quarter 4		
SURG 210	Surgical Technology IV	7
BIO 170	Human Pathophysiology	7
MATH 104	Intermediate Algebra or	
MATH 135	Elementary Statistics	5
Quarter 5		
SURG 220	Surgical Technology V	8
SURG 239	Advanced Surgical Special Topics	2
SSCI 101	Social Science 101, 102, 103, or 104	5
Quarter 6		
SURG 230	Surgical Technology VI	8
HUM 111	Humanities, 111, 112, 113, 151, or 152	5
ENGL 200	Business Communications or	
ENGL 202	Writing for Health and Human Serv or	
ENGL 204	Technical Writing	3
TOTAL CREDIT HOURS		103

Technical Communication

In the areas of business, industry, government, healthcare, and technology, there is a need to communicate information of a technical nature to different audiences. Technical Communication is the process of translating technical information into forms that different audiences can understand and use. Technical communicators are the translators. They, write, edit, and perform page layout and design on user manuals, textbooks, training materials, press releases, memos, environmental impact statements, video scripts, and online help files. They design Web pages, develop computer-based training (CBT) modules, prepare multimedia presentations, and develop material for delivery on CD-ROM.

The Associate of Applied Science Degree in Technical Communication at Columbus State Community College is the only technical communication degree program in Central Ohio. The program provides students with the practical, specific skills and technical knowledge needed to get entry-level jobs as technical communicators. All the courses are taught in a state-of-the-art computer classroom, so students becomes familiar with a variety of computer applications.

The program is designed to be completed within six quarters of full-time study. Students are required to take eleven courses in Technical Communication (TCO courses) and an additional 15-25 credits in a single cognate (specialization) area. The choice of the cognate area is up to the student in consultation with the Technical Communication advisor and the advisor in the cognate area. Currently there are over 20 approved cognates in areas such as accounting, aviation maintenance, computer programming, marketing, microcomputing, and graphic communications. For a complete listing, contact the Technical Communication Program coordinator.

A technical communicator should be able to discuss projects with a technical expert and know the best way to translate information so the targeted audience will understand it. The cognate area enhances the knowledge and skills of the technical communicator and provides vocabulary and basic knowledge about the chosen field.

Upon completion of the Associate of Applied Science Degree in the Technical Communication, the graduate will be able to:

- Write in the forms most often required of a Technical Communicator (e.g., processes and procedures, reports, manuals, etc.).
- Translate complex material into clear, concise and easy-to-use terms for specific targeted audiences. *Participate in the entire technical writing cycle both individually and collaboratively - planning, researching, and coordinating projects, writing, revising, and editing documents; designing and placing graphics; and producing a final product.
- Prepare and deliver oral presentations both in formal and informal settings.
- Develop basic graphics and integrate them into text.
- Apply the principles learned in technical cognates to technical communication.
- Critically evaluate existing documentation for clarity, completeness, and general effectiveness.
- Operate the word processors and desktop design packages that are most widely used in the technical communication field.
- Incorporate the basic concepts of multimedia production into professional technical presentations.
- Edit documents individually and collaboratively using both hard copy and online methods.
- Carry out, prepare, and produce documented primary or secondary research.
- Demonstrate an understanding of concepts of time/project management both in individual and team projects.

Technical Communication Associate Degree

COURSE		CR
Quarter 1		
ENGL 101	Beginning Composition	3
TCO 101	Careers in Technical Communication	2
CPT 101	Computer Literacy 1	3
*	Technical Cognate	3-6
xxxx xxx	Math or Science Elective for Tech Cognate	5
Quarter 2		
ENGL 102	Essay & Research	3
MCT 106	Computer Literacy 2	3
OADM 101	Business Grammar Usage	3
HUM lxx	Humanities 111, 112, 113, 151 or 152	5
Quarter 3		
OADM 167	Desktop Publishing Using PageMaker	3
COMM 105	Speech Cognate 3-6	
TCO 203	Introduction to Technical Communication	3
TCO 204	Introduction to Technical Editing	3
Quarter 4		
ENGL 200	Business Communications	3
NSCI 101	Natural Science 1	5
TCO 223	Advanced Technical Communication	3
TCO 214	Document Design & Delivery Methods	3
*	Technical Cognate	3-6
Quarter 5		
COMM 110	Conference and Group Discussion	3
TCO 215	Online Documentation	3
TCO 230	Technical Presentations	3
xxx xxx	Technical Writing Elective	3
*	Technical Cognate	3-6
Quarter 6		
SSCI 101	Cultural Diversity	5
TCO 250	Capstone Project	3
TCO 260	Career Development	1
TCO 290	Industry Internship	4
*	Technical Cognate	3-6
TOTAL CREDIT HOURS		**93-103**

*** Between 15-25 hours must be completed in a Technical Cognate.**

Technical writing electives may be selected from the following courses:

COURSE		CR
ENGL 202	Writing for the Health and Human Services	3
ENGL 206	Governmental Communications	3
ENGL 208	Communication for the Mass Media	3
ENGL 215	Magazine Publication	3
ENGL 280	Publishing Practicum	2
TCO 221	Proposal Development	3
TCO 222	Developing Software Documentation	3
TCO 224	Advanced Technical Editing	3
TCO 297, 298, 299	Special Topics in Technical Communication	l-5

Veterinary Technology

Veterinary technicians assist veterinarians in many areas of practice, including medical, laboratory, and office procedures. All tasks are performed under the supervision of a veterinarian. Compassion for animals is desired, because the main interest of workers in this field must be treating and nursing sick animals.

Columbus State's Veterinary Technology program is accredited by the American Veterinary Medical Association. The Associate Degree program provides students with classroom as well as clinical experience. Students have the opportunity to intern at The Ohio State University's Veterinary Teaching Hospital. They also spend a portion of their clinical experiences in various veterinary facilities, including research facilities, private practices, or zoos. Because students and workers in the health care field may be exposed to infectious materials and communicable diseases, the program emphasizes safety and prevention.

Columbus State Community College also offers an evening Veterinary Technology Program designed for the working student. The evening program can be completed in nine quarters with courses starting no earlier than 5:00 p.m.

For students interested in equine health, a joint program has been developed between Columbus State's Veterinary Technology and Otterbein College's Equine Health Technology. For students interested in Health Services Administration, a joint program has

been developed between Columbus State's Veterinary Technology and Franklin University. For students interested in a Bachelor of Science degree in Veterinary Technology, a joint program has been developed between Columbus State's Veterinary Technology and Purdue University. Special advising is necessary for students who wish to participate in these joint programs. Contact the department coordinator for more information.

Upon completion of the Associate Degree in Veterinary Technology, the graduate will be able to:

- Obtain and record case histories for animals in an animal health care setting.
- Explain to clients preventative medicine, treatment protocol, medical and surgical procedures, and medications dispensed by the hospital.
- Prepare medications according to a prescription.
- Administer treatment and/or medication either orally or parenterally.
- Apply wound dressings.
- Collect patient specimens for clinical laboratory procedures including blood samples, urine samples and skin scrapings.
- Perform clinical laboratory procedures, including complete blood counts, serum chemistries, microbiology, immunologic testing, urinalysis, and cytology.
- Identify internal, external, and blood parasites of dogs, cats, horses, and food animals.
- Perform routine procedures on laboratory animals (rats, mice, guinea pigs, rabbits).
- Prepare equipment, instruments, animals and medications for surgical procedures.
- Administer and monitor anesthesia induction, maintenance and recovery by inhalation or by parenteral injection.
- Assist in diagnostic, medical and surgical procedures.
- Perform dental prophylaxis.
- Administer and monitor intensive nursing care.
- Position animals, expose and develop radiographs.

Graduates register with the Ohio Veterinary Medical Licensing Board to become registered veterinary technicians in the State of Ohio. Graduates are eligible to take the Veterinary Technician National Exam (VTNE) which is used in more than 40 states to certify veterinary technicians.

Specific Program Admissions Information

Listed below are additional requirements for admission to the Veterinary Technology.

- High school graduate or G.E.D. equivalency
- Required high school (or equivalent) courses:
  Algebra, grade of "C" or above
  Biology, grade of "C" or above
  Chemistry, grade of "C" or above
- Placement into ENGL 101 - Beginning Composition
- Placement into MATH 103 - Beginning Algebra II, or completion of MATH 102 - Beginning Algebra I
- Completed health statement
- Health insurance or signed waiver
- Computer Literacy 1 or completion of CPT 101

Veterinary Technology Associate Degree

COURSE		CR
Quarter 1		
BIO 161	Human Anatomy	5
CHEM 113	Gen. & Bio. Chem	5
VET 111	Veterinary Tech I	5
VET 114	Client Relations	2
Quarter 2		
BIO 169	Human Physiology	5
VET 122	Vet. Parasitology	3
VET 136	Animal Health & Disease	3
MATH 103	Beginning Algebra II	4
VET 124	Principles of Veterinary Radiology	2
Quarter 3		
VET 131	Vet. Anatomy and Physiology	3
VET 138	Veterinary Surgical Tech.	3
VET 126	Principles of Vet Anesthesia	3
VET 133	Clinical Application I	3
ENGL 101	Beginning Composition	3
Quarter 4		
ENGL 102	Essay & Research	3
SSCI 10x	Social Science 101, 102, 103 or 104	5
VET 135	Veterinary Hematology	5
MATH 100	Calculations and Dosages	2
Quarter 5		
COMM 105	Speech or	
COMM 110	Conf. & Group Discussion	3
VET 291	Clinical Experience I	6
VET 254	Clinical Seminar I	2
ENGL 200	Business Communications	3
VET 266	Animal Health & Disease II	3
Quarter 6		
VET 262	Vet. Pharmacology	3
VET 261	Vet. Urinalysis & Clinical Chemistry	4
VET 269	Vet. Microbiology	5
VET 263	Clinical Application II	3
Quarter 7		
VET 293	Clinical Experience II	6
VET 274	Clinical Seminar II	2
HUM 1xx	Humanities 111, 112, 113 ,151 or 152	5
TOTAL CREDIT HOURS		**109**

Course Descriptions

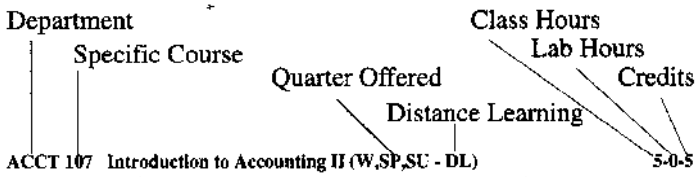
Columbus State's Course Numbering System

No two courses at Columbus State have the same course number. The three or four-letter alpha identifier indicates the department, and the three numbers indicate the specific course within each department.

Listed below are the various departments in alphabetical order. Refer to this chart to find the department in which a given course can be found. For example, ACCT 107 Introduction to Accounting would be found in the Course Descriptions section under Accounting.

Accounting	ACCT
Anthropology	ANTH
Arabic	ARAB
Architecture	ARCH
Art	ART
Automotive Technology	AUTO
Aviation Maintenance Technology	AVI
Biology	BIO
Business Management	BMGT
Chemistry	CHEM
Civil Engineering Technology	CIVL
Communication Skills	COMM
Computer Programming Technology	CPT
Construction Management	CMGT
Dance	DANC
Dental Hygiene	DHY
Dental Laboratory Technology	DENT
Developmental Education	DEV
Dietetic Manager Certificate (See Hospitality Management)	DMGR
Dietetic Technician Major (See Hospitality Management)	DIET
Early Childhood Development	ECD
Economics	ECON
Electro-Mechanical Engineering Technology	EMEC
Electronic Engineering Technology	EET
Emergency Medical Services Technology	EMS
English	ENGL
English as a Second Language	ESL
Environmental Technology	ENVR
Facility Management	FAC
Financial Management Technology	FMGT
Fire Science	FIRE
French	FREN
Geography	GEO
Geology	GEOL
German	GERM
Gerontology	GER
Graphic Communications	GRPH
Health Information Management Technology	HIMT
Heating, Ventilating and Air Conditioning Technology	HAC
Hospitality Management	HOSP
Human Resources Mgmt	HRM
Humanities	HUM
Interpreting/Transliterating	ITT
Italian	ITAL
Japanese	JAPN
Landscape Design/Build	LAND
Latin	LATN
Law Enforcement	LAWE
Legal Assisting	LEGL
Legal Medical Const.	LEGL/HIMT
Literature	ENGL
Logistics Management	LOGI
Marketing	MKTG
Mathematics	MATH
Mechanical Engineering Technology	MECH
Medical Assisting Tech	MAT
Medical Laboratory Technology	MLT
Mental Health/Chemical Dependency/Mental Retardation	MHCR
Microcomputing Technology	MCT
Multi-Competency Health	MULT
Multimedia Production Tech.	MMPT
Music	MUS
Natural Science	NSCI
Nursing	NURS
Office Administration	OADM
Philosophy	PHIL
Physics	PHYS
Political Science	POLS
Psychology	PSY
Quality Assurance Technology	QUAL
Radiography	RAD
Respiratory Care	RESP
Real Estate	REAL
Retail Management	RETL
Social Sciences	SSCI
Sociology	SOC
Spanish	SPAN
Spanish Module	SPN
Sports & Fitness Mgmt	SFMT
Surgical Technology	SURG
Surveying	SURV
Technical Communication	TCO
Theater	THEA
Veterinary Technology	VET

Explanation of Course Description Codes



A continuation of ACCT 106 with special emphasis on the uses of accounting reports in management decisions and in control of business operations; focus is on the internal use of accounting information. Prerequisite: ACCT 106. Not open to Accounting majors.

Course Number - the three or four letter alpha identifier indicates the department; the three numbers that follow identify the specific course. Three or four letters followed by xxx indicate an elective requirement for which only the department is specified; here the student may choose the specific course, subject to approval of his/her advisor. Where no alphabetical or numerical characters appear, the elective may come from more than one department.

Quarter Offered - indicates which quarter or quarters the course is offered during the year: A-autumn, W-winter, SP-spring, SU-summer.

Prerequisites - any coursework that must be completed before the student is eligible to enroll for the course. For example, if ENGL 101 were listed as a prerequisite for a course, then only students who have completed ENGL 101 would be eligible to register for the course.

Concurrent Courses - any coursework that must be completed during the same quarter as the course in which you are enrolling. For example, if course ACCT 27 1 is concurrent with course ACCT 272, both courses must be taken during the same quarter.

Class Hours - the number of hours per week a particular course meets in a lecture classroom.

Lab Hours - the number of hours per week a particular class meets in a laboratory situation. This is usually in addition to class hours.

Credits - the number of credits to be awarded to students who successfully complete the course.

Distance Learning - designates course is also available in a distance learning format. Courses taken in the distance learning format may be subject to a different lab fee.

Lab Fee - the amount of money (if any) required of students registering for the course. This fee is needed to help offset the cost of consumable materials used in lab situations. Examples are chemicals, glassware, booklets, manuals, and edibles.

Accounting (ACCT)

ACCT 101 Financial Accounting (A,W,SP,SU) 4-0-4
The first of a two-quarter sequence introducing financial accounting to non-accounting majors. The course is a fundamental study of the principles and procedures of double -entry accounting as applied to sole proprietorships. Concepts of this first course are continued and applied in the second course, Managerial Accounting. Students are advised to avoid any time lapse between these courses. Lab fee: $2.00.

ACCT 102 Managerial Accounting (A,W,SP,SU) 3-0-3
An extension of financial accounting applying introductory accounting techniques to business situations. It is designed to acquaint the student with the use of accounting information in the control of a business operation and the interpretation of such information for management's use. This course is an overview of the analysis of financial statements, cost and responsibility accounting, budgeting, cost volume profit analysis and decision making. Lab fee: $2.00. Prerequisite: ACCT 101 or ACCT 111.

ACCT 104 Small Business Accounting (W,SP) 4-2-5
An introductory course for small business management majors with no bookkeeping or accounting background. The emphasis is on the study of the fundamental principles and procedures of double-entry accounting, preparation of financial statements using manual and/or PC systems. Lab fee: $5.00. Prerequisite: MCT 106.

ACCT 106 Introduction to Accounting I (A,W,SP,SU-DL) **5-0-5**
The uses of accounting reports for business entities; focus on the uses of accounting for external reporting, emphasizing accounting as a provider of financial information. This course is intended for students who plan to transfer to a four-year college or university to complete a Bachelor's Degree. This course is also offered in a distance learning mode. Not open to Accounting majors. Lab fee: $2.00.

ACCT 107 Introduction to Accounting II (A,W,SP,SU-DL) **5-0-5**
A continuation of ACCT 106 with special emphasis on the uses of accounting reports in management decisions and in control of business operations; focus is on the internal use of accounting information. This course is also offered in a distance learning mode. Lab fee: $2.00. Prerequisite: ACCT 106. Not open to Accounting majors.

ACCT 111 Principles of Accounting I (A,W,SP,SU) **5-0-5**
An introductory course in accounting with emphasis on 1) the accounting cycle as applied to a service organization 2) adaptations in accounting for a merchandising concern, and 3) recording through the use of specialized journals. Lab fee: $6.00. Prerequisites: Placement into ENGL 101 and MATH 102. Not recommended for Associate of Arts or Associate of Science degree seeking students.

ACCT 112 Principles of Accounting II (A,W,SP,SU) **5-0-5**
A continuation of ACCT 111 will specifically emphasize the major types of assets, as well as the category of current liabilities, and payroll accounting, with particular emphasis on the effect of their measurement on net income and their presentation in the financial statements. The course is rounded out with a discussion of corporate equity and the Statement of Retained Earnings. Lab fee: $4.00. Prerequisite: ACCT 111 with a "C" or better.

ACCT 113 Principles of Accounting III (A,W,SP,SU) **5-0-5**
A continuation of ACCT 112 with special emphasis on accounting problems peculiar to corporations (focusing on long-term liabilities and corporate earnings). A major portion of this course is devoted to the analysis and interpretation of accounting information enabling management to plan their organization's financial destiny. Lastly, the students will be expected to apply their accumulated knowledge of ACCT 111, ACCT 112 and ACCT 113 to a computerized practice set for a merchandising corporate entity. Lab fee: $4.00. Prerequisite: ACCT 112 with a "C" or better.

ACCT 121 Data Processing for Accountants (W,SP) 2-4-4
A survey of types of software packages often used by accountants. In-depth practice in the varied practical applications of Lotus Electronic Spreadsheet is provided. Lab fee: $12.00. Prerequisite: CPT 101

ACCT 126 Accounting Systems (SP,SU) 2-5-5
An introduction to systems fundamentals including flowcharting and internal control. A comprehensive application of accounting principles studied in ACCT 111 and ACCT 112 using microcomputers. Lab fee: $8.00. Prerequisite: ACCT 121 and ACCT 112

ACCT 201 Intermediate Accounting I (A) 4-3-5
A continuation of accounting theory. An in-depth study of the accounting process and accounting records; the nature and content of accounting statements: balance sheet, income statement, and retained earnings statement; analysis of working capital; analysis and methods of valuation and statement presentation of the following items: cash and receivables, inventories and property, plant and equipment. Lab fee: $1.00. Prerequisite: ACCT 113 with a "C" or better.

ACCT 202 Intermediate Accounting II (W) 4-3-5
A continuation of ACCT 201 including analysis and methods of valuation and statement presentation of the following items: current liabilities - contractual and contingent items; intangible assets; deferred charges and long-term liabilities, investments, leases, equity transactions, earnings per share, statement of cash flow. Lab fee: $1.00. Prerequisite: ACCT 201 with a "C" or better.

ACCT 206 Advanced Accounting (SP) 4-3-5
Covers series of advanced topics such as partnership accounting, branch accounting, consolidations and installment sale accounting. These topics are such that they round out the student's knowledge of accounting for the most common organizational types. Prerequisite: ACCT 202

ACCT 211 Cost Accounting (A) 4-3-5
A study of the field of job order cost accounting; the cost cycle methods of handling materials, labor costs, and manufacturing overhead expenditures (controllable and uncontrollable); process cost accounting; byproducts and joint products; fundamental cost-volume-profit relationships (break-even analysis); flexible budgeting and standard costs. Lab fee: $3.00. Prerequisite: ACCT 113

ACCT 221 Financial Statement Analysis I (A,SU) 2-3-3
A study of forms of business organization; source and management of working capital; financial statement presentation; tools of analysis; percentages, comparisons to past performance industry standards, and basic ratios including working capital. Lab fee: $1.00. Prerequisite: ACCT 113

ACCT 222 Financial Statement Analysis II (W,SU) 2-3-3
A continuation of course ACCT 221; ratios of equity, return on equity and return on assets; corporate securities; financing through securities; sources and management of long -term assets, debt, and equity including capital budgeting; expansion and combinations, reorganization, receivership, and dissolution. Lab fee: $2.00. Prerequisite: ACCT 221

ACCT 231 State and Local Taxation (SP,SU) 2-3-3
Payroll taxes (withholding and reports), unemployment taxes, workmen's compensation, franchise taxes, personal property taxes (classified and intangible), city income taxes, Ohio personal taxes, sales and use taxes, real estate taxes, and vehicle and other taxes. Lab fee: $5.00. Prerequisite: ACCT 113

ACCT 232 Federal Taxation (W,SU) 4-3-5
Individual income taxes; returns, income exemptions, deductions, gains and losses, rates, adjustments. Problems of proprietorship, partnerships, corporations, inventories, depreciation accounting, installment and deferred sales treatment. Filing requirements, payments, refunds, claims. Tax planning techniques. Lab fee: $5.00. Prerequisite: ACCT 113

ACCT 236 Advanced Taxation (SP) 3-3-4
A continuation of ACCT 232, including non-liquidating distributions, accumulated earnings, and undistributed income. Sub-chapter S corporations, stock redemption and partial liquidations, corporate reorganization, and estate and gift taxation. Lab fee: $2.00. Prerequisite: ACCT 232

ACCT 237 Enrolled Agent's Review Course (SU) 3-2-4
This course is an intense review of all aspects of personal income tax, corporate partnership taxes, the unified transfer tax, taxation of trusts and exempt entity requirements. The purpose of the course is to prepare the student to successfully complete the Enrolled Agent's Examination of the Internal Revenue Service. Emphasis is placed upon examination questions rather than tax return preparation or detailed reporting requirements. Lab fee: $5.00. Prerequisite: ACCT 236. Concurrent: ACCT 238.

ACCT 238 Tax Practice Management (SU) 4-0-4
A study of those aspects of operating a successful tax practice. Maintaining internal control over client tax documents. Issues surrounding deficiency, assessment, and collection procedures. Examination of returns by the Internal Revenue Service (audit flags). Practice before the Internal Revenue Service. Civil and criminal tax procedures. Ethical responsibilities of the preparer. Lab fee: $5.00. Concurrent: ACCT 237

ACCT 241 Auditing I, Principles (W, SU) 2-2-3
A course concerned with identification of professional qualifications and responsibilities of an auditor and study of auditing concepts utilized in the investigation and appraisal of economic information. Topics of study will include the role of the auditor in society, professional ethics, auditing standards, professional liability, audit objectives, relationship of risk and materiality to audit strategies, planning and accepting an engagement, audit sampling, and an auditor's concern with internal control. Lab fee: $3.00. Prerequisite: ACCT 113.

ACCT 242 Auditing II, Applications (SP, SU) 2-2-3
A course concerned with practical application of professional qualifications and responsibilites of an auditor utilized in the investigation and appraisal of economic information. Topics of study include how to audit each of the following transaction cycles: revenue, expenditure, personnel services, productive, investing, and financing and cash. The audit report and other special reports will also be studied. Lab fee: $3.00. Prerequisite: ACCT 241

ACCT 251 Accounting Practice (SP) 3-3-4
A capstone course in the technology intended to tie course material presented throughout the Accounting Technology curriculum to a single practical application - herein students form simulated accounting firms to maintain accounting records for an on-going enterprise. A secondary thrust is intended to assist students in post-graduation pursuits of employment and continuing education. Lab fee: $10.00. Prerequisite: ACCT 202

ACCT 256 Final Project (SP) 2-8-5
A capstone course for students who are enrolled in the EDP Auditing Major. The course integrates materials presented throughout the curriculum through use of a simulated accounting engagement. Students will design appropriate software in conjunction with both systems analysis and design and apply it to a period of transactions of a hypothetical business enterprise. Prerequisite: ACCT 202

ACCT 261 Controllership/CPA Review (SP) 3-3-4
The emphasis of this course is the practical accounting problems and questions on accounting theory as presented in the C.P.A. examination which students have not had in other Columbus State classes such as: fund accounting, consolidated financial statements, foreign currency transactions, and partnership accounting (including liquidations). Other emphasis will include test taking strategies, Geometry in the G.R.E., statement of cash flow, review of intermediate accounting. Lab fee: $4.00. Prerequisite: ACCT 202

ACCT 266 Public Administration/Fund Accounting (SP,SU) 3-3-4
A course dealing with the principles and applications of fund accounting as it relates to state and local governments. It includes budgeting, accounting, reporting, and auditing for federal government, colleges, universities, and hospitals. Prerequisite: ACCT 202

ACCT 271 Accounting Internship (A,W,SP,SU) 0-20-2
A structured employment situation in which the student is introduced into an actual accounting office. The student is expected to perform many of the accounting procedures studied in conjunction with their other classes (i.e., bank reconciliations, payroll, journal entries, etc.) and to gain relevant experience and a limited work record. Weekly supervision of the intern is used to solve any job-related problems and to attempt to develop a sense of responsibility and a professional attitude within the student/intern. Prerequisite: ACCT 201. Concurrent: ACCT 272

ACCT 272 Internship Seminar (A,W,SP,SU) 2-0-2
A practical work experience in which the student is expected to perform several operational auditing procedures (i.e., flowcharts, organization charts, analysis of existing internal control, recommendations, etc.) related to an accounting internship position. Emphasis is placed upon analyzing and further understanding the student's working environment. Prerequisite: ACCT 201. Concurrent: ACCT 271.

Anthropology (ANTH)

ANTH 200 Introduction to Physical Anthropology (A,W,SP,SU) 5-0-5
This course introduces students to the field of physical anthropology. It covers the basic concepts of the field, discusses anthropology's relationship with other biological and social sciences, surveys non-human primates, examines some aspects and examples of non-human behavior in depth, covers topics in current human diversity, and looks at human evolutionary history. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

ANTH 201 World Prehistory (A,W,SP,SU) 5-0-5
This course is an overview of world prehistory. Since the majority of human existence occurred long before written records and historical documents were available, this course introduces students to the fundamentals of prehistoric archaeology. The course surveys human origins, investigates the emergence of domestication and agriculture, and explores the rise of settlements and civilization. A global perspective is taken in the study of the prehistoric human past. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

ANTH 202 Introduction to Cultural Anthropology (A,W,SP,SU) 5-0-5
Cultural anthropology focuses on understanding human cultural diversity, using research techniques such as participant observation to explore the lifeways of groups. Topics include cross-cultural treatments of social systems such as politics, economics, family and marriage, and kinship. General theories of cultural interpretation and change are discussed in a broad geographical context. Students apply concepts and complete a "mini-project" using anthropological research techniques. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

ANTH 240 Introduction to Forensic Anthropology (A, SP) 5-0-5
This course introduces students to the field of forensic anthropology. Forensic sciences use methods and applications from anthropology in the investigation and detection of crime, the processing of mass disasters, the recovery of war dead and missing persons, and in international human rights investigations. The course covers the development of forensic anthropology, examines the theoretical and methodological bases of forensic anthropology, and considers present applications as well as future directions in this relatively new subfield of anthropology. Lab fee: $6.00. Prerequisites: ANTH 200 or LEGL 210 or BIO 161 or LAW 111 and LAW 113.

ANTH 290 Capstone Experience in Anthropology (On Demand) 2-2-3
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing in a baccalaureate degree program in anthropology. Course requirements include the completion and presentation of a research project that relates to the students' academic interest after reviewing research methodologies and findings in anthropology; assembly of a portfolio that covers their academic career at Columbus State Community College, and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00. Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree with five credit hours in anthropology.

ANTH 293 Independent Study in Anthropology (On Demand) **1-5**
An individual, student-structured course that examines a selected topic in anthropology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab fee: $5.00. Prerequisite: Permission of the Instructor and the Chairperson.

ANTH 299 Special Topics in Anthropology (On Demand) **1-5**
A detailed examination of selected topics of interest in anthropology. Lab fee: $5.00. Prerequisites vary.

Arabic (ARAB)

ARAB 101 Elementary Arabic I (On Demand) 5-0-5
Introduction to the fundamentals of the Arabic language with practice in listening, reading, speaking, and writing. Includes studies in Arabic culture. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

ARAB 102 Elementary Arabic II (On Demand) 5-0-5
Continuation of ARAB 101 with further development of listening, reading, speaking, and writing skills and further study of Arabic culture. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: ARAB 101 with a grade of "C" or better.

Architecture (ARCH)

ARCH 100 Introduction to the History of Architecture (A,W,SP) 5-0-5
A study of the fundamental elements of architecture, its development, and its meaning to various cultures throughout western history. Architecture is viewed from the perspectives of form, function, interior and exterior space, technological development, and landscape. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs. Lab fee: $9.00.

ARCH 111 Construction Drafting -Manual I (A,W,SP,SU) 2-6-4
This is a basic drafting course using manual drafting. Areas covered include lettering, linework, layout, dimensioning, geometric construction and orthographic projection. Problems are drawn from throughout the construction industry. Lab fee: $12.00.

ARCH 112 Construction Drafting -CAD I (A,W,SP,SU) **1-5-3**
This course is an entry-level computer aided drafting class. Emphasis is placed on the basic drawing, editing, display, dimensioning and block commands. Several small projects will be created utilizing these features. Lectures, in-class demonstrations, and hands on work sessions are employed as teaching tools during

the course. The course uses the current release of AutoCAD. Lab fee: $15.00. Prerequisite: ARCH 111 or permission of instructor.

ARCH 113 Construction Drafting -CAD II (A,W,SP,SU) 1-5-3

This course builds upon the basics learned in ARCH 112. Emphasis is placed on advanced dimensioning features, hatching, attributes, and external references. Several small projects will be created utilizing these features. The final project in the course will allow the student to pull together all of the features learned in ARCH 112 and during ARCH 113 to prepare a complete set of construction documents for a residential house. Lectures, in-class demonstrations, and hands on work sessions are employed as teaching tools during the course. The course uses current release of AutoCAD. Lab fee: $15.00. Prerequisite: ARCH 112.

ARCH 116 Piping Systems (A,W,SP,SU) 1-5-3
A comprehensive study of the UPC, water supply, water treatment and distribution, to include waste water disposal and sanitation standards. Emphasis will be placed on mechanical piping design, nomenclature, the physics of metal, pipe, tubing, fittings, valves, joining methods, pumps, pump sizing, water flow principles, pressure loss, sizing and terminal units. Boilers, furnaces, chillers, and refrigeration systems will be discussed in detail. Lab fee: $12.00. Prerequisite for Architecture students: CMGT 121.

ARCH 130 Introduction to Interior Design (A,W) 2-6-4
An introduction to the design process, focusing on space planning, through the use of project assignments in a design studio. Emphasis is on problem solving and the process of design, exploring the tools and resources available, and presentation. Several projects, small in scope, will be employed to give the student exposure to a wide variety of typical interior design problems. Lecture, discussion, and studio critiques will be employed as teaching methods during the course. Lab fee: $12.00. Prerequisites: ARCH 161 and ARCH 112.

ARCH 155 Structures - Wood (A, SP) 1-5-3
This course involves the structural design and detailing of various systems used in wood construction, including conventional light framing, post and beam, trusses, and various plywood panel systems. Additional topics discussed include installation, insulation and protection of wood structures. Lab fee: $12.00. Prerequisites: MATH 104 and ARCH 111.

ARCH 161 Architectural Drafting -Manual II (W,SU) 1-7-4
This course follows construction drafting - Manual I with the emphasis on advanced orthographic projection and basic descriptive geometry as found in the construction of buildings. Problems are designed to develop the students ability to think three dimensionally and solve problems involving the intersection of surfaces and lines. Basic perspective, planimetric, and isometric drawing are included. Lab fee: $12.00. Prerequisite: ARCH 111

ARCH 214 Electricity and Lighting (A,SP) 2-2-3
This course deals with the fundamentals of lighting in buildings. The essentials of the electrical code, electrical systems, standards, conventional symbols, nomenclature and layouts. Coordination of electrical work with the elements of the building, and fixture and equipment schedules. Lab fee: $12.00. Prerequisites: CMGT 121.

ARCH 232 Building Construction Standards (A,SP) 1-5-3
This course focuses primarily on building and zoning codes. Emphasis is placed on the OBBC (Ohio Basic Building Code) and the Columbus, Ohio zoning code. Other areas of study include: the influence of professional associations, manufacturers, and testing laboratories in design and construction documents; CSI specifications, their organization, content and relationship to other contract documents; and professional practice in architecture Lab fee: $12.00. Prerequisite: CMGT 121.

ARCH 237 Structures-Steel & Concrete (W,SU) 2-6-4
A study in the design and detailing of steel and concrete structural members. CAD applications in the production of drawings is emphasized. Structural plans, details and coordination of elements will be examined. Lab fee: $10.00. Prerequisites: CIVL 232 and ARCH 113.

ARCH 250 Building Enclosure Materials (ASP) 2-3-3
This course is intended to follow CIVL 120 and expose the student to those materials which are specifically associated with the shell of buildings. Topics covered include interior finishes, window and door openings, moisture and thermal protection, acoustical treatments, and mechanical conveyance systems. Lab fee: $12.00. Prerequisite or concurrent: ARCH 155.

ARCH 262 Presentation Drawings -CAD III (A,SP) 1-6-3
An introduction to presentation drawing techniques using computer applications. The course will focus on three-dimensional modeling, rendering and other applications useful to the profession. Lab fee: $15.00. Prerequisite: ARCH 113 & ARCH 161.

ARCH 263 Working Drawings I (W,SU) 1-7-4
This course introduces the student to the practice of working drawings, and deals with the generation of schedules, details, plans and other drawings necessary, and ADA requirements, with an emphasis on the organization and coordination necessary among the drawings. Lab fee: $12.00. Prerequisites: ARCH 250 and ARCH 113.

ARCH 264 Workings Drawings II (SP,A) 1-7-4
This course uses all of the knowledge obtained from the previous architectural courses. A complete set of working drawings is created as a team effort. The student learns to incorporate consultant information in the final set of working drawings. Independent search for and use of information is encouraged. Lab fee: $20.00. Prerequisites: ARCH 232 and ARCH 263.

ARCH 291 Field Co-Op Experience (SU) 0-48-4
Off-campus work experience in architecture, consulting engineering or construction related paid employment, that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course. Lab fee: $15.00. Prerequisites: CMGT 290 or permission of instructor.

Art (ART)

ART 101 History of Western Art (A,W,SP,SU) 5-0-5
A survey of artistic expression in the Western world from the earliest times to the present including the types of media used and their limitations, the role of patronage in artistic development, the relationship of art and the artist to developments in society, and a consideration of the attributes of "great" art in any time or age. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in Humanities, and the Arts. Lab fee: $5.00. Prerequisites: Placement into ENGL 101.

ART 111 Fundamental Concepts of Art (W,SU) 5-0-5
This is a course that specifically explores the principles of artistic communication through the structural devices of line, color, iconography, shape, perspective, collage, montage, etc. Selected major works of art and styles in the history of art, as well as the moving image, film and video will be analyzed in relation to what they were intended to communicate and how this communication is achieved. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

ART 121 Beginning Drawing (A,W,SP,SU) 0-10-5
An introduction to the basic techniques of freehand drawing. Emphasis is on media, concepts, drawing from observation and development of technique. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in the Arts. Lab fee: $8.00.

ART 122 Two-Dimensional Design (A,W,SP,SU) 0-10-5
An introduction to the basic concepts of 2-dimensional design: line, shape, space, hue, value and texture. Use of various media in a variety of problem-solving projects leading toward an awareness of the principles of visual organization. Lab fee: $8.00.

ART 123 Beginning Painting (On Demand) 0-10-5
An introduction to studio painting fundamentals utilizing varied subject matter and media. Lab fee: $8.00.

ART 1313. Dimensional Design (On Demand) 0-10-5
Design II is aimed at developing the student's basic understanding of three dimensional visual communication through the exploration of three dimensional principles. Student's learn through the process of solving visual art problems. Solutions to these problems are achieved through the fabricating of three dimensional art objects. Various techniques and media are also systematically addressed that are common to this area of study. Lab fee: $10.00. Prerequisite: ART 122 or permission of instructor.

ART 230 Color Composition (A,SP) 0-10-5
This course examines the theory and artistic application of basic color principles through student projects and lecture. Such topics as color mixing, interaction, and organization are presented. Lab fee: $10.00. Prerequisite: ART 122 or permission of instructor.

ART 242 World Cinema (On Demand) 5-0-5
A course exploring the history of world cinema through analysis of the content and structure of selected major historic examples in the genre from the beginnings of film in the late 19th century to the present. Special attention will be given to the work of important filmmakers from around the world, and the social and philosophical context in which they worked. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

ART 290 Capstone Experience in Art (On Demand) **2-2-3**
A capstone course focusing on Art. Students will work on developing techniques and methodologies in the field of art. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in summative testing of their academic skills. Open only to AA and AS students preparing to graduate within 2 academic quarters. Lab fee: $10.00.

ART 299 Special Topics in Art (On Demand) **1-5**
Detailed examination of selected topics of art. Lab fee: $2.00. Prerequisites vary.

Automotive (AUTO)

AUTO 061 Automotive Principles (A,W,SP,SU) 3-3-4
This course covers the basic systems of an automobile and their theory of operation. Includes the physical, hydraulic, and electrical theoretical basics, as applied to cars and light trucks. This course and AUTO 062 are prerequisites for all other automotive courses. Credit for this course can be obtained by satisfactory completion of the course, documented previous training and/or experience, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Recommend concurrent with AUTO 062.

AUTO 062 Shop Orientation (A,W,SP,SU) 3-3-4
This course covers the operation of an automotive shop. Includes use of hand and power tools and basic maintenance operations on cars and light trucks. This course and AUTO 061 are prerequisites for all other automotive courses. Credit for this course can be obtained by satisfactory completion of the course, documented previous training and/or experience, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Prerequisite: AUTO 061. Recommended concurrent with AUTO 061.

AUTO 101 Autocare (On Demand) 2-2-3
This course is designed for the non-automotive student who is interested in obtaining a familiarity with the fundamentals of automotive systems and preventative maintenance. Also included is information on choosing a repair shop, tips and techniques for dealing with minor breakdowns, and vehicle purchasing strategies. Lab fee: $20.00.

AUTO 110 Engine Repair (A,SU) 2-4-4
A basic course in the theory of operation and automotive engines. All engine mechanical systems are explored during teardown and assembly of a current automotive engine. Common in-car repairs are covered. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $20.00. Prerequisites: AUTO 061 and AUTO 062.

AUTO 115 Advanced Engine Repair (A,SU) 2-2-3
An advanced engine course including minor cylinder head and valve machining, component service, and engine removal and installation. Prepares student to achieve national ASE certification in engine repair. Lab fee: $20.00. Prerequisite or concurrent: AUTO 110.

AUTO 120 Automatic Transmissions (W,SP) 2-4-4
A basic course in automatic transmission theory of operation. Hydraulic and electrical systems are emphasized during a complete teardown and assembly. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Prerequisites: AUTO 061 and AUTO 062.

AUTO 125 Advanced Automatic Transmissions (W,SP) 2-2-3
An advanced course in automatic transmission and transaxle service and diagnostics. Emphasis on field diagnostics and repairs. Prepares student to achieve national ASE certification in automatic transmissions. Lab fee: $15.00. Prerequisite or concurrent: AUTO 120.

AUTO 130 Manual Transmissions (A,SU) 2-2-3
This course provides a working knowledge of manual transmissions, transaxles, and differentials. Repair and diagnostics are covered during complete teardown and assembly. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Prerequisites: AUTO 061 and AUTO 062.

AUTO 135 Advanced Manual Transmissions (A,SU) 2-2-3
An advanced course in clutch, manual transmission, transaxle. and differential diagnostics. Includes clutch and transmission removal and installation. Prepares student to achieve national ASE certification in manual transmissions. Lab fee: $15.00. Prerequisite or concurrent: AUTO 130.

AUTO 140 Suspension and Steering (A,SU) 2-4-4
This course provides a working knowledge of the diagnosis and repair of wheels, tires, suspension systems, steering systems, and wheel alignment diagnosis and adjustment. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Prerequisites: AUTO 061 and AUTO 062.

AUTO 145 Advanced Suspension and Steering (W,SU) 2-2-3
An advanced course covering detailed diagnostics and service of suspension components. Includes instruction on both two-wheel and four-wheel alignment. Prepares student to achieve national ASE certification in suspension and steering. Lab fee: $15.00. Prerequisite or concurrent: AUTO 140.

AUTO 150 Brake Systems (W,SP) 2-4-4
This course provides a working knowledge of the diagnosis and repair of the hydraulic system, drum brake systems, disc brake systems, power assist units, and associated systems including wheel bearings, parking brakes and related electrical circuits. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $20.00. Prerequisites: AUTO 061 and AUTO 062.

AUTO 155 Advanced Brake Systems (A,SP) 2-2-3
An advanced course covering detailed diagnostics and repair of automotive brake systems including anti-lock systems. Prepares student to achieve national ASE certification in brake systems. Lab fee: $15.00. Prerequisite: AUTO 150.

AUTO 160 Electrical Systems (W,SP) 3-3-4
This course provides a working knowledge of the diagnosis and repair of general electrical systems: the battery, starting, charging, and lighting systems. Also included are gauges, warning devices, wiper systems, and other electrical accessories. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Prerequisites: AUTO 061 and AUTO 062.

AUTO 165 Advanced Electrical Systems (A,SP) 2-2-3
An advanced course designed to provide students with a knowledge of electronic components, circuits and diagrams, and testing and service of automotive computer systems. Prepares student to achieve national ASE certification in electrical systems. Lab fee: $15.00. Prerequisite or concurrent: AUTO 160.

AUTO 170 Heating and Air Conditioning Systems (SP) 2-2-3
This course provides a working knowledge of the diagnosis and repair of air conditioning systems, refrigeration systems, heating and engine cooling systems, and control units. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Prerequisites: AUTO 061 and AUTO 062.

AUTO 17.5 Advanced Heating and Air Conditioning Systems (SU) 2-2-3
An advanced course designed to provide the knowledge necessary to diagnosis and repair automotive air conditioning systems, including the diagnosis and repair of automatic temperature controls and related electronic systems. Prepares student to achieve national ASE certification in heating and air conditioning systerns. Lab fee: $20.00. Prerequisite: AUTO 170.

AUTO 180 Engine Performance (A,W) 2-4-4
This course provides the opportunity to gain a working knowledge of engine performance diagnostics. Includes diagnosis and repair of the ignition system, fuel and exhaust systems, emission control systems, and an introduction to engine electrical and computer control systems. Credit for this course can be obtained by satisfactory completion of the course, ASE certification in this area, or by satisfactory results of a proficiency exam administered by the department. Lab fee: $15.00. Prerequisites: AUTO 061 and AUTO 062. It is recommended that students complete AUTO 160 prior to registering for this course.

AUTO 181 Fundamentals of Alternative Fuel Systems (W,SP) 2-2-3
This course provides a working knowledge of the predominate alternate fuel systerns currently in use in automotive applications. These include CNG, LNG, propane, ethanol, methanol, electric, oxygenated gasoline, and gasohol. The unique characteristics of each fuel along with the systems used to adapt automobiles to its use is explored along with the federal legislation that is mandating and controlling this technology. Lab fee: $20.00. Prerequisites: AUTO 180.

AUTO 185 Advanced Engine Performance (W,SP) 2-2-3
The course is designed to provide students with a working knowledge in the area of advanced engine diagnostics. Diagnosis and repair of fuel injection and computerized engine control systems are included. Prepares student to achieve national ASE certification in engine performance. Lab fee: $15.00. Prerequisite: AUTO 180.

AUTO 186 Advanced Alternative Fuel Systems (A,SP) 2-2-3
An advanced course designed to provide students with background knowledge and experience on current alternate fuel conversion systems and proper installation procedures. Symptom analysis, diagnosis, and repair of alternate fuel related engine performance problems are coveted. Prepares student to achieve national ASE certification in alternate fuels. Lab fee: $20.00. Prerequisites: AUTO 181 and 185.

AUTO 190 Automotive Business Management (A,W,SP,SU) 2-2-3
An introduction to automotive management principles. Topics covered include: A systems approach to management, management styles, financial measures, MBO and quality, time management, customer and employee relations, marketing and the legal environments. Lab fee: $10.00. Prerequisites: AUTO 061 and AUTO 062

AUTO 191 Service Advising (A,SP) 2-2-3
The primary responsibilities of a Service Advisor: Writing a proper repair order, scheduling, selling maintenance and customer relations are covered in depth in this course. Estimating, repair order tracking and time management skills are also presented. Lab fee: $10.00. Prerequisite: AUTO 190.

AUTO 192 Automotive Service Management (W,SP) 2-2-3
This course covers the variety of duties of the service manager. Principles presented in AUTO 190 are further developed along with practical implementation strategies. Facilities and equipment planning and management along with financial management and analysis are covered. Lab fee: $10.00. Prerequisite: AUTO 190.

AUTO 193 Automotive Service Merchandising (A,SU) 2-2-3
Principles of marketing, merchandising and advertising and their application in the automotive repair industry will be covered in this course. Upon completion of this course the student will be able to demonstrate the ability to develop specific merchandising and advertising items and to develop a departmental marketing plan. Lab fee: $10.00. Prerequisite: AUTO 190.

AUTO 195 Auto Parts - Sales (On Demand) **1-2-2**
The duties and responsibilities of a parts department counter-person are covered in this course. The use of catalogs and locator systems, as well as outside sales, are included. Lab fee: $10.00. Prerequisite: AUTO 190.

AUTO 196 Auto Parts - Inventory Control (On Demand) **1-2-2**
This course covers the various inventory control systems that are commonly used in automotive parts departments and stores. Determining inventory levels is an integral part of this course. Lab fee: $10.00. Prerequisite: AUTO 190.

AUTO 197 Auto Parts - Management (On Demand) 2-2-3
This course covers the various management duties of a parts department manager. Pricing, inventory merchandising, forecasting, and purchasing are included. Lab fee: $10.00. Prerequisite: AUTO 190

AUTO 210 Current Trends in Engine Repair (A,W) **1-2-2**
The content of this course reflects recent technological advances and changes in engine design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 115

AUTO 220 Current Trends in Automatic Transmissions (SP,SU) **1-2-2**
The content of this course reflects recent technological advances and changes in automatic transmission design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 125

AUTO 230 Current Trends in Manual Transmissions (A,W) **1-2-2**
The content of this course reflects recent technological advances and changes in manual transmission design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 135

AUTO 240 Current Trends in Suspension Steering (A,SU) 1-2-2
The content of this course reflects recent technological advances and changes in steering and suspension system design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 145.

AUTO 250 Current Trends in Brake Systems (W) **1-2-2**
The content of this course reflects recent technological advances and changes in brake system design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 155.

AUTO 260 Current Trends in Electrical Systems (W/AU) **1-2-2**
The content of this course reflects recent technological advances and changes in electrical system design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 165.

AUTO 270 Current Trends in A/C Systems (A) **1-2-2**
The content of this course reflects recent technological advances and changes in heating air conditioning system design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 175.

AUTO 280 Current Trends in Engine Systems (SP,SU) **1-2-2**
The content of this course reflects recent technological advances and changes in engine control system design and repair made by the automobile industry during the current model year. Lab fee: $15.00. Prerequisite: AUTO 185.

AUTO 297 Special Topics in Automotive Technology (On Demand) **1-0-1**
Advanced level course electives. This course will address current issues in the automotive industry. Lab fee: $15.00. Prerequisite: AUTO 061 and AUTO 062.

AUTO 298 Special Topics in Automotive Technology (On Demand) **1-2-2**
Advanced level course electives. This course will address current issues in the automotive industry. Cab fee: $15.00. Prerequisite: AUTO 061 and AUTO 062.

AUTO 299 Special Topics in Automotive Technology (On Demand) **2-2-3**
Advanced level course electives. This course will address current issues in the automotive industry. Lab fee: $15.00. Prerequisite: AUTO 061 and AUTO 062.

AUTO 300 Shop Experience (SP) **1-8-4**
This course is taken during a student's final quarter. It includes a final assessment of skills and knowledge. Skills are measured in a shop condition with the students performing diagnostics and repairs. A review of the eight ASE areas is also included. Lab fee: $25.00. Prerequisite: Permission of instructor.

Aviation Maintenance Technology (AVI)

AVI 111 Aviation Theory (A,SP) 3-4-5
Basic science for the aviation maintenance technician, including aerodynamics and flight stability, mathematics, physics, and weight and balance effects. Lab fee: $16.00. Prerequisite: DEV 031 with a grade of "C" or better, or placement into MATH 102.

AVI 115 Aircraft Maintenance Regs., Pubs., and Records (ASP - DL) 1-3-2
Application of Federal Aviation Regulations to aircraft maintenance and the aircraft technician. The use of aircraft maintenance forms, records. publications, and other pertinent technical data. Lab fee: $16.00. Prerequisite: DEV 031 with a grade of "C" or better, or placement into MATH 102.

AVI 117 Basic Aviation Maintenance (A,SP) 4-4-6

Develop an understanding of basic aviation maintenance procedures and the tools used by the aircraft technician. Covers identification and selection of materials used in aircraft construction. Practice in fabricating and installing fluid lines and fittings. Select and perform non-destructive inspection processes. Lab fee: $16.00. Prerequisite: DEV 031 with a grade of "C" or better, or placement into MATH 102.

AVI 119 Aircraft Drawings (A,SP) **1-3-2**
Develop an understanding of the general language and symbolism of the aviation industry. Fundamentals of blueprint reading and interpretation of drawings and shop sketches for fabricating parts. Lab fee: $16.00. Prerequisite: DEV 031 with a grade of "C" or better, or placement into MATH 102.

AVI 121 Basic Electricity (W,SU) **5-11-9**
Inspect and service batteries. Determine the relationship of voltage, current, and resistance in electrical circuits. Measure voltage, current, resistance, and continuity, calculate and measure power, read and interpret aircraft electrical circuit diagrams including solid state devices, and logic functions. Calculate and measure capacitance and inductance, and operating principles of generators, alternators, and motors. Lab fee: $16.00. Prerequisites: AVI 111, AVI 115, AVI 117, and AVI 119.

AVI 125 Ground Operations and Cleaning (W,SU) 2-2-3
Ground operations and servicing of aircraft. Identify and select fuels. Identify and select cleaning materials. Identify, remove and treat aircraft corrosion and perform aircraft cleaning. Lab fee: $16.00. Prerequisites: AVI 111, AVI 115, AVI 117, and AVI 119.

AVI 211 Aircraft Environmental Controls (A,SP) 3 -3-4
This course includes aircraft oxygen and environmental control systems. The pressurization system, deicing and anti-icing systems, and fire detection and extinguishing systems are explored. Emphasis is placed on troubleshooting systems. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 213 Airframe Instruments and Electronics (A,SP) 2-6-4
This course centers around aircraft instrument, navigation and communication systems. The theory of operation and troubleshooting the systems. Lab fee: $16.00. Prerequisites: AVI 12 I and AVI 125.

AVI 215 Aircraft Electrical Systems (A,SP) S-6-7
This course deals with the operation and control of electrical generation and distributing systems. Included are wiring procedure and operation principles of electrical appliances such as solenoids, diodes, transistors, motors and switches. Emphasis is placed on troubleshooting the systems. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 221 Aircraft Structures I (W,SU) 3-3-4
A study of aircraft wood and its defects. Selection, application, inspection, testing and repair of aircraft fabric materials. Selection, identification and application of finishing materials, trim, letters, and touch-up paint. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 223 Aircraft Structures II (W,SU) **4-15-9**
Identification of aircraft structural materials, properties of aircraft metals, and heat treatment. Inspection of welded assemblies. Layout from blueprints, bend allowances, forming and fabrication techniques. Installation and inspection of conventional and special rivets and fasteners. Construction techniques, inspection, repair and finishing of composite structures and components. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 241 Aircraft Fluid Power Systems (A,SP) 3-3-4
Inspect, troubleshoot, service and repair aircraft hydraulic and pneumatic system components in accordance with pertinent maintenance directives. Lab fee: $16.00. Prerequisites: AVI 211, AVI 213, AVI 215, AVI 221, and AVI 223.

AVI 245 Aircraft Fuel Systems (A,SP) **1-2-2**
Inspect, troubleshoot, service and repair aircraft fuel system components in accordance with pertinent maintenance directives. Lab fee: $16.00. Prerequisites: AVI 211, AVI 213, AVI 215, AVI 221 and AVI 223.

AVI 246 Aircraft Landing Gear Systems (A,SP) 3-3-4
Inspect, troubleshoot, service and repair aircraft landing gear system components in accordance with pertinent maintenance directives. Lab fee: $16.00. Prerequisites: AVI 211, AVI 213, AVI 215, AVI 221, and AVI 223.

AVI 249 Aircraft Rigging, Assembly and 100-Hour Inspection (A,SP) 3-7-6
Study of aircraft rigging and assembly. Inspection of the complete airframe and all its systems. Review of airframe topics via written examinations that present a comprehensive overview of all airframe training units. Lab fee: $16.00. Prerequisites: AVI 211, AVI 213, AVI 215, AVI 221, and AVI 223.

AVI 311 Reciprocating Engine Theory, Overhaul, and Repair (W,SU) 4-6-6
Theory and operation of aircraft reciprocating engines. Study of the reciprocating engine construction and design. Reciprocating engine maintenance, inspection, repair, and troubleshooting. Procedures of engine removal, installation, rigging, and testing. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 313 Reciprocating Engine Ignition and Fuel Systems (W,SU) 4-6-6
Electrical principles of reciprocating ignition systems. Aircraft magneto inspection, repair and overhaul. Installation and adjustment of aircraft magnetos. Reciprocating engine ignition harness construction and repair. Aircraft spark plug inspection and servicing. Reciprocating engine ignition system troubleshooting. Theory of operation, maintenance, repair and troubleshooting of aircraft carburetors. Operation, maintenance, repair and troubleshooting of reciprocating engine fuel injection systems. Repair and maintenance of engine fuel systems,. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 315 Reciprocating Engine Cooling, Induction, and Exhaust Syst. (W,SU) 2-3-3
The theory, maintenance and repair of reciprocating aircraft engine cooling, induction and exhaust systems. Principles and maintenance of reciprocating aircraft engine superchargers and turbo-superchargers and related components. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 321 Turbine Engine Theory and Overhaul (A,SP) 4-6-6
Theory and operation of aircraft turbine engines. Study of the turbine engine construction and design. A study of turbine engine maintenance, inspection, repair, and troubleshooting techniques. Application of procedures to remove, install, rig and operationally test turbine engines. Identification and repair of lubrication systems and components. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 323 Turbine Engine Airflow Systems (A,SP) 3-2-4
A study of fundamental principles of turbine engine ice and rain, cooling, exhaust and thrust reverser systems. A study of the applied techniques to inspect, maintain, troubleshoot, repair and service induction and airflow systems to industry standards. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 325 Turbine Engine Fuel and Ignition Systems (A,SP) 4-6-6
A study of operating principles, and theory of turbine engine fuel systems, fuel metering systems and subsystems. A study of applied techniques to inspect, maintain, troubleshoot, repair and adjust respective systems to industry standards. A study of electrical principles of turbine engine ignition systems. Principles of operating turbine engine starting systems of both electrical and pneumatic type. A study of applied techniques to inspect, service, troubleshoot and repair respective system components to industry standards. Lab fee: $16.00. Prerequisites: AVI 121 and AVI 125.

AVI 331 Propellers (W,SU) 4-6-6
Aerodynamic principles of propellers. Propeller types, construction and operation. Inspection, repair and troubleshooting. Installation, removal, tracking and balance. Controllable propellers. Constant speed governor control, operation and adjustment. Reversible propellers. Hazards of propeller operation. Lab fee: $16.00. Prerequisites: AVI 311, AVI 313, AVI 315, AVI 321, AVI 323, and AVI 325.

AVI 333 Engine Instruments and Electrical Systems (W,SU) **2-1-3**
Identify types of powerplant instrument and electrical systems, operating principles and procedures to inspect, check and troubleshoot temperature, pressure and RPM indicating systems. Lab fee: $16.00. Prerequisites: AVI 311, AVI 313, AVI 315, AVI 321, AVI 323, and AVI 325.

AVI 335 Powerplant Inspection and Fire Protection (W,SU) 4-8-7
One hundred hour inspection of powerplants and systems. Use of inspection equipment and aids. Procedures for returning aircraft engines to service. FAA regulations and maintenance records. Theory, inspection, service and troubleshooting of engine fire protection and fire detection systems. Radial engine design, systems and differences. A summative evaluation course to determine, in a comprehensive manner, the competence necessary for certification testing. Lab fee: $16.00. Prerequisites: AVI 311, AVI 313, AVI 315, AVI 321, AVI 323, and AVI 325.

Biology (BIO)

A mandatory safety lesson (normally given in the laboratory) must be completed before the student is admitted to certain biology laboratory sessions. Approved safety glasses are-required for some laboratory sessions and may be purchased through the Bookstore. Attendance during the first week of class is mandatory and may affect a student's continuation in these classes. Students must complete 60% of the laboratories in a course to receive credit. Courses in this area may require additional hours outside of the scheduled class times.

BIO 100 Introduction to Biological Sciences (A,W,SP,SU) 4-0-4
A general biology course in which basic principles of the characteristics of life, biochemistry, cell reproduction and genetics are explored. Lab fee: $3.00. Prerequisite: Placement into ENGL 100 or higher. Not open to students with credit for BIO 111, BIO 112, BIO 125, BIO 126, BIO 131, BIO 132, NSCI 101, NSCI 102, NSCI 103, BIO 161, BIO 169, BIO 174 or BIO 175.

BIO 101 Introduction to Anatomy and Physiology (A,W,SP,SU) 3-0-3
A general overview of normal human anatomy and physiology. Topics include the cell, tissues, musculo-skeletal, nervous, cardiovascular, genitourinary, digestive, respiratory, and endocrine systems. Lab fee: $3.00. Prerequisite: Placement into ENGL 100 or higher. Not open to students with credit for BIO 121, BIO 122, BIO 161, BIO 169, Bio 211 or Bio 212.

Bio 104 Introduction to Marine Science (SU and on demand) 3-3-4
An introductory course in the principles of Marine Science. This course is designed to introduce major concepts in physics, chemistry, geology and biology as they relate to the oceans and marine life. Shore and ocean environments as well as diversity of marine life will be emphasized. This course and Bio 105 fulfill the science requirement for the AAS degree. Lab Fee: $27.00. Prerequisites: Placement into Eng 101.

Bio 105 Field Investigations in Marine Science (on demand) **0-10-1**
An introductory course-providing field experiences in marine science. This course will be instructed at a marine science laboratory such as Discovery Bay and Port Royal in Jamaica, West Indies. Students will spend 7 to 10 days at a marine laboratory engaged in an intense introduction to coral reefs, coastal environments and marine life. Course will be offered over quarter breaks. Cultural and ecological experiences of the region will be included. Students will be given both snorkeling and diving instruction and thus should be strong swimmers and comfortable in the ocean. Lab Fee: $80, Accommodation fee at the marine lab will vary. Concurrent: Bio 104

BIO 111 Introductory Biology I (A,W,SP,SU - DL) 4-3-5
An introduction to the biological sciences for the non-major student. Topics included are cell structure and function, bioenergetics, DNA structure and function, cell reproduction, biodiversity, ecology, and evolution. Lab fee: $19.00. Prerequisite: Placement into ENGL 101. Not open to students with credit for BIO 174 or BIO 175. This course and BIO 112 or BIO 115 or BIO 125 or BIO 126 or BIO 127 provide a two-quarter sequence in biological science that will fulfill the elective requirement for the Associate of Science Degree.

BIO 112 Introductory Biology II; Human Biology (A,W,SP,SU) 4-3-5
An introduction to the study of human biology. Topics included are human evolution, human reproduction, human growth and development, homeostasis, the human brain, and the environmental impact of humans on earth. Lab fee: $19.00. Prerequisites: High school biology or BIO 100 or BIO 111, and placement into ENGL 101.

BIO 115 General Microbiology (A,W,SP,SU) 3-4-5
A general microbiology course for biology majors (non-microbiology majors). Topics coveted include taxonomy, morphology and staining, culture techniques, bacterial metabolism and physical and chemical methods for microbial control. General concepts in immunology, including host defense mechanisms and hypersensitivity, are also covered. Related laboratory is required, including identification of unknown bacteria. Lab fee: $26.00. Prerequisites: high school chemistry and biology, or CHEM 100 and BIO 100 or NSCI 103, and placement into ENGL 101.

BIO 116 Microbial Diseases (On Demand) 3-0-3
A basic study of the concepts of microbial disease. Topics covered are host-parasite interactions and resistance and immunity to disease, including the development of the immune system and mechanics of antigen-antibody reactions. Additional topics for detailed discussion are human airborne, foodborne and waterborne infections and human contact diseases. Lab fee: $3.00. Prerequisites: BIO 115, ENGL 101.

BIO 121 Anatomy, Physiology and Pathology I (A,W,SP,SU) 4-3-5
An integrated organ systems approach to the anatomy, physiology and pathology of the human body. Topics include cell biology, histology, and integumentary, skeletal, muscular and nervous systems. The cat and human cadavers are used for demonstrations in the laboratory. Lab fee: $19.00. Prerequisites: High school biology and chemistry or BIO 100 and CHEM 100 or NSCI 103 and placement into ENGL 101. Not open to students with credit for BIO 161 or BIO 169.

BIO 122 Anatomy, Physiology and Pathology II (A,W,SP,SU) 4-3-5
A continuation of BIO 121. Topics include endocrinology, respiratory system hematology, cardiovascular system, metabolism, gastro-intestinal system, thermal regulation, and renal and reproductive systems. The cat and human cadavers are used for demonstrations in the laboratory. Lab fee: $19.00. Prerequisite: BIO 121.

BIO 124 Human Genetics (On Demand) 3-0-3
Mendelian and classical genetics are presented. Emphasis is also placed on the discovery of the DNA molecule and its structure, genetic mutations and diseases as well as genetic engineering and its implications. Lab fee: $3.00. Prerequisites: high school biology or BIO 100 or NSCI 103, and ENGL 101.

BIO 125 General Botany (A,SP,SU) 4-3-5
This course covers the biology of the major plant groups. Topics include diversity, physiology, reproduction, ecology, and economic significance. Lab fee: $18.00. Prerequisites: Placement into ENGL 101; high school chemistry and biology, or CHEM 100 and BIO 100, or NSCI 103.

BIO 126 Introduction to Ecology (On Demand) 4-3-5
This course provides an introduction to ecology. Topics include population dynamics, distribution of species, and energetics. Lab fee: $16.00. Prerequisites: BIO 111 or BIO 174, high school chemistry, CHEM 100, or NSCI 103.

BIO 127 Environmental Science (A,SP,SU) 4-3-5
This course provides a survey of current issues in the study of environmental science. Topics include scientific principles and concepts, human population dynamics, resources and resource management, pollution, world problems, and environment and society. Emphasis will be placed on how individual actions, and economic and political policies can affect the environment. Proposed solutions to environmental problems will be considered. Lab fee: $19.00. Prerequisites: NSCI 101 and NSCI 102; or BIO 111 or BIO 174 or equivalent and placement into ENGL 101.

BIO 161 Human Anatomy (A,W,SP,SU) 3-4-5
The gross anatomy of the entire human body is presented in detail. The cat is used for laboratory dissection. Human cadavers are used for demonstrations. Lab fee: $26.00. Prerequisites: high school biology or BIO 100 or BIO 101 or NSCI 103; placement into ENGL 101. This course and BIO 169 provide a two-quarter sequence in biological science that will fulfill the elective requirement for the Associate of Science Degree. Not open to students with credit for BIO 121.

BIO 162 Human Embryology (On Demand) 3-0-3
Starting with gametogenesis and reproduction, the embryological development of humans from fertilization to birth is presented for morphogenesis and organogenesis of the following: face, neck, pharynx, limbs, circulatory system, nervous system, respiratory system, digestive system, urinary system, and reproductive system. Lab fee: $3.00. Prerequisites: BIO 161, and placement into ENGL 101.

BIO 169 Human Physiology (A,W,SP,SU) 4-2-5
An introductory course in human physiology designed to cover the normal physiology of all organ systems. Lab fee: $13.00. Prerequisites: BIO 161 or equivalent, CHEM 113 or CHEM 112 or equivalent, placement into ENGL 101. Not open to students with credit for BIO 121.

BIO 170 Human Pathophysiology (A,W,SP,SU) 5-0-5
This course deals with the disordered functioning of the human body due to disease. It is designed for students or practitioners in nursing or other allied health professions who wish to increase their understanding of the changes occurring in physiology due to an abnormality. Lab fee: $3.00. Prerequisites: BIO 169 or equivalent; CHEM 112 or CHEM 113 or equivalent or permission of instructor.

BIO 174 Biological Sciences I (A,W,SP,SU) 4-3-5
A biology course designed for biology majors that provides an in-depth coverage of cell biology, genetics and embryology. Lab fee: $26.00. Prerequisites: High school chemistry or CHEM 100, high school biology or BIO 100. Concurrent: CHEM 111 or CHEM 171. This course and BIO 175 provide a two-quarter sequence in biological science that will fulfill the elective requirement for the Associate of Science Degree.

BIO 175 Biological Sciences II (A,W,SP,SU) 4-3-5
A continuation of BIO 174. A biology course designed for biology majors that provides an in-depth coverage of evolution, diversity of life, animal behavior, and ecology. Lab fee: $25.00. Prerequisite: BIO 174.

BIO 201 General Zoology: Animal Diversity and Systematics (on demand) 4-3-5
A survey of the diversity of organisms in the animal kingdom. Emphasis will be placed on evolutionary interrelationships, locomotory, nutritional, and reproductive strategies of the major groups. Lab fee: $26.00. Prerequisite: BIO 174. This course and BIO 174 provide a two-quarter sequence in biological science that will fulfill the elective requirement for the Associate of Science Degree.

Bio 205 Introduction to Biotechnology (A,W,Sp,Su) 4-0-4
A molecular biology course designed to introduce major concepts in: DNA structure and function, gene expression, recombinant DNA, biotechnology, techniques and applications of genetic engineering, medical biotechnology (gene therapy), forensics and DNA profiling, impact and potential of the human genome project. Lab fee: $5.00. Prerequisites: Bio 111 or Bio 115 or Bio 124 or Bio 174.

Bio 206 Introduction to Biotechnology Lab (A,W,Sp,Su) **0-4-1**
A general laboratory course designed to introduce students to the principles of biotechnology. Topics include: sterile techniques; DNA isolation and purification; bacterial culture techniques, transformation, purification and isolation of plasmid DNA; DNA restriction analysis; Gel electrophoresis, PCR and RFLP analysis and animal cell and plant tissue culture techniques. This course may require additional hours outside of scheduled times. Lab fee: $27.00. Prerequisite: Bio 205.

Bio 211 Principles of Human Physiology I (A,W,Sp,Su) 5-0-5
First course of a two-quarter sequence offering a detailed, in-depth exploration of neuromuscular physiology, brain and special senses, and the cardiovascular/circulatory and respiratory systems. This class and Bio 212 are suitable as transfer prerequisites for BS Nursing/Allied Health and pre-professional programs. Lab fee: $ 6.00 Prerequisites: Bio 161 or equivalent, Chem 111 and 112 and placement into Engl 101. Not open to students with credit for Bio 121 or Bio 169.

Bio 212 Principles of Human Physiology II (A,W,Sp,Su) 5-0-5
Second course of a two-quarter sequence, continuation of Biology 211, offering a detailed, in-depth exploration of renal, endocrine, reproductive and digestive physiology, thermal regulation and metabolism. Lab Fee: $ 6.00. Prerequisites: Bio 211.

Bio 250 General Genetics (A,W,Sp,Su) 5-0-5
The principles of genetics, including molecular genetics, transmission genetics of prokaryotes and eukaryotes, developmental and non-chmmosomal genetics, and the genetics and evolution of populations. Lab fee: $5.00. Prerequisite: Chem 252 or equivalent and Bio 111 or Bio 174 plus 5 additional hrs in biology.

BIO 290 Capstone Experience in Biology 2-2-3
An integrated science course blending elements of chemistry, physics and biology. Topics include the historical development of the sciences, ethical issues in science and how they affect the advancement of scientific thought, and the scientific method as it relates to experimental design and interpretation of scientific results. The laboratory utilizes an investigative approach taking students through the process of identifying a research problem, conducting a literature review, writing a research proposal, collecting and analyzing data, writing a scientific paper and presenting results. Lab fee: $19.00. Prerequisites: 75 hours or more of course work completed with a minimum of 20 credit hours within the sciences. This course is required for all biological science majors seeking either the Associate of Arts or Associate of Science degree.

BIO 293 Independent Study in Biology (On Demand) **1-5**
Detailed examination of selected topics of interest in Biology. Lab fee: $6.00. Prerequisite: permission of instructor.

Bio 299 Special Topics in Biology (On Demand) **1-5**
Detailed examination of selected topics of interest in biology. Lab Fee $ 6.00. Prerequisite: Permission of the instructor.

Business Management (BMGT)

BMGT 101 Introduction to Business (A, W, SP, SU - DL) **5-0-5**
A discussion of all significant activities in the field of business including the interaction of business with internal and external forces, ownership, management, marketing, production, human resources, finance, and control. These areas are discussed as they relate to the basic principles of management and economics. Lab fee: $5.00.

BMGT 102 Managing Interpersonal Skills I (A, W, SP, SU) 3-2-4
This course introduces the student to management themes and the five primary skill sets required to be a successful manager. The course provides opportunities for students to begin to learn, develop, and apply managerial skills through personal assessment and an introduction to various skill concepts and behavior models. Lab fee: $25.00.

BMGT 103 Managing Interpersonal Skills II (W, SP) 2-2-3
This course builds upon BMGT 102 and expands the students understanding of Temperament and Type theory. Students also learn the basics of Emotional Intelligence and how to apply these management tools to motivate and improve performance. Lab fee: $10.00

BMGT 111 Management (A, W, SP, SU - DL) 5-0-5
The basic management functions of planning, organizing, leading, controlling and staffing business organizations are covered. The organization is viewed as a system of interdependent parts which interacts with the outside environment. Topics include leadership, motivation, communication and problem solving. Lab fee: $5.00.

BMGT 211 Organizational Behavior (A, W, SP, SU - DL) 3-2-4
An introduction to fundamental concepts and applications of individual, group, and organizational behavior in the workplace. Topics include foundations of organizational behavior, perception and individual decision making, values, attitudes, the foundations of group behavior, understanding work teams, and organizational dynamics. Lab fee: $5.00. Prerequisite: BMGT 111.

BMGT 216 Business Ethics (A, W, SP, SU - DL) 3-0-3
A comprehensive and practical study of ethical systems designed to explore, analyze and evaluate the organizational values , strategic policies and expected behaviors required to develop high ethical standards both on a personal and organizational level. Emphasis will be placed on case studies and exercises in ethical behaviors. Lab fee: $5.00. Prerequisites: BMGT 101 or BMGT 111 and LEGL 264.

BMGT 218 Management Training for Supervisors (A, W, SP, SU) **5-0-5**
A comprehensive examination of management functions and techniques and of the role of a supervisor. This course will increase awareness of the role and present proven methods and techniques to do a better job. Major areas covered include: setting objectives, problem identification techniques, decision-making, time management, management styles, motivation, training subordinates, performance evaluation, verbal and non-verbal communications, interviewing techniques, and a look at the challenge of leadership in an organizational setting. Emphasis is placed on actual on-the-job problems. Lab fee: $5.00.

BMGT 219 International Business (A, SP - DL) 3-0-3
The course focuses on the economic, social and cultural considerations in 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 is stressed. Techniques to overcome international business barriers are examined. Lab fee: $5.00.

BMGT 220 Leadership Fundamentals (W, SU) 2-2-3
This course provides an in-depth study of leadership styles, skills, roles, and the functions of leaders in organizations. The course integrates writings from the humanities, military leaders, political leaders, religious leaders, and business leaders with basic leadership principles. The course provides the opportunity for the student to explore the concept of leadership and to develop and improve his/her leadership skills. Lab fee: $5.00

BMGT 231 Small Business Development (A, W, SP, SU - DL) 4-0-4
First of a two-quarter sequence that introduces the fundamental considerations in planning and executing the start-up of a new small business venture. Concentrates on planning selected critical aspects of a business plan in the areas of: Orientation to Small Business, Strategic Planning, Financial Considerations, Location, Layout and Beginning Inventory. Lab fee: $5.00.

BMGT 232 Small Business Operations (A, W, SP, SU - DL) 4-0-4

This course is a sequel to BMGT 231 and completes the basic instruction necessary for competence in managing a small business enterprise. Topics covered will include effective operation of an established business with emphasis on strategic planning, market analysis, pricing, inventory control and credit collections. Lab fee: $5.00. Prerequisite: BMGT 231.

BMGT 234 Case Studies in Small Business (A, SP) 4-0-4
Cases covering all functional areas of small business management are analyzed and presented. Emphasis is placed on the problem-solving process as a tool for developing and implementing small business management strategies and operational techniques. Lab fee: $5.00. Prerequisites: BMGT 231 and BMGT 232.

BMGT 235 Strategic Business Planning (A, SP) 2-6-5
Preparation and presentation of a formal business plan using the latest computer software. Presentation of the business plan is delivered to a team of observers, including local business people and faculty. Lab fee: $10.00. Prerequisites: ACCT 104, BMGT 231, BMGT 232, MKTG 111.

BMGT 236 Franchising (A, SP) 3-0-3
This course introduces the fundamentals of franchising from both the franchisee and the franchiser points of view. The focus of the course is the franchise as a tool for those buying a business and those wanting to expand an existing business. Contractual arrangements covering the establishment and the operation of a franchise as well as the relationship between the franchisee and the franchiser including the subjects of distributorships and licensing. Lab fee: $5.00. Prerequisites: BMGT 231 or permission of instructor.

BMGT 237 Home Based Business (A, SP) 3-2-4
This course is designed specifically for individuals who strive to commence their own business or have currently established a venture. The goal is to prepare students for the challenges of their business with full awareness of potential situations and to have the knowledge of how to handle them effectively. Focus is on the realities of beginning, growing, and leaving your business. This course also includes a student field study of an existing business or a concentration on an area of concern in the student's established business. Lab fee: $5.00. Prerequisites: BMGT 231 or permission of instructor.

BMGT 238 Small Business Management Internship (A, W, SP, SU) **0-40-4**
Supervised cooperative work experience with on-the-job application of knowledge and skills acquired in the classroom. Prerequisite: Advisor approval requited the quarter before the student actually begins the internship. Lab fee: $2.00. Concurrent: BMGT 239.

BMGT 239 Small Business Management Seminar (A, W, SP, SU) 2-0-2
On-campus seminar which allows students to report on small business management knowledge gained in specific areas of the internship. May include a market research survey, case reports or other special projects. Lab fee: $1.00. Prerequisite: Advisor approval required. Concurrent: BMGT 238.

BMGT 253 Negotiation Principles (SU) 3-0-3
A review of negotiation objectives, skills, tactics and preparation. The student, with a foundation on the technical aspect of purchasing, now has the opportunities to understand the human behavior part of the acquisition cycle. This involves resolving complex issues with many different people, both inside and outside of the organization. Lab fee: $5.00.

BMGT 257 Project Management Principles (A, SP) 2-2-3
This course introduces students to the basic concepts of project management. Students learn to: define the scope of a project; minimize change of scope; estab-

lish goals; define dependency networks; communicate the project plan; use Program Evaluation and Review Techniques (PERT) charts and Critical Path Management; schedule projects; establish tasks, sub tasks, and milestones; and assign resources to tasks. Students use matrix management principles and tools, including Microsoft Project software, as a way to facilitate project planning and monitoring. Students are required to plan a project from inception to completion, Lab fee: $ 15.00.

BMGT 261 Business Management Internship I (A, W, SP, SU) 0-40-4
Supervised on-the-job application of knowledge and skills acquired in the classroom. Prerequisite: Advisor approval required the quarter before the student actually begins the internship. Lab fee: $2.00. Concurrent: BMGT 262.

BMGT 262 Special Problems in Business Management I (A, W, SP, SU) 0-4-2
Application of business management knowledge to specific areas of on-the-job internship visa a report. Lab fee: $1.00. Prerequisite: Advisor approval required. Concurrent: BMGT 261.

BMGT 263 Business Management Internship II (A, W, SP, SU) 0-40-4
Continuation of BMGT 261. Prerequisite: BMGT 261 and advisor approval required the quarter before the student actually begins the internship. Lab fee: $2.00. Concurrent: BMGT 264.

BMGT 264 Special Problems in Business Management II (A, W, SP, SU) 0-4-2
Continuation of BMGT 262. Lab fee: $1.00. Prerequisite: Advisor approval required. Concurrent: BMGT 263

BMGT 271 Management Decisions (A, W, SP, SU - DL) 0-4-2
A practical experience integrating the application of fundamental accounting, marketing, and operations management principles to the decision making process in business. The course is presented via computer simulation. Lab fee: $10.00. Prerequisite: Open to graduating students only or through advisor approval.

BMGT 272 Case Studies in Business Seminar (A, W, SP, SU - DL) 3-0-3
As a part of the capstone experience this course requires the student to draw on and integrate knowledge learned in all previous classes. The fundamentals of problem solving and decision making are applied using the case study approach in a variety of organizational situations. Lab fee: $10.00. Prerequisite: Open to graduating students only or through advisor approval.

BMGT 273 Management Service Project (A, W, SP, SU) **1-4-3**
This course requires the student to serve in a leadership role as a member of an external team in a community-based project setting in a private industry, public sector agency, or not-for-profit organization; or to serve as a facilitator for a team in the Managing Interpersonal Skills course. In a community-based project setting the student will lead the team in the identification, analysis, and development of potential solutions to one or more problem situations. As a team facilitator, the student will facilitate the team in developing and accomplishing assigned tasks. Lab fee: $10.00.

BMGT 276 Assessment, Analysis and Evaluation Skills (A) 3-2-4
This course provides students with the opportunity to develop their knowledge and skills in the basics of training assessment and evaluation. Course topics include needs assessment, data collection, data analysis, performance assessment, levels of evaluation, testing, and evaluation methods. This course will emphasize application of assessment and evaluation techniques on projects from students' personal or work experiences. Lab fee: $10.00.

BMGT 277 Instructional Design and Development Skills (W) 3-2-4
This course provides the basic knowledge and skills necessary for the systematic design, development and evaluation of instruction and training by focusing on the design of instruction/training programs, development of effective strategies and materials, and the evaluation of instruction/training. Emphasis is placed on application of instructional design methodology. Students will demonstrate skills through the development of and delivery of training materials related to their area of work or personal interest. Lab fee: $10.00.

BMGT 278 Training Delivery Skills (SP) 3-2-4
This course provides basic knowledge and skills required to conduct effective training. Topics include the training and development process, effective training competencies, adult learning practices, on-the-job training process, the learning environment, facilitation skills, presentation skills, feedback guidelines, visual aids, and reinforcement for transfer of learning to the workplace. Application of effective training delivery skills is emphasized. Students will demonstrate skills through the development and delivery of training materials related to their area of work or personal interest. Lab fee: $10.00.

BMGT 280 Business Etiquette (A, W, SP, SU) 3-0-3
Business Etiquette provides students with a competitive advantage in a variety of situations. Students learn to use business etiquette to improve communication through e-mail, letter writing, and on the telephone. Students learn how to improve relations with customers, employees, supervisors, and peers by learning how to accept gifts and compliments, and use social graces while eating or attending social activities. Students learn appropriate dress, posture, hand-shakes, and non-verbal communication. The course explores cultural differences in global etiquette. Lab fee: $10.00.

BMGT 281-293 Studies in Contemporary Business (A, W, SP, SU) **1-6**
Studies in Contemporary Business is a specially designed course offering to meet the needs of the constantly changing business community and student population. Prerequisite: Advisor approval

Chef Apprentice Major (See Hospitality Management)

Chemistry (CHEM)

A mandatory safety lesson must be completed before the student is admitted to any other chemistry laboratory sessions. Approved Chemical Splash Resistant goggles are required and may be purchased through the Bookstore. Certain clothing restrictions exist and will be explained by the instructor. Attendance during the first week of class is mandatory and may affect a student's continued enrollment in these classes. Students must complete 60% of the laboratories in a course to receive credit. Courses in this area may require additional hours outside of the scheduled class times.

CHEM 100 Introduction to Chemistry (A,W,SP,SU - DL) 3-3-4
A preparatory chemistry course covering the basic concepts of chemistry with emphasis on the physical and chemical properties of matter, problem-solving, and an introduction to chemical reactions. Related laboratory work and demonstrations. Safety training and goggles are required for laboratory sessions. Lab fee: $13.00. Prerequisites: MATH 102 or higher, Placement into ENGL 100 or higher. Not open to students with credit for CHEM 111, CHEM 112, CHEM 113, CHEM 171, CHEM 172, or CHEM 173.

CHEM 111 Elementary Chemistry I (A,W,SP,SU) 4-3-5
An introductory course in fundamental chemical concepts and laboratory techniques. Topics include atomic structure, periodic classification of elements, stoichiometry, solutions, acids and bases, pH and buffers, the gas laws, chemical equilibrium, and nuclear chemistry. Lab fee: $19.00. Safety training and goggles are required for laboratory sessions. Prerequisites: high school chemistry or CHEM 100; MATH 102 or equivalent; placement into ENGL 101. Not open to students with credit for CHEM 171, CHEM 172, or CHEM 173. This course and CHEM 112 provide a two-quarter sequence in physical science that will fulfill the elective requirement for the Associate of Science Degree.

CHEM 112 Elementary Chemistry II (A,W,SP,SU) 4-3-5
An introductory course in fundamental organic chemistry and laboratory techniques. The study of carbon compounds organized according to functional groups including carbohydrates, lipids, proteins, enzymes, and vitamins. Emphasis is placed on physiological function. Not open to students with credit for CHEM 171 or CHEM 251. Safety training and goggles are required for laboratory sessions. Lab fee: $19.00. Prerequisite: CHEM 111.

CHEM 113 General and Biological Chemistry (A,W,SP,SU) 4-3-5
This is a course in elementary chemical concepts designed primarily for allied health students. It includes the study of principles of general chemistry as applied to physiological principles; basic organic chemistry, especially related to functional groups; and biochemistry including carbohydrates, lipids, proteins, enzymes and nucleic acids. Emphasis is placed on physiological function. Safety training and goggles are required for the laboratory session. Lab fee: $19.00. Prerequisites: High school chemistry completed within the last three years or CHEM 100 or successfully completing a chemistry placement exam; MATH 102 or equivalent, and placement into ENGL 101. Not open to students with credit for CHEM 112.

CHEM 171 General Chemistry I (A,W,SP,SU) 4-3-5
A course in fundamental chemical principles for chemistry majors and pre-professionals. Topics include chemical calculations, the mole concept, atomic structure, periodic classification, bonding, and acid-base chemistry. Laboratory sessions provide bench experiences. Safety training and goggles are required for laboratory sessions. Lab fee: $19.00. Prerequisites: high school chemistry or CHEM 100, MATH 148 or equivalent, and placement into ENGL 101. This course

and CHEM 172 provide a two-quarter sequence in physical science that will fulfill the elective requirements for the Associate of Science Degree.

CHEM 172 General Chemistry II (A,W,SP,SU) 4-3-5
A continuation of CHEM 17 1. Topics include solutions, oxidation-reduction reactions, kinetics, gases and kinetic theory, thermodynamics, kinetics, and equilibrium. Laboratory sessions provide bench experiences. Safety training and goggles are required for laboratory sessions. Lab fee: $19.00. Prerequisite: CHEM 171.

CHEM 173 General Chemistry III (A,W,SP,SU) 4-3-5
A continuation of CHEM 172. Topics include acid-base and solubility equilibria, electrochemistry, nuclear chemistry, the representative and transition elements, and qualitative analysis., Laboratory sessions provide bench experiences. Safety training and goggles are required for laboratory sessions. Lab fee: $19.00. Prerequisite: CHEM 172.

CHEM 251 Organic Chemistry I (A,W,SP,SU) **5-0-5**
The first course in a three-course sequence in organic chemistry. Structure, nomenclature, physical properties, bonding and reactions of alkanes, alkenes, and alkyl halides. Lab fee: $6.00. Prerequisite: CHEM 173.

CHEM 252 Organic Chemistry II (A,W,SP,SU) **5-0-5**
The second course in a three-course sequence in organic chemistry. This course includes the study of physical and chemical properties of aromatic compounds, alcohols, thiols, ethers, epoxides, sulfides, carbonyl compounds, carboxylic acids and their derivatives, and carbohydrates. Lab fee: $6.00. Prerequisite: CHEM 251.

CHEM 253 Organic Chemistry III (A,W,SP,SU) 5-0-5
The third course in a three-course sequence in organic chemistry. This course includes the study of spectroscopic methods, molecular orbital theory, polymers, the chemical and physical properties of amines, amino acids, proteins, lipids, and nucleic acids. Lab fee: $6.00. Prerequisite: CHEM 252.

CHEM 254 Organic Chemistry Laboratory I (A,W,SP,SU) **1-8-3**
The first course in a two-course sequence in organic chemistry laboratory. This course introduces the student to laboratory techniques of organic chemistry, including synthesis, isolation, purification, and identification of organic compounds. Lab fee: $39.00. Prerequisite or concurrent: CHEM 252.

CHEM 255 Organic Chemistry Laboratory II (A,W,SP,SU) **1-8-3**
The second course in a two-course sequence in organic chemistry laboratory. This course includes further study of organic laboratory techniques including synthesis, isolation, purification, and identification of organic compounds. Lab fee: $39.00. Prerequisites: CHEM 252 and CHEM 254.

CHEM 261 Introduction to Biochemistry (A,W,SP,SU) **5-0-5**
This is an introductory course in biochemistry dealing with the molecular basis of structure and metabolism of plants, animals, and microorganisms. Lab fee: $5.00. Prerequisites: CHEM 252 and two quarters of biological science.

CHEM 290 Capstone Experience in Chemistry (On Demand) 2-2-3
An integrated science course blending elements of chemistry, physics and biology. Topics include the historical development of the sciences, ethical issues in science and how they affect the advancement of scientific thought, and the scientific method as it relates to experimental design and interpretation of scientific results. The laboratory utilizes an investigative approach taking students through the process of identifying a research problem, conducting a literature review, writing a research proposal, collecting and analyzing data, writing a scientific paper and presenting results. Lab fee: $18.00. Prerequisites: 75 hours or more of course work completed with a minimum of 20 credit hours within the sciences. This course is required for all science majors seeking either the Associate of Arts or Associate of Science degree.

CHEM 293 Independent Study in Chemistry (On Demand) 1 - 5
Detailed examination of selected topics of interest in chemistry. Lab fee: $6.00. Prerequisite: permission of instructor of chemistry.

CHEM 299 Special Topics in Chemistry (On Demand) **1-5**
Detailed examination of selected topics of interest in chemistry. Lab fee: $6.00. Prerequisites: Permission of the instructor.

Civil Engineering Technology (CIVL)
Also see Surveying (SURV)

CIVL 112 MicroStation CAD Drafting I (A,W,SP) **1-5-3**
This course is to provide training in the use of basic display, drawing, manipulation, dimensioning, text, cell, reference tiles and plotting commands required to the elementary use of Bentley MicroStation. After mastering system basics, students will be given individual projects. Lab fee: $15.00. Prerequisite: ARCH 111 or permission of instructor.

CIVL 120 Basic Construction Materials (A,W,SP,SU) 2-3-3
A study of the properties, construction applications, standards, specifications and elementary material testing methods of soils, aggregates, asphalts, portland cement concrete, masonry, metals and woods. Laboratory exercises include basic common construction industry materials testing procedures and comparison of results to industry standards and specifications. Lab fee: $15.00. Prerequisite: MATH 102 or placement into a higher level mathematics course.

CIVL 121 Heavy Construction Materials (A,W,SP) 2-3-3
A comprehensive study and application of the material testing methods of soils, aggregates, asphalt and portland cement concrete required in the heavy construction industry. The laboratory exercises provide fundamental hands-on experience toward the American Concrete Institute (ACI) Grade 1 Concrete Field Technician. Lab fee: $15.00. Prerequisite: CIVL 120.

CIVL 221 Elementary Hydraulics (A,W) 2-3-3
A study of liquids at rest and in motion in enclosed conduits and open channels. The effects of static head, velocity, pressure and friction in enclosed piping systems are analyzed. Principles of pump systems, pump station design and detailing are emphasized. Fundamentals of open channel flow, quantification of rainfall runoff and culvert design are introduced. Lab fee: $12.00. Prerequisite: MATH 104 or MATH 112.

CIVL 223 Public Utility Systems (W,SU) 2-3-3
A study of the principles of public utility theory, planning, design and detailing. Emphasis is placed on applying current design standards and local and state regulations to the planning, design and plan preparation for sanitary collection systems, storm water management systems and water distribution systems. Detail plan preparation using CAD systems is also emphasized. Lab fee: $12.00. Prerequisites: CIVL 221 and CMGT 123.

CIVL 232 Statics & Strength of Materials (A,W,SU) 2-3-3
A study of the application of external loads on rigid bodies and analysis of the resulting forces and internal stresses in those bodies. The rigid bodies include beams, columns and truss systems. Topics covered include statics, shear, bending, properties of sections and stress and stain relationships. Lab fee: $12.00. Prerequisite: MATH 148.

CIVL 233 Structural Steel Systems (A,W) **1-5-3**
Design and drafting exercises of steel construction techniques and detailing using the steel construction handbooks, Structural layouts, details, schedules, ship drawing techniques, checking and coordination of steel structural elements with other parts of the building will be examined. Some computer materials testing lab exercises will be scheduled. Lab fee: $9.00. Prerequisites: CIVL 232 and CMGT 121.

CIVL 235 Structural Concrete Systems (W,SP) **1-5-3**
Design and drafting exercises of concrete construction techniques, and detailing using the concrete construction handbooks. Structural layout, details, schedules, shop drawing techniques, checking and coordination of concrete structural elements with other parts of the building will be examined. Some computer and materials testing lab exercises will be scheduled. Lab fee: $9.00. Prerequisites: CIVL 232 and CMGT 12 1.

CIVL 291 Field Co-Op Experience (SU) 0-40-4
Off-campus work experience in construction, consulting engineering or construction related paid employment, that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course. Lab fee: $15.00. Prerequisites: CMGT 290 or permission of instructor.

Communication Skills (COMM)
(Also see English, Technical Communication, and Theater)

COMM 105 Speech (A,W,SP,SU - DL) 3-0-3
Emphasis is placed on both verbal and nonverbal communication techniques in public speaking. Individual presentations, including at least three major speeches, are required. The fundamental principles of interpersonal communications and small group discussion are introduced. Audio and/or video taping of selected projects will occur. This course, or its equivalent, is required for all degrees. Lab fee: $3.00. Prerequisite: ENGL 101 or ENGL 111 or concurrent registration with ENGL 101 or ENGL 111.

COMM 110 Conference and Group Discussion (A,W,SP,SU) 3-0-3
Through role play, discussion, and participation, students will develop attitudes, skills, and knowledge of methods necessary to effectively participate in discussion at conferences, in committees, and in other small groups. This course is recommended as a substitute for COMM 105 in some technologies. Check with your academic advisor. Lab fee: $3.00. Prerequisite: ENGL 101 or ENGL 111 or concurrent registration with ENGL 101 or ENGL 111.

COMM 115 Oral Interpretation (A,W,SP,SU) 3-0-3
Students will read literature orally and listen critically. They will then practice techniques for presenting literature dramatically. The cultural and social functions of oral literature will be discussed. Emphasis will be placed on analyzing literary works, recognizing their emotional and dramatic values, and projecting those qualities through oral presentations. Writing assignments include response journals and short critical papers. This course is recommended as a substitute for COMM 105 for all Associate of Arts and Associate of Science students. Lab fee: $3.00. Prerequisite: ENGL 101 or ENGL 111 or concurrent registration with ENGL 101 or ENGL 111.

COMM 220 Introduction to Mass Communications (A) **5-0-5**
Students will become better consumers of news and other mass media through the study and discussion of the history, roles, and impact of mass media in American society. Principal ethical, policy, and legal questions confronting reporters and media are reviewed. Students are introduced to news writing, advertising, and public relations techniques. Lab fee: $3.00. Prerequisite: ENGL 102 or ENGL 111.

COMM 297-298-299 Special Topics in Communications (On Demand) **1-5**
Special topics from the communication skills area designed to meet specific needs. Prerequisites vary.

Computer Electronics Major
(See Electronic Engineering Technology)

Computer Programming Technology (CPT)

CPT 101 Computer Literacy I (A,W,SP,SU) 2-2-3
This is an introductory course designed to provide basic information about computer hardware, software, data communications, operating systems, popular application packages and ethical issues. Hands-on lab experience using the PC and a popular integrated software package is emphasized in the course. The software package introduces the student to business applications using a word processor (Word) and spreadsheet (Excel). Lab fee: $10.00. Prerequisites: DEV 030 and DEV 040, OADM 131 is recommended.

CPT 108 Program Design and Development (A,W,SP,SU) 2-3-3
Introduction to programming logic for business applications. No programming language is used. Students develop language-independent solutions to typical business applications involving the use of totals, minor and major control breaks, and a sequential update. Lab fee: $5.00. Prerequisites: CPT 101 and MATH 103. MCT 106 may be taken prior to or with CPT 108.

CPT 111 Assembly Language 1 (A,W,SP) 2-5-5
Introduction to programming in Assembly Language on an IBM mainframe. Students learn the basic principles of editing numeric data and packed decimal arithmetic. Programs are run on an IBM mainframe computer system using the DOS/VSE operating system. Lab fee: $40.00. Prerequisite: MATH 121. CPT 108 may be taken prior to or with CPT 111.

CPT 112 Assembly Language 2 (W,SP,SU) 2-8-5
A continuation of CPT 111. Emphasizes the use of binary arithmetic, table handling, sequential disk files, and the external sort. Programs are run on an IBM mainframe computer system using the DOS/VSE operating system. Lab fee: $40.00. Prerequisite: CPT 111

CPT 131 Operating Systems (SP,SU) 2-3-3
Selected topics of current interest will be presented, including a comparative discussion of operating systems, for micros (MS/PC-DOS and Windows), and mini (OS/400) mainframe (DOS/VSE, OS/MVS, and UNIX). The student will code several JCL lab exercises. Lab fee: $10.00. Prerequisite: CPT 111.

CPT 151 BASIC Business Language (On Demand) 2-3-3
Introduction to the BASIC programming language with business applications. Lab fee: $25.00. Prerequisite: CPT 111.

CPT 155 Visual Basic (A,W,SP,SU - DL) 2-8-5
Emphasizes the essential aspects of creating the graphical user interface of a Visual Basic Windows program. The student will also learn fundamental aspects of coding a Visual Basic program, along with more advanced topics such as manipulating MS Access databases, sequential and random-access file processing, error handling and data validation. Programs are run on IBM micro computers using the Windows operating system. Lab fee: $40.00. Prerequisite: CPT 111.

CPT 156 Advanced Visual Basic (A, W, SP, SU - DL) 2-8-5
A continuation of CPT 155. Emphasizes advanced topics in Visual Basic such as Database programming, including SQL and report writing, Active X controls and documents, and object-oriented programming. Lab fee: $40.00. Prerequisite: CPT 155.

CPT 201 COBOL 1 (A) 2-8-5
Introduction to the concepts and techniques of batch COBOL programming using structured programming techniques. Sequential access methods are stressed. An introduction to alternate mediums will be used. Lab fee: $40.00. Prerequisite: **CPT 112.**

CPT 202 COBOL 2 (W) **2-8-5**
A continuation of CPT 201. Sort procedures, random access through VSAM file structure and table handling are stressed. Alternate mediums will be used. Lab fee: $40.00. Prerequisite: CPT 201.

CPT 205 COBOL 3 (CICS) (SP) **2-8-5**
On-line programming using IBM's CICS system. Pseudo-conversational techniques will be used to solve a variety of business applications. Lab fee: $40.00. Prerequisite: CPT 202. CPT 205 may be taken prior to or with CPT 281.

CPT 206 Introduction to Object-Oriented COBOL (A,W,SP,SU) **2-8-5**
Introduction to OOCOBOL using classes and objects are discussed. Object Analysis and Object Design concepts are introduced for COBOL programming. Programs written are tunable on personal computers using and ANSI-standard COBOL-97 compiler. Lab fee: $40.00. Prerequisites: CPT 201.

CPT 211 Systems Analysis 1 (A) **3-2-4**
An introduction to the science of systems analysis and design to include explanation of systems flowcharting, documentation and decision support systems. Readings concerning selected topics of current interest in the field of systems analysis will be presented. Lab fee: $15.00. Prerequisite: CPT 111.

CPT 212 Systems Analysis 2 (W) **3-2-4**
A continuation of CPT 211. The student will learn to use system flowcharting techniques to design typical business systems. Additionally, the students will learn to apply the principles of systems analysis and design to manage and develop large data processing projects. Lab fee: $15.00. Prerequisite: CPT 211.

CPT 221 Database Programming (A,W,SP,SU) **2-3-3**
This course presents an overview of Database Management Systems (DBMS) programming techniques and systems. The student will write programs using ORACLE. Lab fee: $25.00. Prerequisite: CPT 111.

CPT 225 Database Systems (W,SU) **2-3-3**
An introduction to database systems in theory and application. Students will design and build a database on IBM personal computers using ORACLE. Lab fee: $25.00. Prerequisite: CPT 221.

CPT 241 Introduction to AS/400 (A,W,SP,SU) **2-3-3**
Survey of IBM AS/400 computer system operation and use of application development tools. Topics include: Program Development Manager (PDM), Source Entry Utility (SEU), Data File Utility (DFU), Query/400, and Screen Design Aid (SDA). Lab fee: $25.00. Prerequisite: MCT 106.

CPT 243 Command Language1400 (A,W,SP,SU) **2-3-3**
Introduction to Control Language Programming on the AS/400 will stress the skills required to effectively use Control Language in the operations of an AS/400. Topics include: basic CL programming, input/output in CL programs, and advanced tile techniques. Lab fee: $25.00. Prerequisites: CPT 108 and CPT 241.

CPT 244 AS/400 System Operations (A,SP) **2-3-3**
System Operations will be a continuation of CPT 241, Introduction to the AS/400, and will cover typical daily AS/400 operational duties as well as weekly and monthly tasks. Topics include: security, managing print functions, device configuration, backup, performance, and client access. Lab fee: $25.00. Prerequisite: CPT 241.

CPT 245 Beginning RPG (A,SP) **2-8-5**
Study of the fundamentals of Report Program Generator (RPG) programming language, particularly as it applies to an IBM AS/400 computer. Topics include: structured program design in both batch and interactive applications, file han-

dling, arithmetic operations, externally defined files, and table and array handling. Lab fee: $40.00. Prerequisites: CPT 243 and CPT 111.

CPT 246 Advanced RPG (W,SU) 2-8-5
A continuation of CPT 245. Advanced course in RPG programming using the IBM AS/400 computer. Topics include: structured RPG programming with interactive file processing (Subtiles), Command and System Application Program Interfaces (APIs), data structures, and other advanced topics. Lab fee: $40.00. Prerequisite: CPT 245.

CPT 248 RPG IV (W,SU) 2-8-5
A continuation of CPT 246, Advanced RPG. It will present the most suitable, modem techniques of RPG IV and ILE concepts. This is an advanced class concentrating on subtile applications on an AS/400. Lab fee: $40.00. Prerequisite: CPT 246.

CPT 251 Introduction to C++ Programming (A,W,SP,SU) 2-8-5
An introductory course in ANSI-Standard C++ Language Programming. Lab problems are are targeted towards writing programs with business applications. Computer lab projects will provide hands-on experience in developing programs with an ANSI-Standard C++ compiler environment. Lab fee: $40.00. Prerequisites: CPT 111 or CPT 155 or CPT 201 or CPT 245.

CPT 252 Advanced C++ Programming (A,W,SP,SU) 2-8-5
An advanced course in ANSI-Standard C++ Language programming. Lab problems are targeted towards writing programs that explore data structures using object-oriented techniques. Computer lab projects will provide further hands-on experience in developing programs with an ANSI-Standard C++ compiler environment including debugging techniques. Lab fee: $40.00. Prerequisite: CPT 251.

CPT 253 Programming in C++ for Windows (A,W,SP,SU - DL) 2-8-5
The Windows graphical user interface and creation of related C++ programming projects are built and tested. Students experience first hand coding and use of C++ to drive the Windows Application Interface (API). Programs are tunable on personal computers using the Windows operating system and an installed ANSI-Standard C++ compiler for Windows development. Lab fee: $40.00. Prerequisites: CPT 155 and CPT 252.

CPT 261 Network Communication Systems (A,W,SP,SU) **5-0-5**
Students will learn the fundamentals of data communication and computer networks. To include basic communication theory as applied to both digital and analog communication networks, Also students will learn the basics of the OSI layered network model and characteristics of the wide area, and local area data communication networks. Prerequisite: MCT 221.

CPT 262 Client Server Systems (A,W,SP,SU) 2-3-3
Students will learn the basic information about client/server computing and the operation of Local Area Networks (LAN). Students will create users, establish network security, share printers, and other network resources in a single server environment. Lab fee: $25.00. Prerequisite: MCT 221.

CPT 263 Networking (A,W,SP,SU) 2-8-5
A continuation of CPT 262. Students will learn advanced local area network concepts and how they can be applied to support enterprise wide information management of a large organization. Student will learn to install and use a popular LAN operating system. Lab fee: $40.00. Prerequisite: MCT 221.

CPT 264 Advanced Networking (A,W,SP,SU) 2-8-5
A continuation of CPT 263. Students will learn to use Microsoft Windows NT software to support small and enterprise wide information management systems. Students will complete a series of laboratory assignments using Windows NT software Lab fee: $40.00. Prerequisite: CPT 263.

CPT 265 Distributed Database Management Systems (A,W,SP,SU) **2-8-5**
Students will learn the characteristics and types of distributed DBMS currently available for use on distributed data networks, Additionally, students will learn to design and create an enterprise wide database (ORACLE) that will be maintained on a distributive network system in a laboratory environment. Lab fee: $40.00. Prerequisite: CPT 264.

CPT 266 Certification Test Review (A,W,SP,SU) **0-3-1**
Students will review the material necessary to become certified with a popular network operating systems software. Students will complete a series of practical exercises designed to enhance their ability to successfully complete a popular vendor certification program. Lab fee: $15.00. Prerequisite: CPT 264.

CPT 281 Final Project (SP,SU) 2-8-5
This is the capstone course for the Computer Programming Technology. Students will work in small groups to design, choose appropriate medium and program a typical business system. Lab fee: $40.00. Prerequisite: CPT 202 and CPT 212. CPT 205 may be taken prior to or with CPT 28 1.

CPT 289 ACP Examination (A,W,SP,SU) **0-3-1**
Students will review topics covered in all previous technical courses. Students will be eligible to take general and COBOL areas of the Associate Computer Professional (ACP) examination administered by the Institute for the Certification of Computer Professionals (ICCP). All students in Computer Programming Technology will take CPT 289 during their graduating quarter. Lab fee: $20.00.

CPT 291 Special Topics in CS 1 (On Demand) **1-5**

CPT 292 Special Topics in CS 2 (On Demand) **1-5**

CPT 293 Special Topics in CS 3 (On Demand) **1-5**

CPT 294 Special Topics in CS 4 (On Demand) **1-5**

CPT 295 Special Topics in CS 5 (On Demand) **1-5**

CPT 296 Special Topics in CS 6 (On Demand) **1-5**
Special topics in CS is a series of courses specifically designed to meet the needs of the constantly changing business community and student population. Courses will be designed with the advice of the particular group requesting the course and approval of the department chairperson. Lab fee: $30.00.

CPT 297 Computer Science Internship/Field Experience 1 (On Demand) **0-12-1**
The student works 12 hours per week in an activity which relates to the students' occupational objective. The on-the-job experience is coordinated by a faculty member who aids in the students' growth and development.

CPT 298 Computer Science Internship/Field Experience 2 (On Demand) 0-24-2
The student works 24 hours per week in an activity which relates to the students' occupational objective. The on-the-job experience is coordinated by a faculty member who aids in the students' growth and development.

CPT 299 Computer Science Internship/Field Experience 3 (On Demand) 0-36-3
The student works 36 hours per week in an activity which relates to the students' occupational objective. The on-the-job experience is coordinated by a faculty member who aids in the students' growth and development.

Construction Management (CMGT)

CMGT 101 Managing a Construction Company (A,W,SP) 2-3-3
An overview of the operations of a construction firm with a simulation of the management process by student teams demonstrating skills and competencies required. Lab fee: $2.00.

CMGT 105 Construction Contract Documents (A,W,SP,SU) 2-3-3
Intensive study of all documents related to a project with emphasis on the important legal aspects of each, and the role of the contractor in the final project. Lab fee: $4.00.

CMGT 106 Supervision of Field Operations (W,SP) 2-3-3
An overview of the principles of field supervision which includes leadership skill, problem solving, motivation techniques, problem solving processes, communication methods and useful supervisory aids for construction projects. Lab fee: $4.00.

CMGT 115 Building Construction Methods (A,W,SP,SU) 2-3-3
A study of the methods used in work-site preparation, materials handling systems, assembly of construction materials and systems as related to building projects such as offices, schools, stores, industrial buildings and hospitals, along with the strategies employed to control and coordinate these activities. Lab fee: $3.00.

CMGT 121 Building Construction Drawings (A,W,SP,SU) 2-3-3
Reading and interpretation of construction drawings and project manuals as related to residential, commercial, and industrial construction projects. Interpretation of the relationship between plans, elevations, sections, details, and the coordination of these drawings with materials specifications. The use of basic construction math will be explained along with the interpretation of construction terms and symbols. The Dodge SCAN microfilm readers and Sweets catalogues will be used in this course. Lab fee: $9.00. Prerequisite: MATH 103 or higher.

CMGT 123 Heavy Construction Drawings (A,W,SP) 2-3-3
Reading and interpretation of construction drawings as related to highway and public works construction projects. Interpretation of the relationships of plans, elevations, sections and details, and the coordination with published specifications. A basic method of material quantity take-off will be explained. Lab fee: $5.00.

CMGT 125 Heavy Construction Methods (A,W) 2-3-3
A study of methods used to build horizontal projects. such as highways, dams, airports. bridges and utility lines. The various pieces of equipment and materials used in these type projects will be explained as well as the processes used. Lab fee: $5.00.

CMGT 131 Construction Quantity Survey (A,W,SP,SU) **1-4-3**
Development of the use of construction math relative to linear, square and cubic measures of common construction materials. The computation and organization of basic material quantities used in a typical building construction project including the site preparation. Lab fee: $9.00. Prerequisite: CMGT 121, Concurrent: MATH 104.

CMGT 135 Safety and Loss Prevention (SP) 2-3-3
Identification of work hazards and unsafe practices, safety codes and standards, safety programs and training with the role of O.S.H.A. and insurance companies in safety programs. Basis first Aid and CPR are included. How to develop theft reduction programs with the cooperation of local law enforcement departments and insurance companies will also be studied. Lab fee: $7.00.

CMGT 141 Building Estimating (W,SP,SU) 2-3-3
Development of topics such as material price extensions, equipment requirements, labor requirements. and time requirements as related to building construction projects. Involving the take-off procedure used. Lab fee: $9.00. Prerequisites: CMGT 131 and CMGT 115.

CMGT 231 Computer Estimating (A) 2-3-3
A continuation of the study for the skills required to "take-off' the amount of materials from a set of construction plans in an orderly manner. The course will develop the general background information for the process of bidding a construction project utilizing computer software and discussing the most current software applications. Lab fee: $20.00. Prerequisites: CMGT 141, CMGT 131 and MATH 104.

CMGT 241 Planning and Scheduling (SU,A) 2-3-3
A study of project control and coordination through systematic planning and scheduling. including operational adjustments for resource changes and alterations. Computer computation of critical path methods and analysis. Lab fee: $10.00. Prerequisite: CMGT or CMGT 131.

CMGT 243 Construction Labor Law (A) 2-3-3
Investigation of the legal areas of labor contracts. project contracts, NLRB regulations, insurance requirements, fringe benefit collection, dispute resolution, arbitration and litigation as related to construction labor disputes. Lab fee: $3.00.

CMGT 248 Heavy Construction Estimating (A,SU) **1-3-2**
A comprehensive study of the topics associated with and unique to heavy/highway construction estimating. The major focus of the course will involve determining the cost factors of the equipment intensive operations associated with heavy/highway construction. The secondary focus will be relating the equipment selection and cost factors to the labor requirements, materials price extensions. and time requirements as utilized in the model crew method of estimating. Lab fee: $9.00. Prerequisites: CMGT 125, CMGT 123 and CMGT 131.

CMGT 251 Construction Cost Controls (A,W) 2-3-3
Methods and techniques of cost analysis used to develop skills in controlling construction computer computation of costs. budgets, and related critical path analysis and adjustment, operating costs and cost forecasting of completed production. Lab fee: $10.00. Prerequisites: CMGT 141 or CMGT 248 and CMGT 241.

CMGT 252 Construction Contract Law (W) 2-3-3
Analysis of the special conditions of construction law as applied to contractual on-site conditions, document usage. negotiations of disputes, change orders and master contracts. Lab fee: $1.00. Prerequisite: CMGT 105.

CMGT 253 Residential Construction (A,SU) 2-3-3
The basic construction of a single family residence from the ground up, emphasiring construction methods, equipment used, structural design theory, materials and terminology. Lab fee: $2.00.

CMGT 261 Project Management (W,SP) 2-3-3
Tracking a project through a construction firm which includes job start, control assignments, control structures, organization, and move-out phases of the construction project. Computer simulation of project activities and management processes. Lab fee: $10.00. Prerequisite: CMGT 251.

CMGT 263 Marketing Construction Services (SP) 2-3-3
Application of data analysis principles to the area of finding business projects. Contract negotiation, financial and contract packaging, along with the study of techniques of written and oral communications will be developed to include recording onsite activities to prospective clients. Lab fee: $5.00.

CMGT 290 Work Experience Seminar (SP) **1-0-1**
This class will prepare the student to work as a co-op student in a construction related position. Resumes, interviews, and job preparation will be discussed. The student taking this class should have been a student in one of the construction engineering technology programs for at least two previous quarters.

CMGT 291 Construction Work Experience (SU) 0-40-4
Off-campus work experience in construction, consulting engineering or construction related paid employment, that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course. Lab fee: $15.00. Prerequisites: CMGT 290 or permission of instructor,

Corrections Major
(See Law Enforcement)

Dance (DANC)

All studio classes are held at Ballet Met, 322 Mt. Vernon Ave.

DANC 101 Classical Ballet I (On Demand) 0-6-2
Classical ballet at the beginning level. Fundamentals of classical ballet technique, coordination, strength and flexibility with an emphasis on proper execution and comprehension. Lab fee: $8.00.

DANC 102 Classical Ballet II (On Demand) 0-6-2
A continuation of Classical Ballet I, following through on the development of basic skills and their incorporation into combinations of movements. Lab fee: $8.00. Prerequisite: 6 hours of Ballet I or permission of instructor.

DANC 106 Classical Ballet VI (On Demand) 0-9-3
Professional level training offered to serious dance students, with extensive aptitude and abilities wishing to pursue a serious career in Ballet. Emphasis is 'on high level of technical proficiency combined with artistic interpretation and personal discipline. Lab fee: $8.00. Prerequisite: By audition only.

DANC 107 Ballet Repertoire VI (On Demand) 0-6-2
The opportunity to learn works from the classical dance repertoire and to participate in BalletMet company rehearsals and performances. Emphasis on professional standards of performance and work habits. Lab fee: $8.00. Prerequisite: Acceptance into DANC 106.

DANC 111 Modern Dance I (On Demand) 0-6-2
Introductory level training in modem dance. Emphasis on fundamental movement principals of modem dance including the release of weight in and out of the flow, mobility of the back and three dimensional usage of the spine, while frequently moving off the vertical plan. Lab fee: $8.00.

DANC 112 Modern Dance II (On Demand) 0-6-2
A continuation of Modem Dance I integrating the use of more complex concepts and rhythms. Lab fee: $8.00. Prerequisite: 6 hours of Modem Dance I or permission of instructor.

DANC 121 Jazz/Tap I (On Demand) 0-6-2
Jazz and tap techniques at the beginning level. Jazz dance combines classic Broadway theatre dance with contemporary movement styles. Elementary body part isolations, introduction to basic movement elements and basic combinations. Tap classes emphasize precession in sound, rhythm, movement, gesture and expression. Lab fee: $8.00.

DANC 122 Jazz/Tap II (On Demand) 0-6-2
Fundamentals of jazz and tap developed to include more complex movement combinations and interpretations. Emphasis on quick and efficient learning skills. Lab fee: $8.00. Prerequisite: 6 hours of Theatre Dance I or permission of instructor.

DANC 201 Fundamentals of Music and Dance (On Demand) 2-0-2
Exploration of the relationship of music and dance. The elements of music reinforced from a dance perspective and the elements of dance examined within the context of music theory. Lab fee: $8.00.

DANC 210 History of Dance (On Demand) 3-0-3
An appreciation of dance as it exists today through the understanding of the historical developments both within dance and the world. How dance sometimes mirrors the concerns or fashions of the time and its place in the world today. Lab fee: $8.00.

DANC 254 African Dance History (On Demand) 3-0-3
An overview of the evolution and significance of African dance from its roots to the influences exerted on other dance forms of today. Lab fee: $8.00.

DANC 299 Special Topics in Dance (On Demand) **1-5**
Examination of types and styles of dance other than those regularly offered. Lab fee: $8.00.

Dental Hygiene (DHY)

DHY 110 Introduction to Dental Hygiene (A) 3-0-3
This three hour course is designed to acquaint the dental hygiene student with the role of the dental hygienist and provide background knowledge, information and the necessary foundation required for subsequent didactic and clinical dental hygiene course work. Prerequisite: Admission to Dental Hygiene program. Concurrents: DHY 140 and DHY 141.

DHY 111 Dental Hygiene Techniques Seminar I (W) 2-0-2
This one credit course is designed to provide the student with knowledge of the basic principles of instrumentation, instrument design and fundamental skills necessary to perform in subsequent clinical dental hygiene courses. Prerequisites: Admission to Dental Hygiene program and DHY 110. Concurrent: DHY 120.

DHY 112 Dental Hygiene Techniques Seminar II (SP) **1-0-1**
This one hour lecture course is designed to expand the student's knowledge of dental hygiene practice including ultrasonic instrumentation, instrument sharpening, treatment planning, dental charting and care of the special needs patient. Prerequisites: Admission to Dental Hygiene program and DHY 111. Concurrent: DHY 121.

DHY 120 Dental Hygiene Clinic I (Pre-Clinical) (W) **0-12-4**
This four credit hour clinical course is designed to apply the basic principles of instrumentation, instrument design, instrument utilization, and fundamental clinical dental hygiene skills. The method of evaluation is competency-based and guided by mastery of skills. Lab fee: $200.00. Prerequisites: Admission to Dental Hygiene program and DHY 110, DHY 140 and DHY 141. Concurrents: DHY 111, DHY 130 and DHY 131.

DHY 121 Dental Hygiene Clinic II (SP) **0-12-4**
This twelve hour clinical course continues the clinical experience of total patient care emphasizing instrumentation skills, radiographic techniques, patient education charting and treatment planning. Lab fee: $200.00. Prerequisites: Admission to Dental Hygiene program and DHY 120, DHY 130, DHY 131 and DHY 111. Concurrent: DHY 112.

DHY 130 Dental Radiography (W) 3-0-3
This three hour lecture course provides the fundamental theory for safe and effective use of x-radiation as it relates to dentistry. It encompasses: history, production and uses of radiation; film exposure; operation techniques for exposure; and radiographic interpretation. Prerequisites: Admission to the Dental Hygiene program and DHY 140, DHY 141 and DHY 110. Concurrent: DHY 13 1, DHY 111 and DHY 120.

DHY 131 Dental Radiography Laboratory (W) 0-3-1
This one credit laboratory course places emphasis on proficiency in exposing and developing diagnostically acceptable dental radiographs. The course provides experience in the use of x-ray equipment, exposure projections and techniques, processing, mounting and evaluation of radiographs. Lab fee: $75.00. Prerequisites: Admission to Dental Hygiene program and DHY 141, DHY 110 and DHY 140. Concurrent: DHY 130.

DHY 140 Head and Neck Anatomy/Tooth Morphology (A) 3-0-3
This three hour course includes the study of skeletal, muscular, circulatory, nervous and glandular structures of the head, neck and oral cavity. The study of anatomy and morphology of the head and soft tissues of the oral cavity will also be included in this course. Lab fee: $3.00. Prerequisite: Admission to Dental Hygiene program. Concurrents: DHY 110 and DHY 141.

DHY 141 Head and Neck Anatomy, Tooth Morphology Lab (A) 0-3-1
This one credit course involves the identification and reproduction of teeth and orofacial structures, morphology of hard and soft tissues of the oral cavity and head and neck with special emphasis on clinical application. Lab fee: $30.00. Prerequisite: Admission to Dental Hygiene program. Concurrents: DHY 140 and DHY 141.

DHY 210 Dental Hygiene Techniques Seminar III (SU) **1-0-1**
This one hour lecture course is designed to introduce the foundational theories and clinical techniques of root planing, gingival curettage and pit and fissure sealants. In addition, instruction will be provided on the practical aspects of nutritional need of the dental patient and nutritional counseling. Prerequisites: Admission to Dental Hygiene program and DHY 112 and DHY 241. Concurrents: DHY 250, DHY 260 and DHY 220.

DHY 211 Dental Hygiene Techniques Seminar IV (A) **1-0-1**
This one hour lecture course is designed to provide knowledge and understanding regarding dental hygiene care and management for patients with special needs, including but not limited to, pediatrics, geriatrics and the handicapped. Prerequisites: Admission to Dental Hygiene program and DHY 210, DHY 220 and DHY 260. Concurrents: DHY 270 and DHY 221.

DHY 212 Dental Hygiene Techniques V (W) **1-0-1**
This one hour course is designed to provide the student with the fundamental knowledge and theory to perform expanded function duties of the dental hygienist. Prerequisites: Admission to Dental Hygiene program and DHY 211, DHY 22 1 and DHY 270. Concurrents: DHY 222 and DHY 280.

DHY 213 Dental Hygiene Techniques Seminar VI (SP) 2-0-2
This two hour lecture course is designed to provide the student with knowledge of professional ethics, legal responsibilities of the dental hygienist, and the role oforganized dental hygiene. In addition, office management skills, alternate practice settings and securing employment will be emphasized. Prerequisites: Admission Dental Hygiene program and DHY 212. DHY 222 and DHY 280. Concurrents: DHY 223 and DHY 281.

DHY 220 Dental Hygiene Clinic III (SU) **0-12-4**
This twelve hour clinical course continues clinical experience of total patient care, instrumentation skills, radiographic techniques, patient education, assessment and treatment planning. In addition, new treatment modes will include: sealant placement, impression making, nutritional counseling and the introduction to ultrasonic scaling, root planing and curettage. Lab fee: $200.00. Prerequisites: Admission to the Dental Hygiene program and DHY 112, DHY 121, DHY 240 and DHY 24 1. Concurrents: DHY 250, DHY 260 and DHY 210.

DHY 221 Dental Hygiene Clinic IV (A) **0-12-4**
This twelve hour clinic course builds upon previous clinical course work involving dental hygiene total patient care. The course will expand student knowledge in instrumentation skills, radiographic techniques, patient education assessment and treatment planning, sealant placement, impression making, nutritional counseling and periodontal therapies. Lab fee: $200.00. Prerequisites: Admission to Dental Hygiene and DHY 250, DHY 260, DHY 210 and DHY 220. Concurrents: DHY 211 and DHY 270.

DHY 222 Dental Hygiene Clinic V (W) **0-12-4**
This twelve hour clinic course will provide ongoing experience in total patient care. Treatment parameters from previous clinic course work will be increased to include expanded function duties as well as intraoral imaging. Lab fee: $200.00. Prerequisites: Admission to Dental Hygiene program and DHY 2 11, DHY 221 and DHY 270. Concurrents: DHY 2 12 and DHY 280.

DHY 223 Dental Hygiene Clinic VI (SP) **0-15-5**
This fifteen hour clinical course is the final course in the clinical dental hygiene sequence. It is designed to enable the student to incorporate all the techniques and treatment modalities previously acquired involving total patient care. Emphasis will be placed on refinement of treatment, speed and professional decision making. Lab fee: $200.00 Prerequisites: DHY 222 and DHY 212. Concurrents: DHY 281 and DHY 213.

DHY 240 Dental Materials (SP) 2-0-2
This two-hour course is designed to study the chemical, physical and biological properties of materials used in dentistry. Emphasis will be placed on the manipulation and utilization of materials that have application to the dental hygienist. Prerequisites 111, 120, Concurrent: DHY 241, 112 and 121

DHY 241 Dental Materials Laboratory (SP) **0-3-1**
This three hour laboratory course places emphasis on the manipulative techniques and practical application of various materials used in the practice of dentistry. Lab fee: $150.00 Prerequisites: Admission to Dental Hygiene program and DHY 130, DHY 131, DHY 111 and DHY 120. Concurrents: DHY 240, DHY 112 and DHY 121.

DHY 250 Oral Histology and Pathology (SU) **4-0-4**
This three credit hour course involves the study of tissues comprising the oral cavity along with the embryonic development of these tissue and facial structures. In addition, general and oral pathology will be covered with emphasis placed upon the recognition of normal and abnormal conditions. Prerequisites: Admission to Dental Hygiene program and DHY 240, DHY 241, DHY 112 and DHY 121. Concurrents: DHY 260, DHY 210 and DHY 220.

DHY 260 Periodontology (SU) **3-0-3**
This three hour lecture course is designed to place emphasis on the etiology, assessment, evaluation, classification, treatment and maintenance of the periodontally involved dental patient. Prerequisites: Admission to Dental Hygiene program and DHY 240, DHY 241, DHY 112 and DHY 121. Concurrents: DHY 210, DHY 220 and DHY 250.

DHY 270 Dental Pharmacology (A) **2-0-2**
This three hour course is a survey of drugs commonly encountered in the dental office. Emphasis is given to drugs and drug actions, which can affect dental treatment. Prerequisites: Admission to Dental Hygiene program and DHY 260, DHY 210, DHY 220 and DHY 250. Concurrents: DHY 211 and DHY 221.

DHY 280 Community Dental Health (W) **3-0-3**
This three hour lecture course is an introduction to the study of the philosophy, techniques, attitudes and behaviors necessary to promote dental disease prevention through organized community-based programs. The student will be responsible for assessing, planning, implementing and evaluating community oral health programs. Prerequisites: Admission to Dental Hygiene program and DHY 211, DHY 221 and DHY 270. Concurrents: DHY 212 and DHY 222.

DHY 281 Community Dental Health External Projects (SP) **0-2-1**
This two hour course provides the student with the opportunity to apply the principles of public and community dental health in a practical setting. Projects that include implementation and evaluation will be included. Lab fee: $20.00. Prerequisite: DHY 22 1. Concurrents: DHY 23 1 and DHY 223

Dental Laboratory Technology (DENT)

DENT 101 Materials I (A) **3-0-3**
This course involves a comprehensive study of the chemical and physical properties of materials used by the dental technician. Prerequisite: Acceptance into program.

DENT 102 Materials II (A) **2-0-2**
This course is a continuation of the study of materials introduced in DENT 101. Prerequisite: Acceptance into program.

DENT 111 Anatomy (A) **2-3-3**
This course provides the student with an introduction to the masticatory system. The student will be exposed to the significant structures and landmarks of the oral cavity, with extensive study of the permanent dentition. Prerequisite: Acceptance into program.

DENT 121 Complete Dentures I (A) **1-6-3**
This course involves an introduction to complete dentures and includes a study of the procedures from preliminary impressions through wax contouring, with special emphasis upon artificial tooth arrangement. Lab fee: $65.00. Prerequisite: Acceptance into program.

DENT 122 Complete Dentures II (W) **1-3-2**
This course is a continuation of the study of complete dentures and includes procedural material from flasking through patient remount and occlusal adjustments. Lab Fee: $65.00. Prerequisite: DENT 121.

DENT 123 Complete Dentures III (SP) **1-6-3**
This course involves a study of procedures required to solve specific postinsertion problems, e.g. repair, rebase, and reline. In addition, the student is introduced to the immediate denture technique. Lab fee: $65.00. Prerequisite: DENT 122.

DENT 132 Occlusion (W) **1-6-3**
This course will entail a study of occlusal morphology, the tempromandibular joint and mandibular movements. Prerequisite: DENT 111.

DENT 142 Removable Partial Dentures I (W) **1-6-3**
This course is a basic study of removable partial dentures, and presents principles such as survey, design, and fabrication. Prerequisite: DENT 121.

DENT 143 Removable Partial Dentures II (SP) **1-3-2**
This course will involve an intensification of the study of survey, design and fabrication of removable partial dentures. Prerequisite: DENT 142.

DENT 153 Fixed Partial Dentures I (SP) **1-6-3**
This course will introduce the student to the fixed appliance. The content will be limited to the single unit crown. Prerequisite: DENT 132.

DENT 224 Complete Dentures IV (SU) **1-3-2**
In this course, the student will fabricate an overdenture and will concentrate upon characterization of complete dentures. Lab fee: $65.00. Prerequisite: DENT 123.

DENT 244 Removable Partial Dentures III (SU) **1-6-3**
During this course, the student will apply acquired knowledge and skills by fabrication of removable partial dentures. The didactic portion will encompass the specialized designs such as stressbreakers, precision attachments and the RPI technique. Prerequisite: DENT 143.

DENT 254 Fixed Partial Dentures II (SU) **1-6-3**
This course is designed to extend the students' experiences in construction of fixed appliances and will contain material related to veneers. Prerequisite: DENT 153.

DENT 255 Fixed Partial Dentures III (A) **2-6-4**
This course will extend the students' experiences in crown and bridge construction by introducing soldering and multiple unit appliances. The unit will also cover temporary appliances and alternate model construction methods. Lab fee: $65.00. Prerequisite: DENT 254

DENT 256 Fixed Partial Dentures IV (W) **1-6-3**
This course will involve a study of crown and bridge cases not covered previously as well as the use of attachments. The student will construct multiple unit appliances and construct one piece castings. Lab fee: $65.00. Prerequisite: DENT 255.

DENT 264 History and Ethics (SU) **2-0-2**
This course deals with the history of dental technology and its effect upon dentistry In addition, the course will explore current problems and situations a dental technician must cope with. Prerequisite: DENT 123.

DENT 275 Ceramics I (A) **2-6-4**
This course is an introduction to dental ceramics and will involve a study of porcelain fused to metal restorations. The students will construct porcelain veneers and full coverage single unit crowns. Prerequisite: DENT 254.

DENT 276 Ceramics II (W) **1-6-3**
This unit will entail a continuation of the study of the porcelain fused to metal restoration. It will also include the study of the Maryland bridge and the porcelain jacket crown and other multiple unit appliances. Prerequisite: DENT 275.

DENT 285 Orthodontics (A) **1-3-2**
This course will entail a basic introduction to the laboratory skills necessary to provide services in the areas of orthodontics.

DENT 296 Applied Laboratory I (W) **1-6-3**
This course consists of laboratory and is intended to simulate a working laboratory The student will fabricate fixed and removable appliances. Prerequisites: DENT 224 and DENT 255.

DENT 297 Applied Laboratory II (SP) **1-18-7**
This course consists entirely of laboratory and is intended to stimulate a working laboratory situation with regard to work schedules, case flow, and coping with real problems. Lab fee: $75.00. Prerequisite: DENT 296.

Developmental Education Department (DEV)

DEV 006 Basic Grammar Skills (A,W,SP,SU) **2-0-2**
This course covers grammar skills including the correct use of verb tenses and forms; simple, compound, and complex sentences; fragments, run-ons, and comma splices. Lab fee: $2.00.

DEV 007 Basic Punctuation Skills (A,W,SP,SU) **2-0-2**
This course covers punctuation skills including the-correct use of commas, semicolons, quotation marks, apostrophes, and other marks. Lab fee: $2.00.

DEV 015 Spelling and Vocabulary (A,W,SP,SU) **3-0-3**
This course is designed to improve vocabulary and spelling skills through the use of memorization, phonics, the application of rules, and personal word lists. Lab fee: $2.00

DEV 028 Algebra Foundations (A,W,SP,SU) **3-0-3**
This course is designed for students who need special assistance in order to reenter DEV 031, Pre-Algebra. The course is structured to develop students' critical thinking and problem solving in relation to basic algebra concepts. Methods of instruction will include collaborative activities, manipulatives, lecture, and writing activities involving simplifying expressions, solving equations, word problems, and signed number operations. The course is not open to students with credit for DEV 031 or MATH 102.

DEV 029 Math Foundations (A,W,SP,SU) 3-0-3
This course is designed for students who need special assistance with basic math in order to re-enter DEV 030, Basic Mathematics. This course includes whole number operations, problem-solving strategies, estimation and number sense, Order of Operations, math study skills, and an introduction to fractions and geometry. DEV 029 is taught through lectures, group activities, tutorial exercises, and small group instruction. This course is not open to students with credit for DEV 030 or higher.

DEV 030 Basic Mathematics (A,W,SP,SU) **5-0-5**
Basic Mathematics offers a review of arithmetic concepts including whole numbers, fractions, decimals, percents, proportions, formulas, data interpretation, and basic geometry. The course is structured to develop students' critical thinking, problem solving, math and study skills through collaborative activities, writing assignments, real-life applications and the use of modem technology in the classroom. Traditional and computer-mediated sections available. This mastery learning course is not open to students with credit for DEV 031, MATH 101 or MATH 102. Lab fee: $6.00 for traditional; $65.00 for computer-mediated (includes software and textbooks.).

DEV 031 Pre-Algebra (A,W,SP,SU) 5-0-5
Pre-Algebra is designed for students who have no experience with algebra and for those who need to strengthen their abilities to work with algebraic mathematics. Topics in DEV 031 will include simplifying algebraic expressions, solving equations, working with exponents, formulas, signed number operations, polynomial operations and application problems. This course will help to develop students' algebra and studying skills and help them to perform successfully in MATH 101, MATH 102, and in the workplace. Traditional, mastery, and computer-mediated sections available. This course is not open to students with credit for MATH 101 or MATH 102. Lab fee: $6.00 for traditional and mastery; $65.00 for computer-mediated (includes software and textbooks). Prerequisite: By placement or minimum of "C" or above in DEV 030.

DEV 040 Reading Improvement (A,W,SP,SU) 4-2-5
This course focuses on developing students' basic reading skills. Students will practice strategies for improving reading rate and comprehension. Critical reading skills will be introduced through reading and responding to essays, keeping a journal and vocabulary notebook, and doing workbook activities. This course is not open to students with credit for DEV 044. Lab fee: $4.00.

DEV 041 Basic Communication Shills (A,W,SP,SU) 4-2-5
This course combines elements of the writing process with the basic principles of writing clear, coherent, and well-developed paragraphs. Students will review rules of grammar usage and punctuation. Critical thinking skills will be developed through reading, class discussion, and journal writing. This course is open to students who place by writing test or placement score into DEV 041. It is not open to students with credit for any of the ENGL 100 series. Lab fee: $5.00.

DEV 042 Principles of Writing (A,W,SP,SU) 5-0-5
In this writing-intensive course, students will build on the composing, revising and editing strategies introduced in DEV 041. Through a review of individual DEV 041 writing portfolios, students' needs will be determined and instruction will address these needs. Students in this course will develop critical thinking skills through analyses of student and professional writings and through journal response to reading assignments. Prerequisite: DEV 041 and permission of instructor. Lab fee: $5.00.

DEV 044 Critical Reading and Thinking (A,W,SP,SU) 3-0-3
Critical Reading and Thinking is designed to help students develop higher-order reading skills that will help them become more effective and efficient readers. In this course, students will expand basic reading and critical thinking skills. A variety of reading disciplines will be used for discussion, reading and writing assignments, and projects that will allow students to critique their self-knowledge and evaluate ideas. The course is open to all Columbus State students. Lab fee: $2.00. Prerequisite: DEV 040 or by placement.

DEV 050 Career Life Planning (A,W,SP,SU) 3-0-3
Career and Life Planning is designed to help students identify and examine their abilities, interests, values, and personality relative to educational and career choices. Upon completion of this course, a student will be able to develop a plan of action for gaining employment and/or pursuing a field of study that meets his or her personal needs. Lab fee: $11.00.

DEV 090 College Success Shills (A,W,SP,SU) 2-0-2
College Success provides students with skills necessary to be successful in their personal, academic, and career-related pursuits. The course focuses on an orientation to the College, study skills, note-taking, test-taking, and time management. This course is required of students who place in two Developmental Education courses. Lab fee: $6.00.

Dietary Manager Certificate (DMGR)

Dietetic Technician Major (DIET)
(See Hospitality Management)

EDP Auditing Major
(See Accounting)

EMT-Paramedic Degree Track
(See Multi-Competency Health)

Early Childhood Development (ECD)

ECD 103 Cognitive Curriculum (W,SP) 3-0-3
Theoretical foundations for the child's cognitive development. Techniques for promoting concept development as well as focus on science, math and readiness skills in both indoor and outdoor program. Emphasis on planning activities which encourage questioning, probing, and problem-solving skills appropriate to individual developmental level and learning style. Also includes effects and use of T.V., and computer software in settings for young children. Lab fee: $12.00. Prerequisites: PSY 261, ECD 105, ECD 107, and ECD 203.

ECD 105 Self-Concept (A,W,SP,SU) 3-0-3
Focuses on individualizing an early childhood program to meet the needs of children in a manner which develops a positive self-image and individual strength. Explores impact of teacher's self-image, values and attitudes on preschool classroom. Includes dimensions of self, antecedents of self-concept, relationship of feelings to self-concept, and teaching to foster self-esteem. Examines normative stressors in lives of children and offers suggestions that teachers/families might use to cope in given situations. Lab fee: $12.00. Prerequisite: Placement into ENGL 101.

ECD 106 Observing and Recording (A, WI, SP, SU) **1-0-1**
This course focuses on appropriate methods of observing young children in group settings. Objective methods for recording children's behavior will be included. Strategies for observing while filling the role of teacher will be addressed. Prerequisite: ENGL 101 and ECD 105. (May be taken concurrently with ECD 105).

ECD 107 Curriculum Planning (A,W,SP,SU) 3-0-3
Focuses on strategies to facilitate classroom management. Emphasizes developing goals and objectives as basis for classroom activities. Includes preschool curriculum planning and developmentally appropriate practice. Deals with the organization of time and space as it impacts on group child care Lab fee: $12.00. Prerequisite or Concurrent: ECD 105.

ECD 109 Language Experiences in Early Childhood Programs (W,SU) 3-0-3
Theories and sequence of speech/language development, differentiating between normal and atypical language comprise this course. Focus is on teacher as facilitator of communication skill development; planning and implementing language arts activities; selecting and using literature to enhance language development, providing emotional support and stimulating interest in books. Includes reading readiness in terms of the play curriculum. Lab fee: $12.00. Prerequisites: ECD 105, ECD 107, ECD 203, and PSY 261.

ECD 110 Infant - Toddler Curriculum (A,SP) 3-0-3
Presents an overview of caregiving for infants and toddlers. Emphasizes programming for infants and toddlers across curriculum areas through appropriate experiences, the design of supportive environment, the use of various methods of developmental stimulation, and optimizing the learning potential of daily routines. The role of the caregiver in relation to patent and child is examined. Special issues of parent participation in infant and toddler care, and advocacy are included. Lab fee: $12.00. Prerequisites: ECD 105, ECD, 107, ECD 203 and PSY 261.

ECD 112 Physical Development Curriculum (A,SP) 3-0-3
Theoretical foundations for the child's physical and motor development. Includes assessing individual child's motor skills, sequence for the development of motor skills, perceptual-motor development, as well as implementing small and large motor activities in both the indoor and the outdoor setting. Health and safety education activities as well as nutrition are included. Lab fee: $12.00. Prerequisites: ECD 105, ECD 107, ECD 203, and PSY 261.

ECD 115 School Age Child Care (W or on request) 3-0-3
This course will present principles that are important for developing and administering child care programs for children in Kindergarten through Grade 5. Developmental characteristics of school aged children will be reviewed and appropriate care, education and guidance practices identified. Information regarding licensing regulations and parent involvement for school age child care programs in Ohio will be disseminated. Lab fee: $12.00. Prerequisites: ECD 105 and ECD 107.

ECD 151 ECD Media Resource I (A,W,SP,SU) **1-0-1**
This course will provide and overview and orientation to resources, equipment and materials available for creating learning activities for children. Students will have opportunities to practice safe, economical and appropriate skills in creative ways. Lab fee: $12.00. Prerequisites: ECD 105 or permission of ECD Coordinator.

ECD 152 ECD Media Resources II (A,W,SP,SU) **1-0-1**
This course will expand students' opportunities to learn, implement, and evaluate appropriate materials and methods for creating learning activities for children. Emphasis will be on extensions of appropriate classroom activities and environments through the use of media materials. Lab fee: $12.00. Prerequisite: ECD 105 or permission of ECD Coordinator..

ECD 161 - 265 ECD Seminars I-V (A,W,SP,SU) 1 **-0-1**
Group discussion of experience arising during ECD field placement; integration of theory and practice. Seminars are taken concurrently with ECD Field Experience I-V. Seminars focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Expectations, objectives and requirements build with each successive experience. Prerequisites: ECD 105, ECD 107, ECD 203, and PSY 261. Concurrents: ECD 171-275.

ECD 171 - 275 ECD Field Experiences I-V (A,W,SP,SU) **0-7-1**
These courses are an integral part of the ECD program, providing students with the opportunity to apply theory and practice under the guidance of early childhood professionals. These professionals guide and assist in the evaluation of student performance. Lab fee: $20.00 for Field I; $12.00 for Fields II - V. Prerequisite: Formal admission to ECD. Concurrents: ECD 161-265.

ECD 190 Activity Plan Seminar (A,W,SP,SU) **1-0-1**
This seminar is required for ECD students who have received Non-traditional credit for Field Experience and Seminars I&II. The class will focus on preparing written documentation of developmentally appropriate activities for preschool aged children. Students will learn to write concepts, objectives, and procedures for developmentally appropriate activities, consistent with ECD program outcomes. Prerequisites: credit for ECD 162 and ECD 172.

ECD 200 First Aid (A,W,SP, SU) **1-0-1**
This course provides the student with training and practice in first aid for infants and young children. It meets requirement of Ohio Child Day Care Licensing Rules for staff in early childhood settings. Lab fee: $4.00. Prerequisite: placement into ENGL 100.

ECD 201 Health and Safety (A,W,SP) 3-0-3
Course gives training and practice in first aid, in the recognition and management of communicable diseases, and in child abuse recognition and prevention. Meets requirements of Ohio Child Day Care Licensing Rules for staff in early childhood settings. Lab fee: $12.00. Prerequisite: Placement into ENGL 100.

ECD 202 Management of Communicable Disease (A,W,SP, SU) **1-0-1**
A course designed to provide students with the knowledge and skills in recognition and management of communicable diseases. Meets requirements for Ohio Child Day Care Licensing Rules for staffs in early childhood settings. Lab fee: $4.00. Prerequisite: placement into ENGL 100.

ECD 203 Creative Curriculum (A,W,SP) 3-0-3
Course deals with the principles of creativity and its importance in the life of the young child. Focus is on the sequence of development in child's use of creative materials. Techniques for creative arts and music will be explored, demonstrated and implemented. Students will develop and evaluate materials, objectives and activities in these areas. Lab fee: $20.00. Prerequisites: ECD 105 and ECD 107.

ECD 204 Recognition of Child Abuse & Neglect (A,W,SP, SU) **1-0-1**
A course designed to provide students with the knowledge and skills in child abuse recognition and prevention. Meets requirements for Ohio Child Day Care Licensing Rules for staff in early childhood settings. Lab fee: $4.00. Prerequisite: placement into ENGL 100.

ECD 205 Patent Involvement - Early Childhood Programs (W,SU) **3-0-3**
Instruction, for working effectively with parents of young children, and involving them in the child care center. Emphasis is on how to encourage active participation of parents in the early childhood programs, including parent conferences and parent education. Family needs, similarities and differences will be discussed as they may affect the teacher's role. Lab fee: $12.00. Prerequisite: ECD 206.

ECD 206 Social Development Curriculum (A,SU) 3-0-3
This course will include the following components of social development: recognition of family patterns and traditions, gender identity and sex roles, moral reasoning of young children, play theories and programming for classroom play, multicultural practices and diversity, and social studies for young children. The teacher's role as classroom facilitator of social development will be defined. Lab fee: $12.00. Prerequisites: ECD 112 and ECD 103.

ECD 207 Guidance and Discipline in Early Childhood Programs (SP,SU) 3-0-3
A study of guidance of young children and social learning theories. Focus is on preventing problem behaviors, and teaching desirable behavior through example, communication and setting limits. Issues of child behavior and analyzing discipline problems will be discussed. Focus is on resolving problem situations, changing behavior and development of moral reasoning. Includes helping children cope with stressful situations. Lab fee: $12.00. Prerequisite: ECD 205.

ECD 208 Young Children With Special Needs (A,SP) 3-0-3
This course presents the rationale and skills in educating and caring for young children with special needs in programs with typically developing young children. It describes strategies for identifying and assessing children with special needs and appropriate adaptive activities and strategies useful in an integrated classroom. This course will enable students to acknowledge the importance and necessity of collaboration with community professionals and resources. Lab fee: $12.00. Prerequisite: ECD 205.

ECD 209 Early Childhood Staff (W,SU) 3-0-3
In-depth study of the dynamics of staff interaction in a setting for young children. Focus includes personnel rights and responsibilities, ethical implications of teaching, team functioning, problem-solving, communication skills, professional growth and development, evaluation processes, as well as history, traditions and trends in the field. Lab fee: $12.00. Prerequisite: ECD 206.

ECD 211 Child Care Administration (W,SU) 3-0-3
This course deals with the supervisory roles required to administer a program for young children. Focus is on planning for the child, the program, the staff, the parents and community involvement. Establishing and maintaining sound fiscal practices are given special emphasis. Includes legal requirements and responsibilities of Ohio licensing procedures. Lab fee: $12.00. Prerequisites: Minimum of one year working in ECD setting and ECD 105 and 107.

ECD 220 Special Topics in Early Childhood (A,W,SP,SU) **1-3**
This course will facilitate offerings of special topics related to ECD, on a quarterly basis. Topics may include: Children's Literature, Diversity and Young Children, Intergenerational Care, Music & Movement, Fitness for Children, Nutrition, Sign Language, Leadership, Advocacy, etc. Lab fee: $4 - 12.00. Prerequisite: Admission to ECD or permission of ECD Coordinator

ECD 267 Student Teaching Seminar (A,W,SP,SU) 2-0-2
Students have opportunity to discuss their interaction with young children, staff, and parents in their early childhood settings. Students will analyze the components of the learning environment, and their inter-relationships in programs for young children and families. They will plan to integrate theory and practice for quality programming, guidance, health and safety of pre-kindergarten children. Lab fee: $12.00. Prerequisite: ECD 264 and ECD 209. Concurrent: ECD 277.

ECD 277 Student Teaching Practicum (A,W,SP,SU) **0-21-3**
Provide students with opportunities to develop skills in working with young children (individually and in groups), and to integrate theories of child development with teaching practice. Students will work in assigned prekindergarten classrooms five days a week for a total of 21 hours weekly. Lab fee: $12.00. Prerequisite: ECD 274 and ECD 209. Concurrent: ECD 267.

Economics (ECON)

ECON 100 Introduction to Economics (A,W,SP,SU) 5-0-5
This course is an issues-based introduction to basic economic concepts. Students will relate principles such as scarcity, opportunity cost, and markets to current events, including changes in the minimum wage, environmental controversies, and the actions of the Federal Reserve. Lab fee: $6.00. Prerequisites: MATH 101, or REAL 104, or the equivalent and placement into ENGL 101.

ECON 200 Principles of Microeconomics (A,W,SP,SU - DL) 5-0-5
This course introduces students to the economic decision-making of individuals and firms. Topics include scarcity, opportunity cost, supply and demand, consumer choice, elasticity, market structure, profit maximization, resource markets,

and international trade. Lab fee: $6.00. Prerequisites: MATH 101, or REAL 104, or the equivalent and placement into ENGL 101.

ECON 240 Principles of Macroeconomics (A,W,SP,SU - DL) **5-0-5**
This course introduces students to economic decision-making at the aggregate level. Topics include national income analysis, the business cycle, inflation, unemployment, fiscal and monetary policies and objectives. Lab fee: $6.00. Prerequisites: ECON 200, MATH 101, or REAL 104, or the equivalent (successful completion of MATH 102 or its equivalent is strongly recommended) and placement into ENGL 101.

ECON 290 Capstone Experience in Economics (On Demand) 2-2-3
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing a baccalaureate degree program in economics. Course requirements include the completion and presentation of a research project that relates to the students' academic interests after reviewing research methodologies and findings in economics; assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters, Lab fee: $10.00. Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree with five credit hours in economics.

ECON 293 Independent Study in Economics (On Demand) **1-5**
An individual, student-structured course that examines a selected topic in economics through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program, Lab fee: $5.00. Prerequisites: Permission of the instructor and the Chairperson.

ECON 299 Special Topics in Economics (On Demand) **1-5**
A detailed examination of selected topics of interest in economics. Lab fee: $5.00. Prerequisites vary.

Electro-Mechanical Engineering Technology (EMEC)

For other related course descriptions, see Electronic Engineering Technology and Mechanical Engineering Technology.

EMEC 250 Motors and Controls (A) 2-3-3
A study in the basic elements of single phase and three phase AC motors and generators, DC motors and generators, transformers, motor controls, and motor protection (fuses and overloads). Students learn how to select, size and wire three phase motors and starters as well as do calculations related to sizing, horsepower, and efficiency. Lab fee: $15.00.

EMEC 251 Electro-Mechanical Controls I (W) 3-3-4
A study in the basic interface circuitry used in electro-mechanical controls. Students learn about solenoids, relays, ladder logic, ladder diagrams, and how to design and wire controls systems to meet a given set of criteria. Troubleshooting is emphasized at each step. Lab fee: $15.00. Prerequisite: EMEC 250

EMEC 260 Electro-Mechanical Controls II (SP) 3-3-4

An introduction to Programmable Logic Controllers (PLC's). Students gain knowledge and experience in programming the Allen-Bradley SLC 500 series of PLC's. Students are required to design, wire, and troubleshoot programs to meet a given set of criteria. Both discrete and analog devices are examined. Lab fee: $20.00. Prerequisite: EMEC 251.

Electronic Engineering Technology (EET)

EET 101 Basic Electricity (A,W,SP) 2-3-3
An introductory electrical applications course covering basic direct and alternating current concepts, measurements, circuit analysis, magnetism, electrical energy sources, and electrical energy conversion. This course is not required for students in the Electronic Engineering Technology. Lab fee: $4.00. Prerequisite: MATH 103.

EET 102 Electronics and Digital Fundamentals (W,SP,SU) 2-3-3
An introductory electronics and digital fundamentals course. Course content covers electronic basics, diodes, transistors, electronic power supplies, amplification, power control, and basic digital logic devices and systems. Circuit applications of electronic and digital devices are stressed. This course is not required for students in the Electronic Engineering Technology. Lab fee: $4.00. Prerequisite: EET 101.

EET 110 Electronic Drafting (A,W,SP,SU) **1-2-2**
An introductory drawing course incorporating the use of instruments, instructions, and practice to produce quality schematics and pictorial diagrams using lettering, electronic, and electrical symbols. The student will be given an introduction to computer-aided drafting (CAD). Lab fee: $4.00.

EET 111 Direct Current Fundamentals (A,W,SP,SU) 4-0-4
An introduction to direct current fundamentals, electron physics, current and voltage, work, power, series and parallel resistances, network theorems, electrical measurement devices, circuit analysis. Microcomputers are introduced and used for problem-solving. Prerequisites: MATH 103 or placement into MATH 111. Concurrents: EET 112 and MATH 111.

EET 112 DC Laboratory (A,W,SP,SU) 0-6-2
This is an introductory course in the use of power supples and measurement equipment commonly found in laboratories and industrial situations. The student will gain hands -on experience in the use of these equipments. A lab manual is used by the students as an aid to standardization of notation, reference data, and student reporting throughout the course. Lab fee: $9.00. Concurrent: EET 111.

EET 120 Alternating Current Fundamentals (A,W,SP,SU) 4-0-4
A detailed study of the principles of time varying electrical current and voltage relationships. The course includes an intensive application of vector analysis as applied to AC circuits, power applications, and the resonance phenomenon. Computer solutions are stressed when appropriate. Prerequisites: EET 111 and EET 112. Concurrents: EET 121 and MATH 112.

EET 121 Alternating Current Laboratory (A,W,SP,SU) 0-6-2
Laboratory study of signal sources, oscilloscopes, reactance, inductance, AC networks, transformers and filter circuits. Lab fee: $9.00. Prerequisites: EET 111 and EET 112. Concurrent: EET 120.

EET 122 CAD/Electronics (W,SU) 1-4-3
A follow-up to EET 110, this technical elective course will familiarize the student with the concept of computer aided drafting (CAD) systems as used by drafters in the electronics industry. Emphasis will be placed on the OrCAD TM system. A limited number of seats are available to students from outside the technology. Lab fee: $5.00. Prerequisite: EET 110 or permission of the instructor

EET 130 Electronic Devices (A,W,SP,SU) 4-0-4
An indepth investigation of the operating characteristics of basic active devices. The course is designed to explain the approximate electrical equivalence and circuit analysis of devices to the basic AC, DC models, with sample applications of the most frequently used circuits. Prerequisites: EET 120 and EET 121. Concurrent: EET 131.

EET 131 Electronic Devices Laboratory (A,W,SP,SU) 0-6-2
The lab exercises in this course closely follow the EET 130 lecture theory for reinforcement through experimentation and theoretical verification of results. All lab exercises use modem devices, planned experiments and industrial standard equipment. Lab fee: $9.00. Prerequisites: EET 120 and EET 121. Concurrent: EET 130.

EET 132 Digital Fundamentals (A,W,SP,SU) 2-3-3
An introductory course in digital electronic fundamentals covering number systerns, Boolean Algebra, truth tables, Karnaugh maps, basic gates, adders, (latches, flip-flops, and counters). Lab fee: $4.00. Prerequisite: EET 111 or permission of instructor

EET 144 PC Hardware (A,W,SP,SU) 2-2-3
Course provides instruction and hands on experience in upgrading, reconfiguring and adding boards, memory, etc. Use of modems and utilities. Students will tear down and reassemble a PC. Lab fee: $12.00. Meets degree requirement for MCT students. Prerequisites: CPT 101 recommended.

EET 145 Computer Maintenance (A,SP) **1-4-3**
A hands-on laboratory course where students troubleshoot the printer, monitor, disk drive, and CPU of an IBM-PC by means of troubleshooting flowcharts. Recommended for students planning to go into field service positions. A limited number of seats are available to students from outside the technology. Lab fee: $10.00. Prerequisite: EET 130 or permission of the instructor

EET 146 Computer Network Communications Systems (A, W, SP, SU) 2-8-5
This course is a computer networking course combining networking software and hardware. Topics include networking protocols and network configurations, circuit analysis of high-speed modems, packet-switching techniques, pulse code

and pulse-width modulation techniques. Investigation of high-speed modem transmission lines, microwave transmission, and cellular radio are included. The lab emphasizes network component installations and making measurements on bit-error-rates, system noise, and analysis of error detection/correction codes, synchronous and asynchronous protocols. Lab fee: $40.00

EET 203 National Electrical Code (On Demand) 3-3-4
This course gives a brief description of each National Electrical Code article and discusses how to reference information in the code. Changes from the previous code and sample calculations are also covered. Not required for students in the Electronic Engineering Technology. Completion of this course does not guarantee eligibility to sit for any licensing examinations and may not meet electrical contractor or Electrical Safety Inspector refresher course requirements. Check with the College or The Ohio Department of Industrial Relations.

EET 240 Calculus for Electronics (A,W,SP,SU) **5-0-5**
Practical application of differential and integral calculus to electronics. Covers rates, limits, derivatives, differentials and differentiators, higher derivatives, maxima/minima, integrals and integrators, definite integrals, trigonometric and logarithmic functions, and selected advanced topics. Graphical methods calculators and computers will be used for problem solutions where appropriate. Prerequisites: MATH 113 or MATH 150 and EET 120.

EET 241 Electronic Devices Circuit Analysis (A,W,SP,SU) 4-0-4
This course covers the concepts of small signal voltage amplification of both low and high frequencies, the concepts of negative and positive feedback, integrated circuit (IC) differential and operational amplifiers, and IC voltage regulation with emphasis on circuit analysis techniques. Computer solution of problems is stressed where practical. Prerequisites: EET 130 and EET 131. Concurrent: EET 242.

EET 242 Electronic Devices Circuit Analysis Lab (A,W,SP,SU) 0-6-2
This course is designed to compliment EET 241 by providing physical involvement with the various circuits studied therein. The student will construct the circuits presented in lecture, measure their parameters and compare experimental results with those computed from theory. Lab fee: $9.00. Prerequisites: EET 130 and EET 131. Concurrent: EET 241.

EET 243 Digital Devices (A,W,SP,SU) 4-0-4
A continuation of the study of digital electronics covering waveforms, the generation of pulses and study of the related circuitry such as multivibrators and one shots. More complex and widely used digital devices such as counters, shift registers, memories, and multiplexers are also presented. The basic units of a computer (bus, ALU) are studied. Prerequisites: EET 132 and EET 130. Concurrent: EET 244.

EET 244 Digital Devices Laboratory (A,W,SP,SU) 0-6-2
This lab course, concurrent with the lecture course EET 243, gives the student an opportunity to learn and design complex and widely used digital devices, Switching and wave shaping circuits are built using IC chips. Different devices which are used in building a computer are introduced and used in experiments. Lab fee: $9.00. Prerequisite: EET 132. Concurrent: EET 243.

EET 250 Electronic Communications I (A,W,SP,SU) 4-0-4
The electronics communication course is an introductory systems course utilizing conventional modulation and demodulation theories. Particular emphasis is made on AM, FM, and video circuits. A survey of current trends in digital communication concepts, microwave principles, and fiber optics will be presented. Prerequisite: EET 130. Concurrent: EET 251.

EET 251 Communications I Laboratory (A,W,SP,SU) 0-6-2
Laboratory study of modem discrete, integrated circuit and modular circuit configurations to fabricate systems in AM, SSB, FM, video circuits and phase lock loop and pulse modulation. Lab fee: $9.00. Prerequisite: EET 131. Concurrent: EET 250.

EET 2.52 Microprocessors (A,W,SP,SU) 4-0-4
Different building blocks of a microprocessor and their functions are introduced. Methods of data storage and programming of a microprocessor are studied. Use of a microprocessor as a controller and interfacing it to other devices are also studied. A Motorola 68HCII microprocessor is used throughout the course. Prerequisite: EET 243. Concurrent: EET 253.

EET 253 Microprocessor Lab (A,W,SP,SU) 0-6-2
This lab course is the practical version of the concurrent lecture course EET 252. Different blocks of a microprocessor studied in lecture are used and experimented on in the lab course. Along with each lab, programming methods for different blocks of the microprocessor are introduced. The practical aspects of using the microprocessor as a controller for other devices are also explored. A 68HCII microprocessor is used. Lab fee: $9.00. Prerequisite: EET 243. Concurrent: EET 252.

EET 254 Electronic Fabrication (A,W,SP,SU) 1-3-2
An introduction to the fabrication of electronic circuits from assembly through testing, to include soldering/desoldering, use of heat sinks, surface mount device technology testing, documentation and repair/replacement of parts. Credit can be earned by taking the course, life experience or proficiency testing. See your technology faculty advisor for details. Lab fee: $12.00. Prerequisite: EET 120.

EET 255 Instrumentation and Controls (A,SP) 2-3-3
This course presents the basic theories and specific methods of measurement of temperatures, pressure, liquid level, and other parameters which may be measured in industrial and scientific applications. The laboratory part of this course enables the student to gain experience with transducers. Major process control schemes as used in industry are covered along with conditions affecting response and stability of control systems. Lab fee: $10.00. Prerequisites: MATH 113, EET 130, EET 132. Concurrents: PHYS 185.

EET 260 Industrial Electronics (A,W,SP,SU) 4-0-4
A study of measurement and control circuits used in industry. A capstone course which explores the use of microprocessors and programmable logic controllers (PLCs) in control and measurement functions. Prerequisites: EET 241 and EET 252. Concurrent: EET 261.

EET 261 Industrial Laboratory (A,W,SP,SU) 0-6-2
Paralleling the development of topics in EET 260, this course permits student evaluation of theoretical predictions pertaining to industrial systems and their control. Lab fee: $9.00. Prerequisite: EET 253. Concurrent: EET 260.

EET 262 Digital Communications and Telecommunications (W,SU) **2-3-3**
A study of the techniques, theory and devices used for communication in computer systems, networks and telecommunications. Modulation methods including PCM, MFM, NRZ, NRZI, and synchronous and asynchronous protocols are presented. Network standards such as token ring, ALOHA, Ethernet and LAN protocols are examined. This course also includes study of devices such as UARTS, MODEMS and CODECS as applied to the subject. Lab fee: $4.00. Prerequisites: EET 250 and EET 243.

EET 264 Fiber Optic Communications (SP,SU) 2-3-3
This is an introductory course on fiber optics. In it, various types of light sources, connectors, optics, fiber wave guides, detectors and distribution systems will be investigated, and the student will learn by laboratory experiment of the problems created by misalignment, attenuation, and lossy connectorization. Practical testing of fiber optic links using-light sources and power meters will also be emphasized. Eye safety when working with dangerous power levels will be stressed. Lab fee: $5.00. Prerequisite: EET 250.

Emergency Medical Services (EMS)

EMS 100 Crash Injury Management, First Responder (SU,SP) **1-3.2**
This course is designed to teach the person (public safety officer or other), who arrives first at the scene of an accident, proper life saving procedures. In terms of emergency victim care, the first responder will provide what is needed until qualified emergency medical technicians arrive. Lab fee: $5.00.

EMS 110 EMT- Basic (A,W,SP,SU) 4-8-8
This course provides a first phase of training in the career structure of the Emergency Medical Technician (EMT); the course covers all the knowledge and skills required for the state certification examination. This course includes 12 clock hours of clinical experience. Lab fee: $50.00. Prerequisite: Placement into ENGL 100 and permission of instructor.

EMS 111 EMT - Intermediate (A,W,SP,SU) 4-4-6
In depth study of patient assessment, shock physiology, fluid and intravenous therapy is the direction of this course, and it covers the knowledge and skills required to take the state certification exam. Lab fee: $75.00. Prerequisite: State Certified EMT-Basic.

EMS 121 E.M.S. Systems (A) 3-0-3
This course deals with the history, development, organization, funding, and control of EMS. It will involve the student in current trends in EMS. Lab fee: $12.00.

EMS 122 Legal Principles for E.M.T. (A) 2-0-2
This course encompasses the laws and regulations which govern EMTs and their actions. The course also deals with the rights of the patient and professionalism of the EMT. Lab fee: $8.00. Prerequisite: Permission of instructor.

EMS 123 Emergency Psychiatric Intervention (W) 3-0-3
This course deals with the EMT's approach to victims exhibiting abnormal behavior and provides an in-depth look into methods of evaluation and management of these people. Lab fee: $10.00. Prerequisite: Permission of instructor.

EMS 124 Public Health Education (W) 3-0-3
This course will involve the paramedic in the role of public health educator from needs assessment, organizations involved, to implementation; the student will be required to do some practical public health education. Lab fee: $5.00. Prerequisite: Must be CPR Certified.

EMS 125 Disaster Aid (SP) 3-0-3
This course will familiarize the EMT with disaster planning, community needs assessment, organization and control of a community disaster plan, and in developing testing procedures for this plan. Lab fee: $5.00. Prerequisite: Permission of instructor.

EMS 126 Advanced Rescue (SU 2nd Term) 3-2-4
This course deals with getting the EMT to an entrapped victim and removing the victim from the entrapment. Special rescue techniques will be covered in the areas of: vehicle, fire, building, farm, water, wilderness and electrical. Lab fee: $25.00. Prerequisite: Permission of instructor.

EMS 127 Handling Hazardous Materials Situations (SU) 2-0-2
This course encompasses the safety factors and care the paramedic must consider when dealing with victims exposed to hazardous materials, (i.e., toxic fumes, radioactive materials, electrical, explosive and flammable materials). Lab fee: $3.00. Prerequisite: Permission of instructor.

EMS 130 River Rescue (SU 1st Term) 2-2-3
This course deals with rescuing victims from the water. It will include, but not be limited to, self-rescue, rescue from shore, boat assisted rescues, rescue from boats and rapelling. Lab fee: $8.00. Prerequisite: State of Ohio Certified Intermediate Swimmer

EMS 131 Special Topics for Paramedics (SU) 3-0-3
In this course, the paramedic will be required to develop and present an in-depth study in an area of their individual interest. Lab fee: $3.00. Prerequisite: Permission of instructor.

EMS 132 Emergency Medical Services Dispatcher (SP) **1-2-2**
The EMS dispatcher course is designed to prepare EMS dispatcher personnel to receive requests for emergency medical services, allocate community resources in response to such requests, and give pre-arrival instruction. Lab fee: $170.00 (includes book and certification fee). Prerequisite: Permission of instructor.

EMS 133 Ice & Cold Water Rescue (A) 2-0-2
This course deals with rescuing victims from ice-covered and cold water, hypothermia and other related medical concerns. Lab fee: $25.00. Prerequisite: Permission of instructor.

EMS 134 EMS Administration I (A) 4-0-4
The first in a two-course sequence designed to introduce the concepts of EMS Administration and its effect on patients, employees and themselves. Lab fee: $5.00. Prerequisites: EMS 121, EMS 122, BMGT 218 and HRM 121.

EMS 135 EMS Administration II (W) 2-2-3
The second in a two-course sequence designed to introduce the concepts of EMS Administration and its effect on patients, employees and themselves. Lab fee: $5.00. Prerequisite: EMS 134.

EMS 140 Construction/Collapse for Fire/Rescue (W) 2-2-3
This course is an introduction to the present and past practices of building construction. It tells of important standard elements of buildings, the hidden dangers of old and new buildings, what influences structural stability of walls in fires and collapse, and how to look for and judge structural dangers. Also: relationships between construction materials and damage of a building. Lab fee: $5.00. Prerequisites: CMGT 121 and CIVL 120.

EMS 141 Hazardous Material (Technician Level) (SU) **1-2-2**
This course provides a foundation for working at a hazardous materials incident including the developing and implementing a site safety plan and implementing decontamination procedures. It will also cover the use of difference reference materials, and the identification, verification, and control of hazardous materials. Lab fee: $10.00.

EMS 142 Vertical Rescue (SP) **1-3-2**
This course is designed to present the fundamentals of rope rescue, using up-to-date equipment and techniques with a major emphasis on safety. Terminology, selection of proper equipment, essential knots, and current standards will be presented, as well as rope rescue systems and litter packaging. Practical application evolutions will include solving rescue problems and evaluating rope rescue systems and/or techniques. Includes rescue of the injured and/or stranded from ledges, cliffs, elevator shafts, etc. Lab fee: $20.00.

EMS 143 Search and Rescue (A) **1-3-2**
This course includes the introduction to job responsibilities, philosophy and concepts of effective search and rescue management. It describes preplanning, resources, investigation, interviewing, determining urgency, subject behaviors, search strategy, area probability, base camp set up and management, briefing and debriefing. The course also introduces map and compass reading. Lab fee: $20.00. Prerequisite: Permission of instructor.

EMS 144 Confined Space Rescue (SP) **1-3-2**
This course is designed to present the learner with OSHA regulation, and requirements. Also: confined space entry procedures to safely and properly perform a rescue from tanks, pipelines, manholes, cave-ins, etc. The course will address necessary rescue shoring and tunneling equipment required for a confined space rescue. Lab fee: $15.00. Prerequisite: EMS 142.

EMS **145 Vehicle Extraction (A)** **1-3-2**
This course is designed to prepare the learner for situations involving autos, school buses, commercial buses, and trucks. Participants will be presented information on how to respond to incidents involving these types of vehicles, the methods used to construct the vehicles and how they are operated. Learner will be expected to apply classroom theory and hands-on application dealing with vehicle stabilization, patient handling and removal, and extrication incidents. Lab fee: $20.00. Prerequisite: EMS 110.

EMS 147 Farm/Agricultural Rescue (A) **1-2-2**
This course will familiarize the learner with different types of farm/agricultural accidents, including machinery upsets/rollovers, grain bin entrapments, patients caught within large machinery, exposure to toxic chemistry/pesticides. Lab fee: $5.00. Prerequisite: EMS 110.

EMS 211 EMT-Paramedic I (W,SU) 5-4-7
This course encompasses the training of the paramedic in the areas of their role, triage and assessment of victims, care of the victim in the areas of shock, respiratory system, intravenous therapy and trauma as well as principles of communications. Lab fee: $80.00. Prerequisite: EMS 110. Concurrent: EMS 281 and EMS 291.

EMS 212 EMT-Paramedic II (ASP) 5-3-6
This course encompasses the training of the paramedic in the areas of: cardiovascular, anaphylaxis, and the endocrine and nervous systems. Lab fee: $70.00. Prerequisite: EMS 211. Concurrents: EMS 232, EMS 282 and EMS 292.

EMS 213 EMT-P III (W,SU) 4-2-5
This course encompasses the training of the paramedic in the areas of: central nervous system, musculoskeletal system, soft tissue injuries, obstetric and gynecologic emergencies, neonatal and pediatric emergencies, and rescue. Lab fee: $65.00. Prerequisite: EMS 212. Concurrents: EMS 283 and EMS 293.

EMS 214 EMT-P IV (SP,A) **1-0-1**
This course encompasses the training of the paramedic in the areas of: trauma life support and major incident response, and the continuation of training in ob/gyn/neonatal, behavioral emergencies and rescue. Lab fee: $30.00. Prerequisite: EMS 213. Concurrents: EMS 234, EMS 284 and EMS 294.

EMS 232 Advanced Cardiac Life Support (ACLS) **1-0-1**
Advanced cardiac life support. Lab fee: $10.00. Prerequisite: Permission of instructor.

EMS 234 Basic Trauma Life Support (BTLS) **1-0-1**
Basic trauma life support. Lab fee: $50.00. Prerequisite: Permission of instructor.

EMS 281 Hospital Clinical I (W,SU) 0-6-2
Hospital clinical, observation and experience, encompassing the didactic areas covered in EMS 2 11. Lab fee: $3.00. Concurrents: EMS 2 11 and EMS 29 1.

EMS 282 Hospital Clinical II (A,SP) 0-6-2
Hospital clinical, observation and experience, encompassing the didactic areas covered in EMS 212. Lab fee: $3.00. Prerequisite: EMS 281. Concurrents: EMS 212 and EMS 292.

EMS 283 Hospital Clinical III (W,SU) 0-6-2
Hospital clinical, observation and experience, encompassing the didactic areas covered in EMS 213. Lab fee: $3.00. Prerequisite: EMS 282. Concurrents: EMS 213 and EMS 293.

EMS 284 Hospital Clinical IV (A,SP) 0-6-2
Hospital clinical, observation and supervised experience, encompassing the didactic areas covered in EMS 214. Lab fee: $3.00. Prerequisite: EMS 283. Concurrents: EMS 214 and EMS 294.

EMS 291 Field Clinical I (W,SU) **0-5-1**
Vehicle clinical, observation and experience. Lab fee: $3.00. Prerequisite or concurrent: EMS 281 Concurrents: EMS 211.

EMS 292 Field Clinical II (A,SP) **0-5-1**
Vehicle clinical, observation and experience. Lab fee: $3.00. Prerequisites: EMS 211, EMS 281 and EMS 291. Concurrents: EMS 212 and EMS 282.

EMS 293 Field Clinical III (W,SU) **0-5-1**
Vehicle clinical, observation and experience. Lab fee: $3.00. Prerequisites: EMS 292. Concurrents: EMS 213 and EMS 283.

EMS 294 Field Clinical IV (ASP) **0-10-2**
Vehicle clinical, observation and experience. Lab fee: $3.00. Prerequisite: EMS 293. Concurrents: EMS 214 and EMS 284.

English (ENGL)
(Also see Communication Skills, Theater, and Technical Communication)

ENGL 100 Language Development (A,W,SP,SU) **5-0-5**
Students develop skills in reading and writing in preparation for ENGL 101 by analyzing the writing of students and professionals and by developing paragraphs and short essays using narration, description, and examplification and/or illustration. Lab fee: $65.00. Prerequisite: DEV 041 with a grade of "C" or higher plus successful completion of the DEV 041 exit examination, or DEV 042 with a grade of "C" or higher, placement by test. Credit will not count toward graduation in any degree program.

ENGL 101 Beginning Composition (A,W,SP,SU - DL) 3-0-3
Students compose clear, concise expository essays using various modes such as definition, exemplification, process, analysis, cause and effect, comparison and contrast. This course or its equivalent is required for all degrees. Lab fee: $3.00. Prerequisite: ENGL 100 with a grade of "C" or higher or placement by test.

ENGL 102 Essay and Research (A,W,SP,SU - DL) 3-0-3
This course is a continuation of ENGL 101 expanded to include argumentation, logic, and research techniques. Research papers using MLA documentation are written. Lab fee: $3.00. Prerequisite: ENGL 101 with a grade of "C" or higher

ENGL 111 English Composition (A,W,SP,SU - DL) **5-0-5**
This course is an accelerated combination of ENGL 101 and ENGL 102. Students receive training in the fundamentals of exposition and argumentation through using the writing process. The course stresses critical reading of the students' own and professional writing. It includes units on library research and documentation. Lab fee: $3.00. Prerequisite: Placement test score.

ENGL 119 Tutoring for Literacy (A,W,SP) 2-6-3
Tutoring for Literacy is a methods course that instructs students in basic techniques for teaching reading, writing, and basic math skills in community agencies that host programs designed to improve literacy in their respective environments. Students in this course participate in classroom instruction two hours weekly and provide one-to-one tutoring with assigned agencies six hours per week. Prerequisites: ENGL 101, MATH 102, and either SSCI 101, SSCI 103, PSY 100. or SOC 101.

ENGL 190 Freshman Experience in English (A,W,SP,SU - DL) 2-0-2
The Freshman Experience Seminar is designed to familiarize first time Arts and Sciences students at Columbus State Community College with the academic environment. Students will use various on site support systems, set personal academic goals, and map their course of study at Columbus State to meet those goals. Open to all students. Optional for students having completed ESL 100; required for all Associate of Arts or Associate of Science degree seeking students. Concurrent: ENGL 101 or 111. Lab fee: $4.00.

ENGL 200 Business Communications (A,W,SP,SU - DL) 3-0-3
Emphasis is placed on principles of effective business writing. Students practice writing business letters and memos. A problem-solving or technical report related to the student's area of concentration is required. Resume preparation and job search techniques are covered. Lab fee: $7.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher and at least two quarters or equivalent work experience in a technology.

ENGL 202 Writing for Health and Human Services (A,W,SP,SU) 3-0-3
Students specializing in human services and health care fields practice the kinds of writing essential to record keeping and research in their professions. Legal and ethical interdisciplinary communication is emphasized. Using practice and real-life cases, students write descriptions, summaries, and evaluations. Job search techniques and letter, memo and report formats are covered. A short research paper using APA documentation is required. This course may substitute for ENGL 200 or ENGL 204 in certain technologies; check with your academic advisor. Lab fee: $7.00. Prerequisites: ENGL 102 or ENGL 111 with a grade of "C" or higher, admittance to a technical program, and current clinical/field placement.

ENGL 204 Technical Writing (A,W,SP,SU - DL) 3-0-3
Students learn the principles of technical writing and practice those types of writing required of technicians, including letters, memos, and reports as required in a student's technology. A problem-solving report is written. Resume preparation and job search techniques are covered. Oral reports using visual aids are required. Lab fee: $7.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher and at least two quarters or equivalent in the student's technology.

ENGL 206 Governmental Communications (W,SU) 3-0-3
The course emphasizes the principles of effective writing done in government settings. The student learns to write various types of correspondence in a variety of formats in addition to researching and writing a report adhering to formatting guidelines. The student will also prepare selected components of a job application package. Lab fee: $7.00. Prerequisite: ENGL 102 or ENGL 11 1 with a grade of "C" or better.

ENGL 208 Communication for the Mass Media (W,SP) 3-0-3
This course prepares students to communicate effectively with the mass media including newspapers, magazines, radio, and television through press conferences, news releases, feature stories, research reports, and statements. Students will prepare and present a portfolio that may include news and feature stories, brochures, flyers, research and other assignments completed for the course. Lab fee: $7.00. Prerequisite: ENGL 102 or ENGL 111. Concurrent: COMM 105 or equivalent is recommended.

ENGL 210 Creative Writing (A,SP) 3-0-3
Students are introduced to the fundamental techniques of creative writing. Using peer group analysis and workshop techniques, students will develop short pieces in a variety of genres. Lab fee: $3.00. Prerequisite: ENGL 101 or ENGL 111.

ENGL 215 Magazine Publication: Literary Criticism, Editing, and Design (W) **1-4-3**
Through hands-on practice with Springstreet, students learn the processes and techniques involved in the production of a literary magazine. Lab fee: $3.00. Prerequisite: ENGL 101 of ENGL 111 with a grade of "C" or higher and instructor's permission.

ENGL 220 Introduction to Literature (A,W,SP,SU) 3-0-3
Students are introduced to the major forms of literature by reading and discussing poetry, drama, and short stories. Practical experience in the critical analysis of literature is acquired through the writing of essays and journals and through the presentation of short oral reports. This course, or its equivalent in the ENGL 250-253 series, is required for all Associate of Arts and Associate of Science degrees. Lab fee: $3.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher.

ENGL 225 Introduction to Fiction (W,SU) **5-0-5**
English 225 is an intensive study of selected short stories and novels. Through critical reading, discussion, and writing, students will become familiar with important themes and methodologies of fiction. In both short stories and novels, emphasis will be placed upon identifying and analyzing authors' particular uses of the traditional elements of fiction (structure, setting, point of view, etc.) to develop plot and character. Lab fee: $1.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or better.

ENGL 230 Introduction to Dramatic Literature (W,SU) **5-0-5**
Students will study selected masterpieces of western drama and discuss their social, political, and cultural influences. Students will write critical analyses of drama and of plays attended. Lab fee: $1.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or better.

ENGL 235 Introduction to Poetry (A,SP) 5-0-5
This course will introduce students to the critical process of reading and responding to poetry from historical, cultural, and gender-based perspectives. Emphasis will be upon traditional and nontraditional forms as well as mainstream and marginalized writers. Students will become familiar with appropriate terminology; however, they will also learn to encounter the poem as a whole piece of written discourse between poet and reader. Students will, therefore, conduct an on-going oral and written dialogue with the poet (who is the speaker? who is the audience?, what is the purpose?) and the poem (what is the message?). Students will articulate orally and in writing their own ideas of interpretation based upon a close reading of the text and an informed perspective concerning the historical and cultural circumstances of its origin. Lab fee: $1.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or better.

ENGL 240 Introduction to Science Fiction (A) 3-0-3
The historical roots and literary forms of science fiction are introduced. From their readings and viewing of films, students will write critiques, reports, and research papers about science fiction as a literary genre. Lab fee: $3.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher.

ENGL 245 Introduction to Film (W,SU) **5-0-5**
This course introduces students to cinema by analyzing the elements of film technique: literature, story, drama, editing, movement. acting, sound, photography, staging, and theory. Film as a cultural product is also discussed. Class activities include critical viewing, discussion, and writing assignments. Lab fee: $10.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher.

ENGL 250 Writing About the American Experience (A,W,SP,SU - DL) 5-0-5
Students will read selected pieces of American literature and writings about the American experience in order to explore the variety of conflicts within individuals and within society as values, principles, and beliefs are defined, established, challenged, and defended. Student writing assignments include response journals, documented critical papers, and essay examinations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature. Lab fee: $3.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher. Not open to students who have credit for ENGL 251, ENGL 252, or ENGL 253.

ENGL 251 The American Identity (A,W,SP,SU - DL) **5-0-5**
Students will read selected American writings to explore the multicultural experiences that define the American nation. Discussion will focus on how individual experience shapes the national character. Student writing assignments include response journals, documented critical papers, and essay examinations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature. Lab fee: $3.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher. Not open to students who have credit for ENGL 250, ENGL 252, or ENGL 253.

ENGL 252 Images of Men and Women (A,W,SP,SU - DL) **5-0-5**
Students will read selected American writings to explore the perceptions of men and women of various racial and ethnic backgrounds in American society. Discussion will focus on gender issues and conflicts as they arise within the individual and between the individual and society. Student writing assignments include response journals, documented critical papers, and essay examinations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature. Lab fee: $3.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher. Not open to students who have credit for ENGL 250, ENGL 251, or ENGL 253.

ENGL 253 Regional American Writing (A,W,SP,SU) **5-0-5**
Students will read selected American writings to explore the regional diversity that characterizes the American nation. Discussion will focus on how such regional differences as historic and ethnic backgrounds, social development, economics, politics, language and literary traditions are reflected in literature. Student writing assignments include response journals, documented critical papers, and essay examinations. The course may substitute for ENGL 220 or meet elective requirements in the Associate of Arts or Associate of Science degree programs and transfer requirements in composition or literature. Lab fee: $3.00. Prerequisite: ENGL 102 or ENGL 111 with a grade of "C" or higher. Not open to students who have credit for ENGL 250, ENGL 251, or ENGL 252.

ENGL 260 Survey of Modem U.S. Literature (SU) **5-0-5**
This course examines the works of major writers in U.S. literature from 1865 to the present with attention to revision of the canon. Genres include essays, short fiction, drama, poetry, and the novel. Course activities include reading, discussion, writing assignments, and audience participation. Lab fee: $3.00. Prerequisite: ENGL 220 or equivalent.

ENGL 262 Survey of British Literature (SP - DL) 5-0-5
Students will study selected master works of nineteenth and twentieth century British literature. The course activities will include reading, discussion, writing assignments, and audience participation. Lab fee: $3.00. Prerequisite: ENGL 220 or equivalent.

ENGL 264 Introduction to Shakespeare (W,SU - DL) **5-0-5**
This course will examine representative works selected from Shakespeare's History Plays, Comedies, Romances, and Tragedies, concentrating on a critical/analytical approach to both the plays and Elizabethan dramaturgy. Emphasis, therefore, will be placed upon Renaissance/Elizabethan dramaturgy and conventions, upon language and style, upon the elements of History Plays, Comedies, Romances, and Tragedies, and upon analyses of fundamental human experience. Lab fee: $3.00. Prerequisite: ENGL 220 or equivalent.

ENGL 265 European Literature in Translation (A) 5-0-5
The course will examine the works of representative European writers and cultures for the purpose of developing an appreciation of the international nature of literary subjects. themes, and movements. Emphasis will be placed upon developing an understanding of the historical, philosophical, and social contexts of the various cultures within which European Romanticism, Realism, Naturalism, Existentialism, and modem movements developed. Lab fee: $3.00. Prerequisite: ENGL 220 or equivalent.

ENGL 270 African - American Writers (W,SU) 5-0-5
This course is a survey of Black American literature from the eighteenth-century beginnings to the present: it includes a study of slave narratives. folklore, drama. poetry, and short fiction. Activities include reading and writing assignments. oral presentations. special performances, guest speakers, and field trips. Lab fee: $3.00. Prerequisite: ENGL 220 or equivalent.

ENGL 272 Introduction to Folklore (SU) **5-0-5**
This course is a study of folklore; it looks at 1) ORAL FOLKLORE (i.e.. proverbs, riddles, myths. motifs, legends, folktales). 2) CUSTOMARY FOLKLORE (i.e.. superstitions. folk customs, folk festivals). 3) MATERNAL AND FOLK TRADITIONS (i.e., folk foods, architecture. costumes). Course activities include field work, reading and writing assignments. and a special project. Lab fee: $3.00 Prerequisite: ENGL 220 or equivalent.

ENGL 274 Introduction to Non-Western literatures (A,SP) 5-0-5
This course introduces students to selected classic and modern literature of the non-Western world, including Asia, Africa, the Mid-East, and Latin America. Through several literary approaches, students will gain an understanding of the authors, the periods, and the cultures they represent and the various ways they have handled literary themes. Lab fee: $3.00 Prerequisite: ENGL 220 or equivalent.

ENGL 276 Women in Literature (A,SP) **5-0-5**
This course will explore the history by and about women. The course uses a comparative approach to see how women have treated a variety of themes and how they have worked within the genres of fiction, poetry, and drama. Discussions will consider the literature from the perspectives of gender, history, politics, and culture. Writing assignments will include response journals, documented critical papers, and essay examinations. Lab fee: $3.00. Prerequisite: ENGL 220 or equivalent.

ENGL 278 The English Bible as Literature (W) **5-0-5**
This course offers a literary approach to the Bible in English. Students read, in a modem English translation, much of the Old Testament and the New, as well as parts of the Apocrypha. This is not a course in religion. The approach is literary, historical, cultural. The Bible is read as an anthology of writings composed, compiled, translated, and edited over several centuries by many individuals and as a book that has had an enormous effect on our culture, art, and civilization. Lab fee: $3.00. Prerequisite: ENGL 220 or equivalent.

ENGL 280 Publishing Practicum (SP) 0-4-2
Students who have satisfactorily completed ENGL 215 or who have comparable training and experience from another context learn magazine production techniques using Springstreet or another college publication as a production laboratory. This practicum may be repeated once and normally taken immediately after completing ENGL 215. Lab fee: $3.00. Prerequisite: ENGL 215 or instructor's permission.

ENGL 281 Writing Fiction (A) **5-0-5**
This course introduces students to the art and craft of writing fiction. Emphasis is on the student's own work; however, students will also be required to study the works and writing processes of established writers, male and female, traditional and nontraditional, ancient and modem, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, create and revise a final long work (or combination of shorter works) of at least 4,000 words by the end of the quarter. In addition, students will be required to participate in a public reading of their work at least once during the quarter. Course is repeatable to 10 credits. Lab fee: $5.00. Prerequisite: ENGL 210 with a grade of "B" or better or permission of the instructor.

ENGL 282 Writing Poetry (W) 5-0-5
This course introduces students to the art and craft of writing poetry. Emphasis is on the student's own work; however, students will also be required to study the works, writing processes, critical commentary on, and oral delivery of established poets, male and female, traditional and nontraditional, ancient and modern. and from diverse cultures. Students will keep a writer's journal, respond critically to me works of other students, create and revise a chapbook of 8-10 finished poems (12-20) pages by the end of the quarter. Students will present selected poems from the chapbook at a public reading. Course is repeatable to 10 credits. Lab fee: $5.00. Prerequisite: ENGL 210 with a grade of "B" or better or permission of the instructor.

ENGL 283 Writing Plays (SP) **5-0-5**
This course introduces students to the art and craft of writing plays. Emphasis is on the student's own work; however, students will also be required to study the works and writing processes of established playwrights, male and female, traditional and non traditional, ancient and modem, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, create and revise a short play (or an Act or Acts of a longer work) complete enough to be produced by the end of the quarter. Students will present a public reading or performance of their work. Course is repeatable to 10 credits. Lab fee: $5.00. Prerequisite: ENGL 210 with a grade of "B" or better or permission of instructor.

ENGL 284 Writing Creative Nonfiction (SU) **5-0-5**
This course introduces students to the art and craft of writing creative nonfiction (feature writing, travel writing, memoirs, personal profiles, biographies, public relations, etc.). Emphasis is on the student's own work; however, students will also be required to study the works, writing processes, critical commentary on, and oral delivery of established nonfiction writers, male and female, traditional and nontraditional, ancient and modem, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, create and revise a complete longer work (or a combination of shorter pieces) of at least 3,000-4,000 words by the end of the quarter. Students will present a public reading of their work during the quarter. Course is repeatable to 10 credits. Lab fee: $5.00. Prerequisite: ENGL 210 with a grade of "B" or better or permission of the instructor.

ENGL 285 Writing to Publish (SP) 5-0-5
This course introduces students to procedures for preparing a manuscript for marketing and publication. Students select a work or works for publication fro a genre (fiction, poetry, drama, literary nonfiction), submit manuscripts for peer review at least three times during the quarter, and revise and edit their work throughout the quarter. Students research a market for their work, write the appropriate query or cover letter, and prepare the manuscript for submission. Since length requirements for manuscripts vary according to genre and target market, the instructor will determine the length requirement for successful completion of the course. The final exam for the course is a completed and corrected manuscript package ready for mailing. Students will also have the opportunity to give a public performance of their work. Course is repeatable to 15 credits. Lab fee: $5.00. Prerequisites: ENGL 281, ENGL 282, ENGL 283, or ENGL 284 with a "B" or better or permission of the instructor.

ENGL 290 Capstone Experience in English (On Demand) 2-2-3
A capstone course focusing on English. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in a summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00. Prerequisites: 75 hours completed toward the degree including 10 credits in ENGL courses beyond ENGL 220 or equivalent.

ENGL 297 - 298 - 299 Special Topics in English (On Demand) **1-5**
Special topics in English language or literature designed to meet specific needs. Prerequisites vary.

English as a Second Language (ESL)

ESL 044 Fiction for Non-Native Readers 4-0-4
This course gives ESL students an opportunity to read various authentic (unedited) literary works in English including short stories, plays and short novels. The students will explore the settings, structures, plot and character development. Students will build vocabulary as well as analyze cultural settings. Analysis will come through journals, presentations, group discussions and class discussions. Lab fee: $4.00. Prerequisite: ESL 099 or placement into ESL 100.

ESL 090 Critical Skills for College Success 2-2-3
This course prepares non-native students to achieve their academic goals at a US college or university. They will examine US classroom procedures, professor-student interaction, thinking styles and learning styles. They will also be trained in techniques for effective reading, writing and critical thinking in a variety of academic fields. Student will demonstrate these techniques through the completion of mini-projects derived from a variety of courses currently offered at CSCC. Students' final project will be derived from an entry level course in their chosen field of study. Lab fee: $3.00. Prerequisite: ESL 099 or placement into ESL 100.

ESL 092 Basic Oral Communication 2-2-3
This course will introduce students to the American sound system and quickly expand their working oral vocabulary. It will also equip students to perform viral language-based functions on campus and in the community. The course will be based upon daily classroom participation and the satisfactory completion of each language function. Lab fee: $3.00. Prerequisite: ESL 097 (may be taken concurrently) or placement into ESL 097.

ESL 093 Intermediate Oral Communication 2-2-3
This course will help students to increase their effectiveness in social, academic and professional interactions in a U.S. setting. Students will expand their working oral vocabulary, master useful American idioms and improve their pronunciation. Students will examine and practice the conventions of contemporary American communication: both verbal and nonverbal. The course will be based upon daily class participation, oral presentations and also evidence of improvement found through a contrast of audiotaped readings. Lab fee: $3.00. Prerequisite: ESL 098 (may be taken concurrently) or placement into ESL 098.

ESL 094 Advanced Oral Communication 2-2-3
Students will increase their awareness of the values and beliefs that underlie cultural norms in the U.S. Readings on various aspects of contemporary American culture will provide the springboards to information gathering outside of class (through additional reading and interviews with native speakers) in-class discussions and four requited oral presentations. Students will practice standard American pronunciation and intonation and will master useful vocabulary and idiomatic expressions. Lab fee: $3.00. Prerequisite: ESL 099 (may be taken concurrently) or placement into ESL 099.

ESL 095 Public Speaking for Non-Natives (A,W,SP,SU) **1-3-2**
This course will prepare students whose first language is not English to participate effectively in COMM 105, Speech. Students will study and practice public speaking techniques, with particular emphasis on native pronunciation, intonation and delivery. Students will be required to conduct interviews and research in preparation for demonstration and persuasive speeches, presented individually and in groups. Students will receive feedback on their oral production from their instructor and their classmates regularly and will be audio/video taped on occasion. Lab fee: $5.00. Prerequisite: ESL 100 (may be taken concurrently) or placement into ESL 100.

ESL 097 Basic English as a Second Language (A,W,SP,SU) **10-0-10**
Students who already have limited command of the English language build upon their vocabulary and begin to eliminate errors through the study of basic grammar, readings, guided discussions, and written and oral exercises. Lab fee: $5.00. Prerequisite: Placement test. Credit will not count toward graduation in any degree program.

ESL 098 Developmental English as a Second Language (A,W,SP,SU) 10-0-10
Students will continue to develop their reading, writing, listening and speaking skills through the study of intermediate grammar, readings, guided discussions, and written and oral exercises. Lab fee: $5.00. Prerequisite: "C" in ESL 097 or placement. Credit will not count toward graduation in any degree program.

ESL 099 ESL: Reading, Grammar, and Composition (A,W,SP,SU) 10-0-10
Students will prepare for academic course work through the study of advanced grammar, sentence structure, paragraph organization and pre-writing techniques and will respond to college level readings in guided discussions, oral presentations and paragraph length essays. Lab fee: $5.00. Prerequisite: "C" in ESL 098 or placement. Credit will not count toward graduation in any degree program.

ESL 100 English as a Second Language: Composition (A,W,SP,SU) **5-0-5**
Students will polish their writing skill through grammar reviews, written exercises and the study of sentence structure, rhetoric and essay organization. Students will respond to both the content and technique of college level readings. Students will write essays using description, narration, cause and effect and comparison/contrast. Lab fee: $5.00. Prerequisite: "C" in ESL 099 or placement. Credit will not count toward graduation in any degree program.

Environmental Technology (ENVR)

ENVR 101 Introduction to Environmental Technology (A,SP) 3-0-3
An introduction and overview of the environmental technology field. This includes environmental problem discovery and definition, the effects on humans and the natural environment, environmental investigation and response, the regulatory structure that guides environmental projects, and worker health and safety.

ENVR 110 Industrial Pollution Control (W) 2-2-3
An overview of the management, treatment and disposal practices utilized for pollution control. This course covers the nature of pollution and provides an introduction to air pollution control devices, wastewater treatment techniques, solid and hazardous waste management, treatment and disposal, recycling and pollution prevention. Lab fee: $8.00.

ENVR 111 Hazardous Materials Management (A,SP) 2-2-3
An overview of the management practices for hazardous materials and hazardous waste. This includes a review of science and technology, occupation health and safety concerns, regulatory compliance and management practices. Lab fee: $10.00.

ENVR 112 Environmental Computer Applications (W) 2-3-3
Introductory course for Environmental Technology students. This course will provide basic information about computer hardware, software, data communications, operating systems, and popular application packages. Hands-on laboratory experience using the IBM PC and a popular integrated software package is emphasized in the course. Lab fee: $15.00. Prerequisite: MATH 102 and CPT 101 or permission of instructor.

ENVR 120 Environmental Aspects of Soil (A,SP) **2-2-3**
This course will include an introduction to the analysis of soils behavior and the soil classification methods used in the environmental industry. Soil characteristics will be explored by means of laboratory examination and elementary testing techniques. Lab fee: $10.00. Prerequisite: GEOL 101 or GEOL 121.

ENVR 130 Environmental Laws and Regulations (W,SU) 4-2-5
A study of American political institutions and a brief history of the American environmental movements and the resulting environmental regulations. A study of local, state, and federal codes and regulations as they apply to the handling, treatment, storage, and disposal of hazardous materials and wastes. Emphasis on NEPA, The Clean Water and Air Acts, the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). Lab fee: $10.00.

ENVR 158 Environmental Analysis (A,SP) 2-2-3
A study of environmental site assessments, including Phase I ESA's for real estate transactions and environmental assessments for environmental impact statements. Environmental regulations and guidance documents will be applied in an analysis of a specific project site. Lab fee: $12.00.

ENVR 220 Environmental Chemistry (W,SU) 4-3-5
Effective solutions to environmental problems require an understanding of the chemical processes that occur in the environment. This course provides a basic knowledge of environmental chemistry including ground water chemistry, soil chemistry, analytical techniques, and the basics of chemical fate and transport, and quality assurance/quality control. Related laboratory work and demonstrations. Lab fee: $18.00. Prerequisite: CHEM 111 with a grade of "C" or higher.

ENVR 222 Water Treatment Techniques (W,SU) 2-2-3
This course is designed to permit the student to attempt the State of Ohio Class One Water Operator's exam. The course will emphasize water quality criteria, reasons for water treatment, and laboratory processes. Practical experience will be emphasized. Lab fee: $20.00. Prerequisite: High school chemistry or CHEM 100, MATH 102 or equivalent, or by permission of instructor.

ENVR 223 Wastewater Treatment Techniques (W,SU) 2-2-3
This course is designed to provide the training to permit the student to apply to the State of Ohio Class One Wastewater Operator exam. The course will emphasize types of treatment, equipment, hygiene and public health aspects, sewer systems, and laboratory processes. Practical experiences will be emphasized. Lab fee: $20.00. Prerequisites: High school chemistry or CHEM 100, MATH 102 or equivalent, or by permission of instructor.

ENVR 224 Environmental Hydrology (A,SP) 2-2-3
Study of the occurrence, movement, and behavior of water in the hydrologic cycle. Introduction to the concepts of controlling the movement of surface water and ground water, and the ways in which these resources can be exploited and/or contaminated. Lab fee: $15.00. Prerequisite: MATH 102.

ENVR 250 Subsurface Investigation Techniques (A,SP) 4-3-5
A course covering the techniques and methods used in environmental field investigations. Topics include the environmental regulatory framework, project coordination, drilling techniques, soil sampling techniques, monitoring well installation, field instrument calibration and use, environmental sampling, supplemental techniques and decontamination of field equipment. Lab fee: $20.00. Prerequisite: GEOL 101 or GEOL 121.

ENVR 252 Health and Safety Training for Hazardous Waste Operations (W,SU) 2-3-3
(40-Hour OSHA Training)
Satisfies CFR Part 1910.120(e) under SARA. A health and safety training course for individuals who may be involved in the investigation, remediation and operation of hazardous waste sites. Topics include hazardous materials chemistry, toxicology, air monitoring instrumentation, air purifying respirators, self-contained breathing apparatus, supplied air respirator systems, protective clothing, decontamination, simulated hazardous materials response incidents, and appropriate problem sets. Lab fee: $100.00

ENVR 253 Environmental Systems Analysis (A,SP) 2-2-3
A course introducing environmental control systems and practical applications of their operation and maintenance. Attention to piping and instrumentation diagrams, flow diagrams, reading strip charts, flow measurement and process control. Lab fee: $18.00. Prerequisite: ENVR 110 with a grade of "C" or higher.

ENVR 254 Subsurface Restoration Techniques (A,SP) 4-3-5
This course will address subsurface remediation techniques and treatment technologies used at hazardous waste sites. Course topics include the regulatory framework for subsurface restoration, clean-up goals, basic contaminant chemistry and transport, supplemental subsurface investigative techniques, soil and groundwater remediation techniques and water and air treatment technologies. Lab fee: $20.00. Prerequisites: ENVR 250 with a grade of "C" or higher.

ENVR 255 Air Monitoring (W,SU) 2-2-3
This course focuses on EPA methods for stack sampling of various air contaminants, operation and maintenance of contiguous emissions monitors, and industrial air pollution control options. An introduction to applicable permitting and reporting requirements will also be included. Lab fee: $23.00.

ENVR 256 Hazardous Materials Refresher Training (A,W,SP,SU) **1-0-1**
This course provides refresher training for site workers and emergency operators who have completed the 24 or 40-hour courses and complies with the 29 CFR 1910.120(q) refresher training requirements. Emphasis is placed on practical exercises and review of relevant changes in OSHA requirements. Successful completion of the course is based on classroom participation and completion of a written assignment. This is a repeatable course. Lab fee: $50.00.

ENVR 290 Work Experience Seminar (SP) **1-0-1**
This course will prepare students for the summer Field Co-op Experience (ENVR 291) and will address employment opportunities in the environmental field, resume writing, interviewing techniques, health and safety at the job site, environmental and work ethics, and conflict resolution. The student taking this class should have completed at least three quarters in the Environmental Technology program. This course is graded as Satisfactory/Unsatisfactory.

ENVR 291 Field Co-Op Experience (SU) 0-40-4
Off-campus work experience in environmental services related paid employment that augments formal education received in the technology with actual work conditions and job experience. "N" credit will not be allowed for this course. Prerequisite: ENVR 290

ENVR 297 Special Topics on Environmental Tech. (On Demand) **1-0-1**
Special topics from the environmental industry designed to meet specific needs.

ENVR 298 Special Topics on Environmental Tech. (On Demand) **1-2-2**
Special topics from the environmental industry designed to meet specific needs.

ENVR 299 Special Topics on Environmental Tech. (On Demand) 2-2-3
Special topics from the environmental industry designed to meet specific needs.

Executive Office Administration
(See Office Administration, Administrative Assistant)

Facility Management (FAC)

FAC 111 Introduction to Facility Management (A,W,SP,SU) **3-0-3**
A course designed to familiarize the student with the fundamental areas of knowledge comprising facility management, including ethical and legal responsibilities, the relationship of the facilities unit with other organizational units, and the history, concepts, standards and responsibilities of the profession. Lab fee: $5.00.

FAC 150 Operations & Maintenance (W,SP,SU) **2-2-3**
A course designed to convey to the student, an understanding of the importance, procedures, policies, and practices required to oversee acquisition, installation, operation, maintenance, and disposition of building systems, furniture, equipment, grounds, and other elements of a facility. Lab fee: $10.00. Prerequisite: FAC 111 or permission of instructor.

FAC 246 Telecommunications (A,SP) **1-2-2**
A study of the techniques, theory, and devices used for communication in computer systems, network, and telecommunications, with an emphasis on facility needs and problems arising with communications and management of the systems. Lab fee: $12.00. Prerequisites: FAC 111 or permission of instructor.

FAC 250 Computers in Facility Management (W,SU) **1-2-2**
A study of the computer programs and techniques in current use for Facility Management, including those used in Communication, Engineering and Management Lab fee: $15.00. Prerequisites: CPT 101 and FAC 111, or permission of instructor.

FAC 260 Problems in Facility Management (W,SP) 2-4-4
A comprehensive capstone course for the facility management student, blending academic theory with practical skills. Problem solving and teamwork in reaching solutions to real problems is emphasized. Students will present their reports and findings to an academic panel and/or real clients. Lab fee: $10.00. Prerequisites: FAC 150, HRM 220, REAL 221, BMGT 211 or permission of instructor.

FAC 270 Programming and Space Planning (W,SU) 2-3-3
Students work with the analysis and translation of physical needs into space and resource requirements, becoming familiar with typical layouts, physical space constraints, code implications, costs, construction sequencing, procurement lead time, design goals, and working with consultants. Lab fee: $10.00. Prerequisites: ARCH 111, CMGT 121, ARCH 232, or permission of instructor.

Finance (FMGT)

FMGT 101 Personal Finance (A,W,SP,SU - DL) 4-0-4
This course presents a lifetime program of money management for the individual. Such topics as: budgets, savings, job search, buying a house, insurance, mutual funds, stock market, real estate investments, taxes, and estate planning, are covered. Students will be able to write a basic personal financial plan. Lab fee: $3.00.

FMGT 105 Insurance Principles (A) 3-0-3
This course covers the evaluation of the financial impact of risk exposure and how to manage the risk exposure through the intelligent use of insurance products. Topics presented include: nature of risk, insurance contracts, life and health insurance, annuities, property and liability insurance, and government regulation of insurance. Lab fee: $3.00. Prerequisite: FMGT 101.

FMGT 121 Introduction to Commercial Credit (A,) 3-0-3
A basic course in commercial credit and collections. Studies will be centered on the establishing of the credit department, nature and function of credit, various types of credit, sources of credit, sources of credit information, analysis of information, factors of risk. This course is offered by the National Association of Credit Management.

FMGT 130 Small Business Finance (SP) 3-0-3
A study of the financial aspects of small business entrepreneurship. Many of the techniques that are found in a traditional corporate finance course are applied in this course to the small business. Prerequisite: This course is open to Small Business Management majors only. Lab fee: $3.00

FMGT 201 Business Finance (A,W,SP,SU - DL) **5-0-5**
An introduction to the principles of financial management of private business firms. Topics covered include: financial analysis, financial planning, working capital management, financial leverage, sources of financing, capital budgeting and capital markets. Lab fee: $3.00. Prerequisite: ACCT 101 or higher.

FMGT 202 Money and Banking (A,W) **5-0-5**
A study of the operation, organization, and economics of U.S. monetary and banking systems. Current trends and problems are also covered. Lab fee: $3.00.

FMGT 211 Investments (A,W,SP) 4-0-4
This course examines the investments for the individual with emphasis on the securities markets. Topics presented include: risk and return trade-offs, sources of investment information, stocks, bonds, mutual funds, options, and tax considerations. Lab fee: $3.00.

FMGT 212 Advanced Credit Analysis (SP) 3-0-3
This course is offered by the National Association of Credit Management and covers both commercial as well as consumer credit administration. Prerequisite: FMGT 121.

FMGT 221 Credit Administration (W) 4-0-4
Analytical study of credit control, and management of collections. Topics include; management and analysis of consumer credit, business credit, government credit, and foreign credit. Lab fee: $3.00.

FMGT 232 Principles of Banking (+) 4-0-4
Presents the fundamentals of bank functions in a descriptive fashion so that the beginning banker may acquire a broad and operational perspective. Banking is increasingly dependent upon personnel who have the broad perspective so necessary for career advancement.

FMGT 237 Law and Banking (+) 4-0-4
This course is an introduction to basic U.S. law, presenting the rules of law which impact banking. Topics include jurisprudence, the court system, civil procedure, contracts, quasi-contracts, property, torts, crimes, agencies, partnerships, corporations, sales of personal property, commercial paper, bank deposits, collections documents of title, and secured transactions. The uniform commercial code is also covered.

FMGT 241 Estate Planning 3-0-3
This course covers the procedures to transfer assets at death with the fewest complications, with the fewest taxes, and at the least cost to all parties. Topics presented include: estate taxes, avoiding probate, revocable living trusts, gifts, life insurance, annuities, short term trusts, and totten trusts. Lab fee: $3.00. Prerequisite: FMGT 101 or advisor approval.

FMGT 251 Finance Research (A,W) 2-0-2
The student receives exposure to current developments in finance and economics through projects and research papers. Designed to serve as a capstone course for graduating students. Lab fee: $3.00. (+)These courses are offered by the American Institute of Banking and are open to Columbus State students for credit.

Fire Science (FIRE)

FIRE 101 Introduction to Fire Protection 3-0-3
Survey of fire protection; the role, history and development of the fire service. Other topics: fire equipment and apparatus, communications, records and reports, insurance rating systems, and the law as it pertains to the fire service.

FIRE 102 Prevention Practices 3-0-3
An overview of inspection programs, with emphasis on tire protection procedures and practices. Relationships of prevention programs with government, private sector, codes and arson is discussed.

FIRE 104 Fire Investigation Methods (SP) 3-2-4
A study of the principles of tire investigations including recognition, preservation, collection, and presentation of arson evidence. Arson laws, interrogation of witnesses, application of photography, preparation of reports and adjustment of insured losses. Estimation of loss due to tire, smoke and water. Lab fee: $5.00.

FIRE 106 Protection Systems 2-2-3
The design and operation of fire protection systems, including water distribution, direction, alarm and watchman services and protection systems for special hazards. Carbon dioxide, dry chemical, foam and water spray systems studied in detail. Standpipes and sprinkler systems and methods of reestablishment after use.

FIRE 107 Fire Fighting Practices 4-0-4
Techniques and procedures of fire fighting with emphasis on the role of the individual fire tighter. Methods of extinguishing fires, life saving procedures, special tire fighting equipment, salvage, prevention rekindling and overhauling. Experienced fire fighters having graduated from a fire department academy may receive credit for this course upon recommendation by the local tire department. Lab fee: $5.00. Concurrent: FIRE 212.

FIRE 108 Fire Fighting Command I 3-2-4
Group operations and command strategy for fireground operations. The training of companies and officers to operate as a team. Methods of implementing plans and strategy into tactical operations. Prerequisite: FIRE 205.

FIRE 109 Fire Fighting Command II 0-6-3
Group operations and command strategy at the chief officer level, Preplanning of fire fighting operations, employment of personnel and equipment. Specific tactical problems analyzed. Operations and tactics including mutual and outside aid in tire fighting. Lab fee: $3.00. Prerequisite: FIRE 108.

FIRE 110 Fire Safety Education 2-2-3
A course designed to generate methods and techniques for providing an education program in fire safety for a community, for a school, or for a municipality. Lab fee: $5.00.

FIRE 115 Community Affairs I-local Government 3-0-3
The role of local government in the community; its structure, organization, responsibility. Local government politics and the community. Methods and principles of local budgeting. Urban, suburban, rural and community structure.

FIRE 116 Personnel Training Methods (SP) **1-4-3**
Methods of instruction, application of audio visual equipment, testing and evaluation, and preparation of materials are introduced. Special emphasis is placed upon planning an organizational training program. Lab fee: $3.00.

FIRE 117 Firefighter I & II (SU) **8-14-12**
The course consist of all the performance and knowledge objectives in the current NFPA Standard 1001 for firefighter I and II including but not limited to: fire department organization, Safety, fire alarm, fire behavior, extinguishers, rope, ladders, hose streams, fire control, salvage and rescue. This course is required for full-time firefighters. The content of this course will enable students to obtain State of Ohio certification for Firefighter I & II levels (240 hour firefighter course).

FIRE 151 Fire Prevention Codes 3-2-4
A study of important building construction and tire safety codes with emphasis on fire prevention and enforcement. Prerequisite: FIRE 102.

FIRE 153 Fire Hydraulics 3-2-4
An introduction to hydraulic theory. Drafting of water, velocity and discharge, friction loss, engine and nozzle pressure, fire streams, and pressure loses in flowing hydrants. Practice in application of hydraulic principles. Flow and pump testing as well as study of water distribution. Lab fee: $2.00.

FIRE 202 Hazardous Materials II 3-2-4
A study of the properties and behavior of various hazardous chemicals in our environment. An overview of the physical and chemical characteristics of toxic. flammable, and reactive substances in the forms of solids, liquids, and gases combined with practical application of methods for responding to emergencies involving such materials. Emphasis will be placed on safe approach to incident scenes, positive identification of materials, and accurate analysis of the hazards presented by hazardous materials. Simulation and tabletop emergency exercises will be utilized throughout the course. Lab fee: $6.00. Prerequisite: LAWE 268.

FIRE 203 Legal Aspects of Fire Protection (A) 3-0-3
Introduction to law, civil and criminal actions, the judicial system. Municipal liability for acts of the fire department and its members. Pensions, salary and compensation and termination. Duty owned by the public to members of the fire department. The initiation, operation, and liability and legal aspects of mutual aid, primary response contracts, and private contracts. Lab fee: $5.00.

FIRE 204 Fire Service Rating System (Fire Insurance) **1-2-2**
The history of fire insurance. The principles and practices of inspections by the insurance services office. The rating system as used by I.S.O. to determine premium rates. Extensive study of methods used by I.S.O. to classify public protection and individual property fire suppression.

FIRE 205 Fire Service Company (Supervisory Methods) 3-0-3
Supervision techniques applied to public service personnel. The study of the need for job descriptions and job procedures, reports, oral and written directions, work evaluation, meetings, discipline and conference leaders. Methods of instruction effective in teaching and motivating personnel.

FIRE 206 Administration of a Fire Department 3-0-3
The contemporary fire protection agency, its functions, structure, and operational techniques. Principles of organization, staffing, budgeting, controlling, coordinating, planning, research in fire protection. The development and maintenance of liaison and cooperation between tire and police departments. Prerequisite: FIRE 107.

FIRE 207 Customer Services for the Fire Services (Public Relations) 3-0-3
The psychology of relations between public service employees and the general population. Policies and practices of community relations as they apply to public service agencies. Current national and local community problems.

FIRE 208 Fire Code Blueprint Analysis 2-2-3
A course designed to allow a tire prevention officer or safety officer to read, understand, and analyze construction blueprints so that they may be able to enforce tire safety and building codes. Prerequisite: FIRE 210.

FIRE 209 Fire Fighting Problems (W) 3-0-3
Procedures of fighting aircraft tires. Procedures of fighting tires involving hydrocarbons, and lp gas. Hazards of electrical emergencies and proper procedures of handling them. Examples of disaster and stress involving emergency personnel. Lab fee: $3.00. Prerequisite: FIRE 107.

FIRE 210 Building Construction 4-0-4
An introduction to the present and past practices of building construction. Tells of important standard elements of buildings, the hidden dangers of old and new buildings, what influences structural stability of walls in fires, and how to look for and judge hundreds of structural dangers. Relationships between construction materials and tire damage of a building. Lab fee: $2.00.

FIRE 212 Fire Fighting Practices Laboratory 0-4-2
Laboratory to accompany 107 fire fighting practices. Lab fee: $2.00. Concurrent: FIRE 107.

Food Service/Restaurant Management Major (See Hospitality Management)

French (FREN)

FREN 101 Elementary French I (A,W,SP,SU - DL) **5-0-5**
Introduction to the fundamentals of the French language with practice in listening, reading, speaking, and writing. Includes selected studies in French culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisite: Placement into ENGL 101.

FREN 102 Elementary French II (A,W,SP,SU - DL) **5-0-5**
Continuation of FREN 101, with further development of listening, reading, speaking, and writing skills and further study of French culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisites: FREN 101 with a grade of "C" or better or by placement exam.

FREN 103 Intermediate French I (DL) **5-0-5**
Continued study of the French language and development of listening, reading, speaking, and writing skills. Readings from contemporary French culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisite: FREN 102 with a grade of "C" or better or by placement exam.

FREN 104 Intermediate French II (DL) **5-0-5**
Reading and discussion of French short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of French culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisite: FREN 103 with a grade of "C" or better or by placement exam.

FREN 290 Capstone Experience in French (On Demand) 2-2-3
A capstone course focusing on French. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $5.00.

FREN 299 Special Topics in French (On Demand) **1-5**
Detailed examination of selected topics in French. Lab fee: $2.00. Prerequisites vary.

Geography (GEOG)

GEOG 200 World Regional Geography (A,W,SP,SU) **5-0-5**

This course serves as an introduction to the study of regional geography at the global scale. Students will become familiar with the basic concepts in geography, the topic of uneven development. and the factors (landforms, climate, population, resources, culture, economic activity, and historical evolution) that affect uneven development within and among all the world's major regions. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

GEOG 290 Capstone Experience in Geography (On Demand) 2-2-3

This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing a baccalaureate degree program in geography. Course requirements include the completion and presentation of a research project that relates to the students' academic interests after reviewing research methodologies and findings in geography; assembly of a portfolio that covers their academic career at Columbus State Community College, and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00. Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree with five credit hours in geography.

GEOG 293 Independent Study in Geography (On Demand) **1-5**
An individual, student-structured course that examines a selected topic in geography through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab fee: $5.00. Prerequisite: Permission of the instructor and the Chairperson.

GEOG 299 Special Topics in Geography (On Demand) **1-5**
A detailed examination of selected topics of interest in geography. Lab fee: $5.00. Prerequisites vary.

Geology (GEOL)

Students must complete 60% of the laboratories in a course to receive credit. Courses in this area may require additional hours outside of the scheduled class times.

GEOL 101 Earth Systems I: Geologic Environment (A,W,SP,SU) 4-3-5
A general geology course covering the materials of the Earth's crust, the processes that produce and modify them. and the development of the Earth and its life forms through time. Related laboratory and demonstrations. Lab fee: $21.00. Prerequisite: Placement into ENGL 101. Not open to students with credit for GEOL 121.

GEOL 121 Physical Geology (A,W,SP,SU) 4-3-5
This course covers geologic processes and the development of land forms. Topics include the development of the Earth, the nature and origin of minerals and rocks, land forms and the agents that produce and modify them, structural features of the Earth's crust, and the environmental effects of changes in the Earth. Related laboratory and demonstrations. Lab fee: $20.00. Prerequisite: MATH 103 and placement into ENGL 101.

GEOL 293 Independent Study in Geology (On Demand) **1-5**
Detailed examination of selected topics of interest in geology. Lab fee: $6.00. Prerequisite: permission of instructor.

GEOL 299 Special Topics in Geology (On Demand) **1-5**
Detailed examination of selected topics of interest in geology. Lab fee: $6.00. Prerequisite: Permission of the instructor.

Gerontology (GER)

GER 101 Social Gerontology (A,SP) 3-0-3
This course offers the student an overview of the social, psychological and physical aspects of aging. Visits with a senior friend provide an opportunity to establish a relationship with an older adult. Lab fee: $3.00. Concurrent or Prerequisite: ENGL 100.

GER 103 Interpersonal Communication in Human Services (A,W,SP,SU) 4-0-4
This course teaches principles of interpersonal communication for individuals working in Human Services. This course is structured. on the premise that the most important resource individuals bring to an helping relationship is their ability to remain self-aware and to communicate honestly and directly. Also taught are managing anger, conflict resolution, and assertive behavior. This course is participatory and interactive. Lab fee: $4.00. Prerequisite: ENGL 101.

GER 105 Human Services for the Elderly (W) 4-0-4
This course provides the student with an in-depth knowledge of the informal and formal community resource systems. Current concepts of service delivery, planning and evaluations are covered. Available housing is analyzed from the perspective of person-environment fit. Lab fee: $3.00. Prerequisites: GER 101.

GER 109 Social Work with the Elderly (SP) 5-0-5
This course teaches a problem solving method of social work. The history of social work with the elderly is presented. Values and ethical dilemmas are explored. Principles of casework are presented and applied to the aging individual. Diversity within the aging population is emphasized. Lab fee: $3.00. Prerequisites: GER 105. GER 103 and ENGL 102.

GER 201 Social Policy and Aging (SP) 3-0-3
A study of the origins of public policy, the legislative process, insurance, financial planning/retirement income, protective services and legal issues. Lab fee: $3.00. Prerequisites: GER 294 and GER 209. Concurrents: GER 191 and GER 192.

GER 203 Family Ecology (A,SU) 3-0-3
Family ecology views the family as an ecosystem and examines its interrelationships with the environment (biophysical, psychosocial, and technological) through processes of perceiving, valuing, spacing and deciding. Emphasis is placed on family organization, family members, and their roles. Lab fee: $2.00.

GER 204 Death and Bereavement (SP) 3-0-3
This course examines death and dying from social, cultural, and life span perspective. Medical ethics, suicide, legal issues, and the funeral industry are analyzed. The processes of bereavement and communicating with and about dying conclude the course. Lab fee: $4.00. Prerequisites: PSY 100 and ENGL 102.

GER 205 Activities Programming for the Elderly in Long Term Care (A,SP) 9-0-9
This course is the ninety hour programming course accepted by the State of Ohio Health Department for activity training. This course uses the national curriculum published by the NCCAP. A certificate of completion from Columbus State Community College will be awarded after the successful completion of this course. Lab fee: $3.00.

GER 206 Senior Center Management (A) 5-0-5
This course is designed to provide the information necessary to manage a Senior Center. The student will develop an overall administrative plan reflecting the broad range of seniors' needs in our complex and changing environment. Lab fee: $3.00.

GER 207 The Older Woman (W) 3-0-3
This course presents the psychosocial, biological, and economic status of older women in our culture. Lab fee: $4.00. Prerequisites: GER 209 and GER 292.

GER 209 Aging and Mental Health (A) 3-0-3
This course provides an overview of mental health issues affecting older adults, assessment techniques and diagnostics criteria will be reviewed. Topics include functional disorders, organic disorders and substance abuse. Lab fee: $3.00. Prerequisites: GER 109, GER 192 and PSY 230.

GER 211 Counseling the Elderly (W) 3-0-3
This course provides the student with an understanding of traditional counseling theories, theories specifically for the older adult, appropriate settings for counseling older adults, and the use of self within that relationship. Lab fee: $4.00. Prerequisites: GER 209. GER 292 and PSY 230.

GER 213 Aging and Physical Health (W) 3-0-3
This course provides the student with an understanding of the interactive effects of biological and psychological aging as they occur simultaneously in the human organism. Also included are the common disease processes associated with aging, and their social and emotional ramifications. General decline in functioning, as well as prevention and wellness issues are addressed. Lab fee: $3.00. Prerequisites: BIO 101, GER 101 and GER 192.

GER 214 Aging, Fitness and Exercise (SP) 3-2-2
Young or old, there is no question that physical activity can significantly improve the quality of one's life. But the type and intensity of that activity may change depending on one's age. This course will present the essential information professionals need to provide older adults with safe and effective fitness. programming, from the physiology of aging to the techniques and tools for motivating older adults. Units will include Personal Fitness, Pre-Exercise Screening and Fitness Assessment, Exercise Techniques, and Common Health Challenges Faced by Older Adults. Prerequisites: GET 213 Lab Fee: $10.00

GER 191, 291, 293, 295 Seminar I, II, III, IV (A,W,SP, SU) 2-0-2
Seminar provides students a forum for discussion of practicum experiences, integration of theory and practice, and discussion of current issues related to the elderly. Lab fee: $3.00. All Seminars are concurrent with Practicums.

GER 192, 292, 294, 296 Practicum I, II, III, IV (A,W,SP,SU) 0-14-2
Practicum offers the student opportunities to both observe and work with the elderly in supervised agency settings. Lab fee: $20.00. Practicums are sequential. Prerequisite: GER 105. Concurrents: GER 109. All Practicums are concurrent with Seminars.

German (GERM)

GERM 101 Elementary German I (A,W,SP,SU) 5-0-5
Introduction to the fundamentals of the German language with practice in listening, reading, speaking and writing. Includes selected studies in German culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

GERM 102 Elementary German II (A,W,SP,SU) **5-0-5**
Continuation of GER 161 with further development of listening, reading, speaking, and writing skills and further study of German culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs **and** transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: GERM 101 with a grade of "C" or better or by placement exam. Placement into ENGL 101.

GERM 103 Intermediate German I (On Demand) **5-0-5**
Continued study of the German language and development of listening, reading, speaking, and writing skills. Readings from contemporary Germanic culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: GERM 102 with a grade of "C" or better or by placement exam.

GERM 104 Intermediate German II (On Demand) **5-0-5**
Reading and discussion of German short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Germanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: GERM 103 with a grade of "C" or better or by placement exam.

GERM 290 Capstone Experience in German (On Demand) 2-2-3
A capstone focusing on German. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State and participate in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $5.00.

GERM 299 Special Topics in German (On Demand) **1-5**
Detailed examination of selected topics in German. Lab fee: $2.00. Prerequisites vary.

Graphic Communication Technology (GRPH)

GRPH 110 Survey of Graphic Communications (A,W) 2-4-4
This course provides an overview of the graphic communications industry with an emphasis on the lithographic process. The student is introduced to the history and technological developments in printing, the basic printing processes (letterpress, gravure, lithography, screen, engraving), and key terminology used in the field. Basic skills are also developed during laboratory time. Lab fee: $10.00.

GRPH 111 Black and White Photography (A,W,SP,SU) 2-4-4
An introduction to the principles of continuous-tone photography emphasizing composition, lighting, as well as manipulative functions, operative settings, and focus control of cameras and enlargers; students will also learn to develop their film and make prints. Lab fee: $28.00.

GRPH 112 Introduction to Computer Graphics (A,W,SP,SU) 2-4-4
This course is designed to bring the non-computer user, or one with limited Macintosh experience, to a working level for future coursework in the Graphic Communications Technology curriculum. It enables students to improve their keyboard skills and knowledge of computer hardware, software and industry trends. Specific tasks using an integrated software package (Clarisworks) enable students to improve their knowledge and capabilities in a wide range of computer-related areas. Lab fee: $10.00.

GRPH 122 Electronic Publishing (W,SU) 3-4-5
This course introduces students to electronic publishing software, specifically Quark Xpress with typographical command sequences and manipulation applications. This package is the chosen software of most services bureaus when a high degree of accuracy is required on Macintosh hardware. Quark Xpress imaging and color controls for scanned photographs and drawings are reviewed. Lab fee: $20.00. Prerequisite: GRPH 112.

GRPH 125 Image Assembly (W) 3-4-5
This course provides an understanding of the components and procedures involved in conventional pre-press, especially copy preparation and lithographic stripping. Emphasis is placed on concepts that are applicable to both conventional and electronic pre-press. Students will take lab projects through the copy preparation and stripping stages. Lab fee: $43.00. Prerequisite: GRPH 110.

GRPH 130 Press Operations (SP) 3-3-4
This course covers the lithographic process, press design, press function, press operations, and maintenance and repair. Environment and safety considerations are included. Laboratory work revolves around operations of a sheet-fed offset press. Other printing processes examined include flexographic and gravure. An overview of MSDS procedures is included. $23.00. Prerequisite: GRPH 110.

GRPH 131 Design and Typography (SP) 2-4-4
This course covers the interrelationship among such design elements as balance, proportion, color harmony and the fundamentals of typography and graphic design. Students translate these principles into effective design assignments that are then presented to and evaluated by the class. Lab fee: $10.00. Prerequisite: GRPH 110.

GRPH 132 Paper and Ink (SP) 4-0-4
A study of the two primary materials used in the printing industry, the course examines the history and manufacture of paper and ink, their raw materials, physical characteristics, applications, and their relationships with one another. Also covered are the classifications of and the procedures for estimating and purchasing these materials. Writing a research paper is a required component of the course. Prerequisite: ENGL 102.

GRPH 241 Estimating (A) 3-3-4
This course is a survey of the functions and role of printing estimators, followed by an in-depth study of estimating the costs of paper, ink, one-color sheet fed presswork and flat sheet bindery functions. Calculating wastage and preparing quotations will also be studied. Students will create an efficient production plan for printing a variety of finished products and will be able to estimate the materials and labor costs for performing the operation. Emphasis is on deriving prices from production standards and hourly rate. Lab fee: $15.00. Prerequisites: GRPH 110, GRPH 125, GRPH 130, and MATH 102.

GRPH 242 Image Capture and Conversion (A, W) 2-4-4
This course provides a detailed study of the camera's construction and operation, the technique and procedures of exposure calibration, filter selection, and tonal manipulation. Lab fee: $25.00. Prerequisite: GRPH 110.

GRPH 243 Computer Graphic Illustration (A, SU) 2-4-4
The use of software for technical illustration and typographic manipulations is studied. Special emphasis is placed on its use to generate and create professional quality technical drawings and business graphics. Adobe Illustrator, 7.0 software for the Macintosh is applied in the course. Individual and team projects are emphasized. Lab fee: $20.00. Prerequisite: GRPH 112.

GRPH 244 Quality Control in Graphic Communications (W) 3-3-4
An introduction to the Deming philosophy of management and its implementation in the printing process through the use of statistical process control. Techniques used to identify, measure, and reduce variability are examined with the goal of ensuring quality in both the press and the pre-press production areas. Lab fee: $5.00. Prerequisite: GRPH 110, MATH 102.

GRPH 251 Electronic Imaging (W, SP) 3-4-5
This course combines the fundamental skills introduced in preliminary courses with the new technologies of desktop scanning and separation. The course incorporates such topics as color separation and color proofing for print production. The student works with Adobe Photoshop 4.0 software. Lab fee: $20.00. Prerequisite: GRPH 112.

GRPH 270 Advanced Black and White Photography (W, SU) 2-4-4
This course works with small format (35mm) black-and-white film, with emphasis on camera-light meter calibration and the zone metering system. This course exposes the student to more extensive use of chemistry, lighting, filters, films and printing papers. It is required that each student have a 35mm camera with variable shutter speed and aperture as well as a light meter. Lab fee: $28.00. Prerequisite: GRPH 111.

GRPH 271 Studio Photography (W,SU) 2-4-3
This course revolves around the techniques of black-and-white photography under both studio and location conditions using medium and large format cameras. Emphasis is placed on lighting, subject treatment, and camera manipulation. Lab fee: $28.00. Prerequisite: GRPH 111 and GRPH 270.

GRPH 273 Design II (W) **1-6-3**
Designed as a follow-up to GRPH 131, this course builds upon basic principles of design and place emphasis on synthesizing solutions drawn from these principles. Lab fee: $10.00. Prerequisite: GRPH 131 or permission of instructor

GRPH 278 Photo Lab (A,W,SP,SU) **0-3-1**
The photo lab provides students currently enrolled in other photography courses the opportunity to enhance their film processing and printing technique skills. Must be taken concurrently with GRPH 111, GRPH 270, GRPH 271 or GRPH 281. Lab fee: $50.00.

GRPH 279 Estimating II (On Demand) 1-6-3
A continuation of the study of estimating for lithographic printing while introducing work with multi-color presses, signature work, and prepress operations. Provides an understanding of accurate estimating procedures and the opportunity to apply these procedures in a laboratory situation. The use of computer-assisted software is included. Lab fee: $10.00. Prerequisite: GRPH 241.

GRPH 281 Color Photography (A, SP) 2-4-3
An introduction to color photography with emphasis on camera work and color printing. Students will examine color theory, color vision, light and color, filtration, color correcting and color balance. Through reading, practice and class discussion, students will learn elements unique to color photography. Lab fee: $50.00. Prerequisite: GRPH 111 and GRPH 270.

GRPH 282 Electronic Publishing II (SP) 3-4-5
This course will provide the student with a comprehensive view of electronic prepress practices. The class will deal with issues that give the student an understanding of the processes involved when producing high-end graphic publications. the student will receive hands-on training and a "service bureau" type atmosphere. Lab fee: $20.00. Prerequisites: GRPH 112. GRPH 122, GRPH 243 and GRPH 251

GRPH 284 Presentation Production (SP) 2-4-4
This course provides the student with advanced graphic design and presentation production practices. The student will learn how to produce projects in two- and three-dimensional form. Presentation production guidelines and production tips will be taught from the view of the presenter as well as the person viewing the presentations. Two formal presentations will be required for the completion of this course. Lab Fee: $15.00 Prerequisites: GRPH 122. and either GRPH 243 or GRPH 251.

GRPH 285 Printing Production Management (SP) 2-4-4
This course provides an introduction to production management with a clear emphasis on the printing facility. Organizational theory, plant layout, inventory control, wage policies, equipment purchase, control procedures, production standards, hourly rates and printing trade customs are primary topics. Lab fee: $5.00. Prerequisites: GRPH 241 and BMGT 111.

GRPH 297, 298, 299 Special Topics in Graphic Comm. (On Demand) **1-3**
Detailed examination of a selected topic in graphic communications.

Health Information Management Technology (HIMT)

HIMT 111 Introduction to Health Information Management Tech (ASP) 2-0-2
The student will be introduced to the various roles of the health information management technician within the health care system and professional organizations in which the health information management technician is affiliated. The student will explore the various functions performed under the auspices of health information management and the technology used to perform these functions. Lab fee: $35.00. Prerequisite: Acceptance into the program.

HIMT 112 Internet Applications in Health Care (W,SU) **1-2-2**
This course will provide the student with hands-on experience navigating on the Internet, using electronic mail, posting resumes electronically, and searching data bases and other library resources on the Internet. The student will also use the Internet as a tool for locating information from professional associations/organizations. Lab fee: $10.00.

HIM 113 Managed Care Trends (A,W,SP,SU - DL) 2-0-2
This course will provide students with an understanding of various issues regarding managed care that have been instrumental in the redesign and remodeling of patient care delivery. Topics discussed include: types of plans, analysis of data to determine effects of managed care, evaluation of managed care plans, rules and regulations affecting managed care, implementation of plans, and clinical outcomes management.

HIMT 121 Advanced Medical Terminology (A,W,SP,SU - DL) 3-0-3
The student will study medical terminology with emphasis placed on anatomic, diagnostic, symptomatic, and pathologic terminology as used in the context of medical documents.

HIMT 123 Heath Data Management (A,SU) 2-2-3
The student will be introduced to manual and automated filing systems for active and inactive primary records, indexes, and secondary records as well as the computer based patient record (CPR) and the technology associated with the CPR. Emphasis will be placed on maintenance, filing, retrieval, retention, and destruction of records. The student will also be introduced to the internal and external requirements for establishing, operating, and maintaining various registries such as the following: cancer, trauma, cardiovascular, AIDS/HIV, diabetes, and birth defects. Lab fee: $35.00. Prerequisites: HIMT 111 and completed health statement.

HIMT 132 Introduction to Medical Transcription (W,SP,SU) **1-2-2**
The student will be introduced to word processing equipment used in the transcription of medical reports. The student will begin to master medical transcription using authentic physician dictations to transcribe various medical reports. Practice in English dictation with an emphasis on accuracy. Strongly suggest typing ability of 35 words per minutes. Lab fee: $35.00. Prerequisites: MCT 106, HIMT 121, and HIMT 141.

HIMT 133 Legal Aspects of the Health Record (ASP) 2-2-3
The student will study the policies and procedures for processing health records for legal purposes. The importance of the maintenance of confidentiality of health information (both paper and electronic records and databases), the proper handling of requests for, and the transfer of health information will be discussed. The student will create a database for release of information purposes while considering the procedures for the reporting of health information for use by legal, licensing, certifying, and accrediting agencies. Prerequisite: MCT 106.

HIMT 134 Analysis of the Health Record (A,W,SU) 2-2-3
This course will focus on the polices and procedures required to collect and process health information. Abstracting and reporting procedures for various registries and health information systems (and the technology used for such abstracting) will be discussed. The student will compile health records, follow the flow of the health record within the institution, and apply JCAHO guidelines to various case studies, The student will develop a spread sheet for monitoring incomplete/ delinquent medical records. Prerequisite: MCT 106.

HIMT 141 Pharmacology for HIMT (A,W,SP,SU) 3-0-3
This course will survey the major classifications of drugs. The indications and contraindications for use will be presented. Emphasis will be placed on the correlation between drug therapy and disease. The student will be required to use various desk references efficiently. Prerequisites: BIO 122, or (BIO 161, BIO 169, and BIO 170) HIMT 121.

HIMT 243 Ancillary Health Facilities (SP,SU) 3-0-3
The student will study health information systems in non-hospital health care facilities along with the sources of data for these systems and their uses and users. The appropriate technical aspects and functions within these various systems will be discussed along with the various reporting and accrediting requirements for each of the specific health care facilities discussed. Field trips to various health care facilities will be scheduled. Prerequisites: HIMT 111, HIMT 134.

HIMT 245 ICD-9-CM Coding (ASP) 3-4-5
The student will be introduced to the nomenclature and major classification and indexing systems in ICD-9-CM utilized in coding medical information. Laboratory experiences will emphasize the application of the related skills with accuracy and completeness. Other coding systems will be discussed. Lab fee: $35.00. Prerequisites: BIO 122, or (BIO 161, BIO 169, and BIO 170) HIMT 121.

HIMT 255 CPT-4 Coding (W,SU) 3-4-5
The student will be introduced to ambulatory coding and payment systems emphasizing CPT-4 coding. Laboratory experiences will emphasize the application of the related skills with accuracy and completeness. Lab fee: $35.00. Prerequisites: BIO 122, or (BIO 161, BIO 169, and BIO 170) HIMT 121.

HIMT 256 Clinical Data Analysis (A,W,SU) 3-0-3
The student will apply clinical knowledge as it pertains to health care data management in coding for reimbursement of health care services, the evaluation of practice patterns, the assessment of clinical outcomes, and the analysis of cost-effectiveness of services provided. Prerequisites: HIMT 245, HIMT 255.

HIMT 257 Introduction to Health Statistics (A,SU) 2-2-3
The student is introduced to procedures for property collecting, organizing, displaying, and interpreting health care data to meet the needs of various users while complying with the standards of the health care facility. The users of data can include: the patient, medical staff, nursing and allied health staff, state and federal regulatory agencies, JCAHO, and insurance companies. Prerequisites: MCT 106, HIMT 134.

HIMT 259 Quality and Resource Management (A, SP) 3-2-4
The student will be Introduced to the internal and external requirements for establishing, operating, and maintaining quality improvement and utilization management programs. Methods used in bench marking, credentialing, critical pathways, monitoring and evaluation, occurrence screening, peer review, and risk management will also be discussed. Prerequisites: MCT 106, and concurrent: HIMT 257.

HIMT 265 Medical Reimbursement (A,SP) 2-2-3
This course will provide students with an understanding of how coding systems used in outpatient and inpatient health care settings to obtain payment for health care services. Lab fee: $35.00. Prerequisite: HIMT 245 or HIMT 255 and concurrent: HIMT 245 or HIMT 255.

HIMT 267 Principles of Management (A,SP,SU) 3-0-3
The student will be introduced to the functions related to planning, organizing, controlling, and evaluating human resources and health information management services. Other topics include the direction and documentation necessary for the supervision of personnel.

HIMT 270 Certified Case Manager (W,SU-DL) 3-2-4
This course is designed to provide a review for students enrolled in the HIMT or practicing health care professionals and administrators/managers who wish to become certified as a case managers through the Commission for Case Manager Certification. The five major areas of discussion include: coordination and service delivery, physical and psychological factors, benefit systems and cost benefits analysis, case management concepts, and community resources. Concurrent HIMT 296 or permission from the instructor.

HIMT 271 Cancer Registries (W,SU) 3-2-4
This Course serves as the didactic study for students enrolled in the HIMT or credentialed Registered Record Administrators (RRAs) and Accredited Record Technicians (ARTs) seeking eligibility to write the exam for Certified Tumor Registrars. Concurrent: HIMT 296 or permission from the instructor.

HIMT 272 Advanced Medical Transcription Lab (W,SU) **1-6-4**
The student will receive extensive practice of transcribing operative reports, diagnostic procedures, surgical discharge summaries, radiology, and pathology reports along with other medical reports. Topics discussed include: equipment, home-based transcription, outsourcing, and other management issues relating to medical transcription. Lab fee: $35.00. Prerequisite: HIMT 132.

HIMT 274 Issues in Health Information Management Technology 2-0-2
This special topics course is designed to allow the student to research and develop an understanding of health information management issues unique to the interests of the student and for which there is no other course available, the content of which will address such issues. This course is offered on an independent study basis only. Prerequisite: permission of instructor.

HIMT 291 Health Information Management Seminar (W,SU) 3-0-3
Group discussion of clinical experiences and analysis of the components of health information management services. Discussion of current trends, technology, and issues affecting the health information management profession. Preparation for the national certification exam. Prerequisite: HIMT 294. Concurrent: HIMT 296.

HIMT 292 Clinical Practicum I (W,SU) **0-14-2**
Students are assigned to area health are facilities to work under the supervision of facility personnel. Students will obtain exposure to actual working conditions and gain experience in various aspects of health information management services. Prerequisites: MCT 106, HIMT 123, HIMT 133, HIMT 134. Concurrent: HIMT 245 or HIMT 255.

HIMT 294 Clinical Practicum II (A,SP) **0-14-2**
Student are provided with practical applications of the knowledge and techniques needed to perform various functions in a health information environment. Prerequisites: HIMT 257, HIMT 292. Concurrent: HIMT 259 and HIMT 245 or HIMT **255.**

HIMT 296 Clinical Practicum III (W,SU) **0-14-2**
Continued clinical experience in health information services. Prerequisites: HIMT **294.**

Heating Ventilating & Air Conditioning Technology (HAC)

HAC 141 Principles of Refrigeration (A,W,SU) **3-3-4**
A basic refrigeration cycle theory course covering heat thermodynamics, temperature -pressure relationships, mechanical operations of refrigeration equipment and representative application and selection data for class I refrigerants. Lab fee: $10.00.

HAC 152 Instrumentation/Combustion Process (A,SP,SU) **2-4-4**
A course about basic combustion processes using all the fossil fuels and psychrometric chart work to track the thermal heat transfer. The instruments used to test these processes will also be explained along with the fan laws and psychrometric chart procedures. Instruments used in energy auditing are then explained and preventative maintenance programs written. Lab fee: $15.00.

HAC 161 Hand Tools Laboratory (W,SP,SU) **2-4-4**
An entry-level course building elementary skills in brazing, soldering, threading, cutting, swaging, and other skills that relate to service, installation and maintenance processes in the HAC field. Basic hand tools and meters will be demonstrated and used in lab exercises. Lab fee: $15.00.

HAC 183 HAC Wiring Circuits I (A,W,SP) **2-4-4**
This course is designed to teach a new student how to read, draw, interpret and understand residential heating and cooling wiring diagram symbols, devices and wire size identification, basic circuit distribution concepts and schematic applications of same. Lab fee: $10.00.

HAC 222 Load Calculations I (A,W,SP,SU) **2-4-4**
This course is a comprehensive study of the fundamentals of environmental conditioning, energy consumption and operating cost analysis, the properties of air, insulation materials, heat loss and gain calculations, to include the methods of air-conditioning, heating and ventilation. Load calculations will be performed using the applicable ACCA manuals and the Right-J, Windows Version 2, computer software program. Lab fee $12.00. Prerequisite: MATH 102.

HAC 231 Load Calculations II (A,W) **z-4-4**
A course covering commercial heat gain/loss calculations, design of systems, and selection of equipment. The systems used in commercial applications will be discussed and compared, along with correct balancing procedures. The factor of sound as it applies to these types of systems will also be included. This course is one of six that prepares the student to take the HAC Contractor's License Exam. Lab fee: $12.00. Prerequisite: HAC 222.

HAC 235 Field Co-Op Experience (SU) **0-40-4**
Off-campus work experience in construction, consulting engineering or construction related paid employment. that augments formal education received in the technology with actual work conditions and job experience. "N" credit will not be allowed for this course. Lab fee: $15.00. Prerequisites: CMGT 290 and permission of instructor.

HAC 242 HAC Mechanical Standards/Safety (W,SP) **3-2-3**
A basic introduction to HAC safety considerations, first aid, and CPR as well as emergency procedures for on-the-job accidents. An introduction to the various codes that effect the workplace and jobsite, such as OSHA, NFPA, state and local building codes. NEC, energy codes and ASHRAE standards will also be covered. Lab fee: $12.00. Prerequisites: HAC 112, HAC 141 and HAC 152.

HAC 243 Air Conditioning Systems (SP,SU) **2-6-4**
A course designed for the student with a fundamental knowledge of the refrigeration cycle. Previous training in refrigeration theory, wiring diagrams, control circuits, and tools used in the trade are necessary to enroll in this course. The course is designed around hands-on training and testing of the various component parts of a vapor compression split system. Lab fee: $20.00. Prerequisites: HAC 141, HAC 161, HAC 112, HAC 183 and HAC 253.

HAC 244 Heat Pump Systems (A,W,SP) **2-6-4**
A course designed for the student with a fundamental knowledge of the air conditioning and heating processes. Previous training in refrigeration cycle, wiring diagrams, control circuits, and tools used in the trade are necessary to enroll in this course. The course is structured around hands-on training on the various component parts of an air cycle heat pump system. Lab fee: $20.00. Prerequisites: HAC 112, HAC 141, HAC 161, HAC 183 and HAC 253.

HAC 253 Automatic Controls I (A,W) **2-3-3**
A course introducing HAC residential and light commercial control systems and the components that make up the systems. Emphasis will be placed on operators, sensors, controllers and various pneumatic and electrical devices used in modem control systems along with the logic used to develop their control sequences. Lab fee: $20.00. Prerequisites: HAC 141, HAC 152 and HAC 183

HAC 254 Heating Systems (A,W) **2-6-4**
A course designed for the student with a fundamental knowledge of heat transfer characteristics and air movement properties. The course is designed around hands-on training and testing of the various component parts and accessories that make up gas, electric and fuel oil type forced air furnaces, along with accessories such as humidifiers, air filtration systems, and set-back thermostats. Lab fee: $20.00. Prerequisites: HAC 152, HAC 161 and HAC 183.

HAC 256 Automatic Controls II (W,SP) **1-5-3**
A hands-on laboratory course designed to build practical understanding of control circuit logic and sequence of operation theory. Representative circuits from major environmental control devices employing various forms of energy will be included in the lab exercises. Lab fee: $15.00. Prerequisite: HAC 253.

HAC 258 Pneumatic Controls I (SP) **2-4-4**
This course is designed to take a senior level HAC student and teach him/her the fundamentals, installation practices and common application parameters of representative pneumatic controls systems. Lab fee: $15.00. Prerequisite: HAC 152.

HAC 263 Energy Management (W,SP) **2-3-3**
An overview of the world energy supply with both renewable and nonrenewable types being investigated. Attention will be given to building energy control systems/equipment and survey/calculation techniques. Analysis and decision making of energy policy along with computer simulations, conservation measures and systems will be utilized to conserve energy. A glossary of EM terms will be assigned. Lab fee: $15.00. Prerequisites: HAC 152 and HAC 231.

HAC 266 Advanced Problems (A,W,SP,SU) **0-8-4**
A simulation that will allow the student to use their educational knowledge in a problem or problems that emphasizes the design or practical service aspects of a heating and cooling system. The instructor will need to give prior approval of the project or projects to be completed by the student. A tutorial course form must be completed by the student. Lab fee: $8.00. Prerequisite: Permission of instructor,

HAC 284 HAC Wiring Circuits II (W,SP) **2-4-4**
This course will concentrate on lab experiments designed to teach a student how to properly wire up typical heating and cooling devices into working circuits. Devices such as motors, controllers, contactors, compressors and safety devices will be covered. Lab fee: $15.00. Prerequisite: HAC 183.

HAC 285 HAC Electronic Controls I (A) **2-4-4**
This course uses basic electronic knowledge from EET 101 and EET 102, plus electrical knowledge from HAC 183 and HAC 284 to build a basic understanding of HAC solid state computer controls. This theory course will cover controllers, sensors, relays and HAC electronic operational devices. Lab fee: $10.00. Prerequisites: EET 102 and HAC 284.

HAC 287 Boiler Systems (W) **3-2-4**
This course uses basic combustion knowledge from HAC 152 and piping system knowledge from HAC 112, along with codes from course HAC 242 to build a basic understanding of boiler types, systems, safety procedures and codes that will prepare a person to take the High Pressure Boiler License Examination. Lab fee: $10.00. Prerequisites: HAC 112, HAC 152 and HAC 253.

HAC 288 Ammonia Systems (A) **3-2-4**
This course uses basic piping knowledge from HAC 112, refrigeration cycle theory from HAC 141, codes from HAC 242 and control knowledge from HAC 253 to build a basic understanding of the operational theory and safe operating practices for an industrial Class II ammonia refrigeration system. Entering students should have HAC 161 course content or proficiency credit before enrolling in this class. Lab fee: $10.00. Prerequisites: HAC 112, HAC 141, HAC 242 and HAC 253.

HAC 299 Special Topics in Heating and Air Conditioning (On Demand) 1-5
A refresher maintenance training class covering refrigeration systems, mechanical tools and methods, heating and boilers, electrical, air handling and ventilation, controls and safety. Please see your advisor before scheduling for this course.

Histology Degree Track
(See Multi-Competency Health)

Hospitality Management (HOSP)
Dietetic Technician Major (DIET)

DIET 191 Dietetic Technician Practicum I (A) **1-4-1**
Practical application of information presented in the classroom from MLT 100, HOSP 102 and HOSP 122 to related health care facilities. Skills are developed through supervised learning situations to understand the organizational structure of health care facilities and the regulations that pertain, to define the roles of the dietetic practitioners, to maintain and evaluate standards of sanitation and safety. Lab fee: $55.00. Concurrents: MLT 100, HOSP 102, and HOSP 122.

DIET 192 Dietetic Technician Practicum II (W) **1-7-2**
Practical application of information presented in the classroom from HOSP 107 and HOSP 109 in related health care facilities. Skills are developed through supervised learning situations to operate and maintain foodservice equipment, to assist in food production and service, and to maintain food quality and portion control. Lab fee: $20.00. Prerequisite: DIET 191 with a grade of "C" or higher. Concurrents: HOSP 107 and HOSP 109.

DIET 193 Dietetic Technician Practicum III (SP) **1-7-2**
Practical application of information presented in classroom from HOSP 121, HOSP 123 and HOSP 153 in related health care facilities. Skills are developed through supervised learning situations to procure and store food, supplies, and equipment, to calculate food costs, to participate in quantity food production, to develop and/or test products and to provide the nutritional needs of the customers. Lab fee: $15.00. Prerequisite: DIET 192 with a grade of "C" or higher. Concurrents: HOSP 123, HOSP 121 and HOSP 153.

DIET 265 Dietetic Technician Seminar (SP) **1-0-1**
An in-depth study of recent developments and areas of concern related to providing nutrition care. Each student will select a nutrition topic of current concern, write a research paper and present an oral report. Information about professional organizations and the ethical practice of dietetics will be discussed. A written exam to assess knowledge attained throughout the seven quarter program will be administered. Lab fee: $2.00. Prerequisite: DIET 298. Concurrents: DIET 299 and HOSP 219. A grade of "C" or higher is required for graduation.

DIET 275 Medical Nutrition Therapy I (A) **4-2-5**
An introduction to the study of nutritional assessment, diet modification, and nutritional care plans. The rationale for nutritional intervention and related medical conditions and terminology is presented. Calorie controlled, and consistency and nutrient modified diets for a variety of medical and/or lifecycle-related conditions are studied. The student will identify and utilize appropriate nutritional assessment tools and techniques for specific medical and/or lifecycle-related conditions The student will plan, prepare and/or evaluate menus, meal plans, meals, and nutritional supplements related to these diet modifications. Lab fee: $10.00. Prerequisites: HOSP 153 with a grade of "C" or higher and completion of BIO 101. Concurrent: BIO 169.

DIET 276 Medical Nutrition Therapy II (W) **4-2-5**
A continuation of the study of nutritional assessment, diet modification, and nutritional care plans. The rationale for nutritional intervention and related medical conditions and terminology is presented. Calorie and protein supplemented, and nutrient modified diets for a variety of medical conditions are studied. The student will identify and utilize appropriate nutritional assessment tools and techniques for specific medical conditions. The student will plan, prepare and/or evaluate menus, meal plans, meals, and nutritional supplements related to these diet modifications. Lab fee: $10.00. Prerequisites: DIET 275 with a grade of "C" or higher and BIO 169.

DIET 297 Dietetic Technician Practicum IV (A) **2-7-3**
Practical application of information presented in the classroom from HOSP 153 and DIET 275 in community health programs. Skills are developed through supervised learning situations to understand the services offered by community based organizations, to develop the ability to utilize their services, to meet and serve clients, to obtain and evaluate nutritional data from individuals, and to establish good working relationships with clients and other personnel. Lab fee: $45.00. Prerequisite: DIET 193 with a grade of "C" or higher. Concurrents: DIET 275 and HOSP 205.

DIET 298 Dietetic Technician Practicum V (W) **1-7-2**
Practical application of information presented in classroom from HOSP 225, DIET 275 and DIET 276 to clients in related health care facilities. Skills are developed through supervised learning situations to interview clients, to evaluate nutritional data collected, to understand the rationale for dietary modification for nutrient and consistency modification, to understand associated medical terminology and to assist in the planning, preparation and service of modified diet meals. Lab fee: $10.00. Prerequisite: DIET 297 with a grade of "C" or higher. Concurrents: HOSP 225 and DIET 276.

DIET 299 Dietetic Technician Practicum VI (SP) **1-10-3**
Practical application of information presented in the classroom from all technical courses to clients in related health care facilities. Opportunities are provided through supervised learning situations to demonstrate proficiency in client interviewing, to evaluate nutritional data, to understanding associated medical terminology and the rationale for dietary intervention, and to assist in the planning, preparation and service of modified diet meals. Lab fee: $10.00. Prerequisites: DIET 276 and DIET 298 with grades of "C" or higher. A grade of "C" or higher is required for graduation.

Dietary Manager (DMGR)

DMGR 101 Dietary Manager Seminar I (A) **4-0-4**
A study of the types of health care facilities, typical health care organizational structures, and roles of the dietary team members. Regulations and how they affect food service in health care facilities are examined. Foodservice safety and sanitation principles, utilization and care of equipment, and food preparation and purchasing are studied. Concurrents: DMGR 194 and employment in a health care facility with a qualified preceptor on the staff. A grade of "C" or higher is required for graduation.

DMGR 102 Dietary Manager Seminar II (W) 4-0-4
A study of the principles for planning menus to meet the nutritional needs of people in health care operation. Nutrient requirements, functions and sources of nutrients and the digestion and absorption of food are studied. Diet modification for a variety of health conditions is studied. Methods and records used to gather data, to determine food needs and preferences, to establish care plans and to do charting are presented. Prerequisite: DMGR 101 with a grade of "C" or higher. Concurrents: DMGR 195 and employment in a health care facility with a qualified preceptor on the staff.

DMGR 103 Dietary Manager Seminar III (SP) 4-0-4
An explanation of methods and records used in procurement, receiving, and storage of food and related items. Control measures for maintaining quality, quantity, and cost of food production are discussed. Management principles, employee development and supervisory characteristics are discussed. Facility evaluation and planning for improvements is presented. Prerequisite: DMGR 102 with a grade of "C" or higher. Concurrents: DMGR 196 and employment in a health care facility with a qualified preceptor on the staff.

DMGR 194 Dietary Manager Cooperative Work Experience I (A) 0-20-2
Supervised work related learning experiences to be performed on the job following material presented in the classroom from DMGR 101. Lab fee: $12.00. Prerequisite: Employment in a health care facility with a qualified preceptor on the staff. Concurrent: DMGR 101.

DMGR 195 Dietary Manager Cooperative Work Experience II (W) 0-20-2
Supervised work related learning experiences to be performed on the job following materials presented in the classroom from DMGR 102. Lab fee: $12.00. Prerequisite: DMGR 194 with a grade of "C" or higher, and employment in a health care facility with a qualified preceptor on the staff. Concurrent: DMGR 102.

DMGR 196 Dietary Manager Cooperative Work Experience III (SP) 0-20-2
Supervised work related learning experiences to be performed on the job following materials presented in the classroom from DMGR 103. Lab fee: $12.00. Prerequisites: DMGR 195 with a grade of "C" or higher, and employment in a health care facility with a qualified preceptor on the staff. Concurrent: DMGR 103.

Hospitality Management (HOSP)

HOSP 101 Survey of the Hospitality/Tourism Industry (A,W,SP,SU) 3-0-3
An introduction to management of restaurants, clubs, institutional food services and lodging facilities, as well as an overview of the travel and tourism industry. Industry-related professional associations and trade publications are studied. Field trips and guest speakers provide a background of organization, operation, management and career opportunities.

HOSP 102 Foodservice Equipment (A,W,SP) 1-2-2
A laboratory course in which students will learn to operate, clean, and describe preventive maintenance of commercial foodservice equipment. Construction features required by the National Sanitation Foundation, and American Gas Association and Underwriter's Laboratories requirements will be emphasized. Appropriate uses for equipment and general principles of equipment layout for safety, sanitation, and efficiency will be discussed. Lab fee: $17.00.

HOSP 106 Food Laboratory I (W,SU) 1-4-3
A laboratory course for chef apprentices. The course includes introduction to basic laboratory skills and basic preparation of vegetables, salad, breakfast items, dairy products, fruits, meats, seafood and poultry. Students will develop recipes and requisition, prepare and evaluate foods. Lab fee: $60.00. Prerequisites: HOSP 102, HOSP 107 and HOSP 122.

HOSP 107 Food Principles (A,W,SP) 5-0-5
A lecture course in basic food preparation including the terminology and definitions used and the scientific principles involved in preparing food products. The course includes a detailed study of the principles of preparation and selection criteria for all categories of foods served in foodservice operations. Lab fee: $5.00.

HOSP 109 Food Production (W) 1-7-3
A laboratory course in which students will produce and serve marketable food products according to standardized recipes using food production equipment in a commercial kitchen environment. The products will be served in a cafeteria and in a dining room setting. The principles of sanitation and safety will be applied. Lab fee: $60.00. Prerequisites: HOSP 102 and HOSP 122 Concurrent or prerequisite: HOSP 107.

HOSP 121 Computer Applications in Foodservice (A,W,SP,) 1-2-2
A course designed to apply the basic skills acquired in Computer Literacy 1 to foodservice operations. Hands-on lab experience expands the student's knowledge of basic business applications as they apply to foodservice operations using word processing, spreadsheet and data base management software and specialized application software packages. Lab fee: $15.00. Prerequisite: CPT 101.

HOSP 122 Sanitation and Safety (A,W,SP,SU) 3-0-3
A detailed study of the HACCP (Hazard Analysis Critical Control Points) procedures which include the control of bacteria, materials handling, and safety practices to maintain a safe and health environment for the consumer in the food and lodging industry. Examination of laws and regulations related to safety, fire, and sanitation. Upon successful completion of an examination from the Educational Foundation of the National Restaurant Association, students will receive certificates from the Educational Foundation and the Ohio Department of Health. Lab fee: $2.00.

HOSP 123 Food Purchasing (A,W) 3-0-3
Provides a working knowledge of procurement methods and procedures and record keeping (manual methods and computer applications) when purchasing, receiving, and storing food, equipment and non-food supplies. Special emphasis is given to writing specifications, determining order quantities, evaluating product quality, and selecting suppliers. Field trips allow the student to see food processing operations, and wholesale food markets. Lab fee: $5.00. Prerequisites: HOSP 107 and placement in DEV 031.

HOSP 143 Hospitality and Travel Law (A,W) 3-0-3
Provides a general knowledge of the law as it applies to the hospitality and tourism industry. Lab fee: $3.00.

HOSP 145 Lodging Operations (W) 3-2-4
This course provides students with a basic understanding of the lodging industry. It covers the activities of various hotel operating departments: front office, housekeeping, food-beverage, marketing, engineering, security and accounting. Emphasis will be placed on handling guest needs. Lab fee: $25.00.

HOSP 153 Nutrition for a Healthy Lifestyle (A,W,SP,SU - DL) 5-0-5
Independent study course is available. A study of the role of nutrition in establishing, promoting and maintaining good health. The composition and functions of foods, nutrition needs throughout the life cycle, and contemporary nutrition concerns are included in the course. Lab fee: $5.00. Prerequisites: Placement into ENGL 101 and DEV 031.

HOSP 154 Destination Geography (A, SP) 5-0-5
Geographical and cultural study of all major regions of the world with emphasis on the most popular travel destinations. Includes lodging, points of interest, customer profile and transportation types for each destination. Lab fee: $5.00.

HOSP 157 Travel and Tourism Operations (A,W,SP) 4-2-5
This course provides students with a basic understanding of the travel and tourism industry. The principles of air transportation, rail, and rental car services are included along with the travel product distribution system and the role of travel agencies. The government agencies and organizations that affect the industry are described, as is the use of a variety of reference materials. Developing itineraries, assessing tariffs, calculating fares, preparing travel documents, processing reservations and tickets for tours, lodging, cruises and related services needed by domestic and international travelers are course components. Lab fee: $25.00. Prerequisite: HOSP 154 or permission of instructor.

HOSP 203 Beverage Management (A,W) 2-2-3
Classification, history and control of beer, wines and spirits. Covers Ohio liquor and legal regulations, inventory control, liquor dispensing systems, cash control, drink merchandising and alcohol responsibility. The art of mixology. Lab fee: $25.00.

HOSP 205 Records and Cost Control (A,W) 3-2-4
Covers the principles and procedures involved in an effective system of food, beverage, labor and sales control. Emphasizes development and use of standards and calculation of actual costs. Lab fee: $15.00.

HOSP 216 Food Laboratory II (W,SP) 1-4-3
A laboratory course to follow Food Production I (HOSP 109) for chef apprentices. The course includes preparation of stocks, soups, sauces, vegetables, and fruits. Also includes butchery, fish, fileting, and poultry de-boning. Students will develop recipes, plan menus, requisition food, and prepare and serve large quantity meal functions. Lab fee: $60.00. Prerequisites: HOSP 106 and HOSP 107.

HOSP 217 Garde Manger (SP) 1-4-3
A laboratory course including preparation of cold food items commonly produced in a garde manger station. Students will prepare garnitures, appetizers, salads, pates, terrines, gelantines and cold sauces as well as be introduced to specialty work in ice carving, tallow and salt dough. Buffet presentation and culinary show guidelines are covered. Lab fee: $40.00. Prerequisite: Registered Chef Apprentice or permission of instructor.

HOSP 218 Baking (W) 1-4-3
Includes the fundamentals of baking and functions of ingredients with production of baked goods and dessert specialties. Proper use and care of equipment and

hygenic work habits are emphasized. Lab fee: $50.00. Prerequisite: Registered Chef Apprentice or permission of instructor.

HOSP 219 Food Production Management (SP) **1-8-4**
A laboratory course in the final quarter of the student's curriculum in which application of foodservice management will occur in a simulated restaurant. Students will serve the public to gain experience in various managerial positions in the front and back of the house while supervising student work groups. Lab fee: $60.00. Prerequisite: Final quarter or permission of instructor. A grade of "C" or higher is required for graduation.

HOSP 224 Hospitality Personnel Management (W,SU) 5-0-5
Supervisory techniques applied specifically to hospitality and travel operations. A study of organizational structure, performance standards, employee application forms, and interviewing techniques used for the selection of employees. Improving communication and job performance with the development of orientation and training programs, and employee appraisal techniques. A grade of "C" or higher is required for graduation. Lab fee: $5.00. Prerequisite: BMGT 101.

HOSP 225 Menu Development (A,W) 3-0-3
Principles of menu planning for a variety of foodservice operations. Includes merchandising techniques, layout and design, and pricing strategies. Consideration is given to food selection; nutritional requirements; food, labor, and other costs; equipment utilization, and computer application. Lab fee: $5.00. Prerequisites: HOSP 153 and HOSP 107.

HOSP 246 Hospitality Sales and Marketing (W,SP) 3-0-3
Covers selling theory, including all phases of the selling process, from initial contact to closing the sale in a variety of hospitality and tourism settings. Includes the basic knowledge and skills necessary to work within a hospitality or tourism organization's marketing plan. Lab fee: $5.00.

HOSP 257 Computer Reservations Systems (A, SU) **1-5-3**
This course is designed to combine student reading materials with hands-on computer experience. Students will develop skills in the utilization of airline computer reservation systems (namely, American Airlines' SABRE CRS) to make car, lodging, and airline reservations. Lab fee: $50.00. Prerequisites: HOSP 157 and OADM 131.

HOSP 271 Meeting Planning & Catering Services (A,SP) 2-3-3
Principles of and practice experiences in meeting planning and catered functions. Students will plan, organize, execute and evaluate meeting and catering functions to meet the needs of clients and guests. Lab fee: $20.00.

HOSP 286 Apprenticeship Final Project (SU) 2-0-2
A capstone course required for students registered in the three year American Culinary Federation Educational Institute National Apprenticeship Training Program. Preparation for and completion of national practical and written examinations. Evaluation of 6000 hours on-the-job training and documentation of completion of all required training objectives. Lab fee: $50.00. Prerequisite: HOSP 295.

HOSP 293 Hospitality Cooperative Work Experience I (A,W,SP,SU) 1-20-3
Work experience in the hospitality/tourism industry. A minimum of 200 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar. Lab fee: $10.00.

HOSP 294 Hospitality Cooperative Work Experience II (A,W,SP,SU) 1-20-3
A continuation of HOSP 293. Work experience in the hospitality/tourism industry. A minimum of 200 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar. Lab fee: $10.00. Prerequisite or concurrent: HOSP 293.

HOSP 295 Hospitality Cooperative Work Experience III (A) **1-20-3**
A continuation of HOSP 293 and HOSP 294 required for third year chef apprentices. On-the-job training in the foodservice industry following guidelines of American Culinary Federation Education Institute National Apprenticeship Training Program for Cooks. One classroom hour per week will be spent in an on-campus seminar. Lab fee: $50.00. Prerequisites: HOSP 294 and Chef Apprenticeship major.

Human Resources Management Technology (HRM)

HRM 121 Human Resources Management (A,W,SP,SU - DL) 4-0-4
An introductory course in Human Resources Management, including the philosophy, principles, and legal aspects of human resources management; and the roles of the manager and the human resources professional/department in this management function. The course focuses on the laws governing policy making, recruiting, selection, training, evaluation, wage and salary administration, benefit programs, representation and safety; and the employer's obligations and the employee's rights under these laws. Students use the Internet to research human resources issues. Lab fee: $10.00. Prerequisites: BMGT 111 or LAWE 252 (Law Enforcement students only) or BMGT 218 (Logistics students only), and ENGL 102.

HRM 122 Human Resource Policy and Procedure Writing (W,SU) 2-5-4
The course provides an in-depth study of employment law, the recruiting process, and the selection process; a review of business grammar through the use of a programmed learning text; a transition from "term paper writing" to formal policy writing; and the application of employment law, business grammar, and policy writing skills through the development of an employment policy, procedure, and an employee handbook summary of the policy. Lab fee: $10.00. Prerequisites: HRM 121, MCT 106, and ENGL 102.

HRM 124 Personnel Interviewing (A,W,SP,SU) 3-2-4
The course provides an in-depth study of the legal aspects of interviewing, the various types of interviews conducted in business, and interviewing techniques. Students participate, as both an interviewer and an interviewee, in selection, counseling, disciplinary, exit, and performance appraisal interview simulations. Interviewing techniques and skills are evaluated using videotape playback. Lab fee: $10.00. Prerequisites: HRM 121 (Business Management and Human Resources Management Technology students only), and COMM 105 or COMM 110.

HRM 220 Labor Relations (A,W,SP,SU - DL) 3-4-5
The course provides a study of labor relations including: the history of the labor movement, the legislative history, and in-depth study of the four major pieces of private sector collective bargaining legislation; a discussion of the State of Ohio collective bargaining law; and the union organizing process and management responses, the collective bargaining process, the grievance process, the arbitration process, and the differences in these processes in the public and private sectors. Students participate, as members of labor and management teams, in contract negotiations, third step grievance meeting, and grievance arbitration simulations. Lab fee: $10.00 Prerequisites: HRM 121 and MATH 101 or MATH 103.

HRM 221 Staffing Under the Law (A,SP) 5-0-5
The course provides an in-depth study of the laws governing discrimination in employment, affirmative action, sexual harassment, discipline, termination, and safety, and the application of these laws through the development of employer policies, procedures, rules, regulations, and summary postings. Lab fee: $10.00. Prerequisites: HRM 121, HRM 122, MCT 106, and MATH 135.

HRM 222 Monetary Compensation (ASP) 4-0-4
The course provides an in-depth study of the history, principles and theories of a compensation package; the laws governing monetary compensation, and the application of these principles, theories and laws through the development of internal and external equity in monetary compensation, and the development of monetary compensation policies and procedures. Lab fee: $10.00. Prerequisites: HRM 121, HRM 122, MCT 106, MATH 135. Concurrent: HRM 223.

HRM 223 Benefits/Non-Monetary Compensation (A,SP) 4-0-4
The course provides an in-depth study of the history, principles, and theories of benefits and non-monetary compensation; the development of external equity in benefit packages, the value of benefit programs to an organization; and the laws governing benefits. Students learn the application of these principles, theories, and laws through the development of plan descriptions for benefit programs such as health, life, disability, pension/retirement, pay for time not worked, and policies and procedures for the implementation of benefits required by law. Lab fee: $10.00. Prerequisites: HRM 121, HRM 122, MCT 106 and MATH 135. Concurrent: HRM 222.

HRM 224 Human Resources Information Systems (W,SU) 2-3-3
The course provides an in-depth study of the records governing the employment relationship required by the federal and state laws and the legal aspects of those records; the relationships between data, information, records, employees, managers, and the human resources department; approaches to developing manual and automated records and information management systems that meet the professional and industry standards. Students are required to demonstrate skills through the development and/or design of both manual and automated systems. Lab fee: $10.00. Prerequisites: HRM 121, HRM 122, and MCT 106.

HRM 225 Alcohol and Drugs in the Workplace (W,SU) 4-0-4

The course provides the student in the Human Resources Management technology with an overview of alcohol and drugs as they relate to historical and contemporary workplace issues. Students explore the impact of drugs of abuse on the individual, family and society; models to define chemical dependency; signs and symptoms indicative of alcohol and drug use and abuse; resources available to persons with chemical dependency and their families. There is emphasis on the Drug Free Workplace Act and the Americans with Disabilities Act, and develop-

ing a Drug Free Workplace Policy. Employee Assistance Programs are discussed as well as drug testing and the legal and ethical issues involved. Lab fee: $4.00 Prerequisites: HRM 121 and HRM 122.

HRM 240 Administration of Human Resources Management (W,SU) 0-10-5
As a course in the capstone sequence for the Human Resources Management Technology, the course provides a hands-on application laboratory wherein students serve as a "Board of Directors," developing the full range of human resources policies, procedures, and programs. To demonstrate the depth and breadth of their knowledge, understanding, and skill. students are assigned two to four individual projects, in the major topic areas (employment, compensation, benefits, performance appraisal, discipline, safety, and training), in the form of presentations, the development of policies and/or procedures as appropriate to the presentation, and the development/securing of documents as appropriate to the presentation. As a group students review, revise, and approve or reject policy, procedure, and program recommendations made by the presenter. Lab fee: $5.00. Prerequisites: HRM 124, HRM 220, HRM 221, HRM 222, HRM 223. HRM 224, HRM 225, MCT 211

HRM 242 Human Resources Management Practicum (A,W,SP,SU) 0-28-4
As a course in the capstone sequence for the Human Resources Management Technology, the course provides a guided work experience in a human resources office or work environment providing human resources services. Exact duties are determined by the student and the employer/placement site supervisor. Students are responsible for securing their own practicum position. Lab fee; $2.00. Prerequisites: HRM 124, HRM 220, HRM 221, HRM 222, HRM 223, HRM 224, HRM 225, MCT 211 and permission of the Human Resources Management Technology Program Coordinator two quarters in advance. Concurrent: HRM 243.

HRM 243 Human Resources Management Practicum Seminar (A,W,SP,SU) 0-4-2
As a course in the capstone sequence for the Human Resources Management Technology, the course provides for a seminar discussion of the work experience; and demonstration of the ability to transfer program skills to a real world work environment through the development of work related projects and assignments. Lab fee: $1.00. Prerequisite: HRM 124, HRM 220, HRM 221, HRM 222, HRM 223, HRM 224, HRM 225, MCT 211 and permission of the Human Resources Management Technology Program Coordinator two quarters in advance. Concurrent: HRM 242.

Humanities (HUM)

STUDENTS WHO ENROLL IN HUMANITIES COURSES MUST HAVE PLACED IN ENGL 101 AND ARE ENCOURAGED TO EITHER HAVE COMPLETED ENGL 101 OR BE ENROLLED IN THAT COURSE WHEN SCHEDULING A HUMANITIES COURSE.

HUM 111 Civilization I (A,W,SP,SU - DL) 5-0-5
A survey of the culture, ideas, and values of human civilization from their origins in the Ancient World through the 15th Century. Emphasis is on the intellectual and artistic achievements of the ancient Middle East, Classical Greece and Rome, the Christian and Arab/Islamic Middle Ages, and Renaissance Italy showing how culture reflects and influences economic, social and political development. Students am exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Classes meet three hours per week in small groups for lecture and discussion and in combined sections for two hours per week for group cultural experiences. Lab fee: $7.00. Prerequisite: Placement into ENGL 101.

HUM 112 Civilization II (A,W,SP,SU - DL) 5-0-5
A study of the development of the culture, ideas, and values of the early modem Western World. Emphasis is on the Protestant Reformation, the rise of modem science, the Enlightenment, the American and French Revolutions, the Industrial Revolution, Baroque, Classical, and Romantic styles in art, music and literature and the revolutionary theories of Karl Marx. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Classes meet three hours per week in small groups for lecture and discussion and in combined sections for two hours per week for group cultural experiences. Lab fee: $7.00. Prerequisite: Placement into ENGL 101.

HUM 113 Civilization III (A,W,SP,SU - DL) 5-0-5
A survey of the triumphs and failures of modern culture, ideas, and values from 1850 to the present. Emphasis is on the conflicts and contradictions between the prevailing spirit of Liberalism, Capitalism, Nationalism and Imperialism from the perspective of the European and non-European worlds, the crises of Western capitalism and democracy and the Fascist and Communist responses, and the major issues confronting world civilization at the turn of the 21st Century. Students arc exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Classes meet three hours per week in small groups for lecture and discussion and in combined sections for two hours per week for group cultural experiences. Lab fee: $7.00. Prerequisite: Placement into ENGL 101.

HUM 151 American Civilization to 1877 (A,W,SP,SU) 5-0-5
A survey of American History from settlement through the Civil War and Reconstruction The course places major emphasis on the relationship between historical events and the literature, art, music, major ideas and popular culture which made up the American intellectual tradition. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Lab fee: $7.00. Prerequisite: Placement into ENGL 101.

HUM 152 American Civilization Since 1877 (A,W,SP,SU) 5-0-5
A survey of the development of the United States from a frontier society to an industrial world power in the 20th century. The course places major emphasis on the relationship between historical events and the literature, art, music, major ideas and popular culture which have made up the American intellectual tradition. Students are exposed to the creative process by reading from primary works of literature and philosophy and critically reviewing works of art, music, theater and dance, both in and out of class. Lab fee: $7.00. Prerequisite: Placement into ENGL 101.

HUM 205 Medicine and the Humanities (On Demand) 5-0-5
A survey of the treatment of medical themes in history, literature, philosophy, the tine arts and popular culture. The course covers works ranging from the drawings of Leonardo DaVinci, to the novel and film MASH. Of particular importance will be the role of the humanities in the assessment and understanding of modem health care. Meets elective requirements in Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in History and Humanities. Lab fee: $4.00. Prerequisite: Placement into ENGL 101.

HUM 222 Classical Mythology (On Demand) 5-0-5
An introduction to the world of mythology, the human and the supernatural, the real and the fantastic through a study of myths from Greece and Rome. The course explores some of the religious ideas, traditions and values that distinguish one civilization from another, while also indicating universally shared themes. Attention will be given to cultural expressions of mythical themes in literature and art. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

HUM 224 African-American History from Emancipation to Present (On Demand) 5-0-5
A survey of African-American History from the Civil War to present. Emphasis will be placed on the struggle for political, social and economic freedom as well as the contributions of African-Americans to the music, art, and literature of the United States. Meets Humanities requirement for AAS students. Lab fee: $2.00. Prerequisite: Entry into ENGL 101.

HUM 245 Music and Art Since 1945 (On Demand) 5-0-5
A survey of the styles and subject matter of important contemporary works of music and visual art. Students will examine the wide spectrum of aural and visual expression that has developed since the Second World War such as aleatoric music, electronic music, abstract expressionism, performance art, pop and op art, minimalism, etc. Students will also examine the major intellectual and social issues of the day and the relationship between these issues and the styles and expressive content of contemporary music and art. Lab fee: $8.00. Prerequisite: Placement into ENGL 101.

HUM 251 Latin American Civilization (On Demand) 5-0-5
A general introduction to the history and cultures of Latin America through the study of literature, film and primary historical texts. The course will employ an interdisciplinary approach to explore the relationship between culture and the major historical, political, and socio-economic developments in Latin America from 1492 to the present. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

HUM 252 The Islamic World and the Middle East (On Demand) 5-0-5
A survey of Islamic civilization from the birth of Mohammad to the destruction of the Ottoman Empire in the 20th century. Emphasis is placed on developing an understanding of the nature and diversity of the Islamic religion, an appreciation of the great cultural achievements of medieval Islam, and an awareness of the complexities of the problems of the contemporary Middle East. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in history, social sciences, and non-western studies. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

HUM 253 History of China and Japan (On Demand) 5-0-5
A survey of the economic, social, political, and cultural development of China and Japan from earliest times to present. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer

requirements in history, social sciences, and non-western studies. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

HUM 254 Introduction to African Literature (On Demand) 5-0-5
A general survey of sub-Saharan African literature including the oral traditions that formed its background. Students will examine traditional African artistic expressions such as dance, drama, poetry and short story as well as novels produced by European-educated writers. Students will read literary texts originally written in English or in English translation. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

HUM 270 Comparative Religions (ASP) **5-0-5**
Introduction to the study of religion through a historical overview and comparson of the major world religions of Judaism, Christianity, Islam, Buddhism, and Hinduism through readings in their sacred texts in translation, Attention will be focused on the concepts, categories, theories, and methods used by the various religious disciplines and how each of them addresses basic issues of the human condition. Also included will be an examination of Sectarianism and contemporary sects in America and the World. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in comparative studies, religion, and philosophy. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

HUM 290 Capstone Experience in the Humanities (On Demand) 2-2-3
A capstone course focusing on synthesis among the disciplines of the Humanities, including but not limited to, history, classics, art history, music history and philosophy. Students will work on developing research techniques and methodologies and will apply these techniques to a project of their own design. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00.

HUM 299 Special Topics in Humanities (On Demand) **1-5**
Special topics from the Humanities discipline designed to meet specific needs. Lab fee: $2.00.

Interpreting/Transliterating (ITT)

ITT 110 Introduction to Interpreting/Transliterating (A) 3-0-3
This course is designed to provide students with an overview of the field of interpreting. Topics of study include a historical overview, terminology, interpreter's role, ethics, and career options. Lab fee: $5.00. Prerequisite: Interview with ITT coordinator and application process. Concurrent: ITT 141.

ITT 111 Introduction to the Deaf Community (A) 5-0-5
This course is designed to provide students with an overview of the D/deaf community. It focuses on the following areas: social, cultural and education experiences. This course also examines employment, local services available to the D/deaf community, and majority culture's myths and misconceptions of the D/deaf community. Lab fee: $5.00.

ITT 120 English for the Interpreter (SP) 3-0-3
This course focuses on the grammar errors made during the voicing process and ways to remedy these errors. It also focuses on English vocabulary expansion and sign vocabulary expansion. Lab fee: $5.00. Prerequisite: ITT 110 with a grade of "C" or better. Concurrents: ITT 143 and ITT 201.

ITT 121 Legal and Ethical Aspects of Interpreting/Transliterating (SP) 3-0-3
This course looks at applying the RID Code of Ethics to the interpreting situation. Analysis of professional ethics, confidentiality vs. privilege, legal liability, and the role of the interpreter are all covered. Lab fee: $5.00. Concurrent: ITT 150 & 204.

ITT 123 Specialized Interpreting/Transliterating (A) 3-2-4
This course introduces the student to special vocabulary, skills, and knowledge needed to interpret in special situations. It looks at ethical considerations of these settings as well. Some of these situations include artistic interpreting, interpreting for deaf/blind persons, interpreting in medical settings, and oral interpreting. Lab fee: $5.00. Prerequisite: ITT 202, 211. Concurrent: ITT 145

ITT 130 Fingerspelling (W) **1-2-2**
This course offers students the opportunity to work on expressive and receptive fingerspelling. The emphasis of this course is on using fingerspelling in context. Opportunities are provided for the students to work with videotaped materials as well as live models. Lab fee: $5.00. Prerequisite: ITT I 10 with a grade of "C" or better. Concurrent: ITT 142.

ITT 141 American Sign Language I (ASP) 4-2-5
This course begins with a series of visual readiness activities as a way of introducing the students to and preparing them for a language in a visual modality. The course utilizes a practical approach to teaching vocabulary, grammar, and the cultural aspects through "real life" conversational experiences. The student is further acclimated to the new modality of this language via classroom experiences conducted without voice. Additional information about the Deaf Community is introduced via outside readings and class discussion. Lab fee: $10.00.

ITT 142 American Sign Language II (W,SU) 4-2-5
ASL II, as a continuation of ITT 141, further acclimates the students to the visual/gestural modality of this language. The course utilizes a practical approach to teaching vocabulary, grammar, and cultural aspects through "real life" conversational experiences. More attention is given to the student's production of the language than in ITT 141, while receptive /comprehension skills continue to be emphasized. Additional information about the Deaf Community is introduced via outside readings and class discussions. Lab fee: $10.00 Prerequisite: ITT 141 with a "C" or better.

ITT 143 American Sign Language III (ASP) 4-2-5
ASL III provides the students with additional opportunities to expand their ability to produce and comprehend the language as used in everyday conversational settings. Students continue to recognize the fact that communication is governed by culturally-bound rules as they continue to study the culture of the Deaf Community. Lab fee: $10.00. Prerequisite: ITT 142 with a grade of "C" or better.

ITT 144 American Sign Language IV (W,SU) 4-2-5
In ASL IV, students' production and comprehension skills continue to develop qualitatively and quantitatively as they are exposed to a greater variety of interaction activities. Whereas these activities are based on cultural values of the Deaf Community, the students' knowledge of this unique community is expanded. Lab fee: $10.00. Prerequisite: ITT 143 with a grade of "C" or better.

ITT 145 American Sign Language V (ASP) 4-2-5
As the final course in this five (5) course series, ITT 145 provides students with opportunities to expand their production and comprehension skills with American Sign Language. Communication activities focus on advanced functions of language usage. Study of the cultural aspects of the Deaf Community is continued. Lab fee: $10.00. Prerequisite: ITT 144 with a grade of "C" or better.

ITT 150 Linguistics of American Sign Language (ASL) (SP) 2-2-3
This course offers an introductory to general linguistics, as well as providing an in-depth analysis of the major grammatical features of American Sign Language. Comparisons are made between English and American Sign Language, noting how grammatical functions are performed differently in the two languages. Lab fee: $5.00. Concurrent: ITT 143.

ITT 201 Interpreting I (SP) 2-2-3
This course is a theoretical and practical "hands-on" approach to the process of sign language interpreting. The student will be actively learning how to render a signed message in ASL into spoken English, as well as render a spoken message in English into ASL. Lab fee: $10.00. Prerequisite: ITT 110 with a grade of "C" or better. Concurrent: ITT 120 and 143

ITT 202 Interpreting II (SU) **1-5-3**
This course is a continuation of ITT 201. As such, the students continue the process of actively learning how to render a signed message in ASL into spoken English, as well as how to render a spoken message into ASL. This course places more emphasis on the practical "hands-on" dialogue setting; and increasing the speed, accuracy, and complexity of the interpreting process. Lab fee: $10.00. Prerequisite: ITT 201 with a grade of "C" or better. Concurrent: ITT 144.

ITT 203 Interpreting III (W) **1-5-3**
This course continues to increase students' knowledge and skills in ASL/English interpretation process. Increased focus is placed on "real life" situational experiences involving complex interpreting settings. Lab fee: $10.00. Prerequisite: ITT 202 and ITT 145 with a grade of "C" or better. Concurrent: ITT 220.

ITT 204 Interpreting IV (SP) **1-5-3**
As the final course in the four course interpreting sequence, this course continues to increase students' knowledge and skills in ASL/English interpretation process. Increased focus is placed on "real life" situational experiences involving complex interpreting settings. Lab fee: $10.00. Prerequisite: ITT 203 and ITT 212 with a grade of "C" or better. Concurrent: ITT 121.

ITT 211 Transliterating I (SU) 2-2-3
This course is a theoretical and practical "hands-on" approach to the process of sign language transliterating. Students will be actively learning how to render contact varieties and signed English messages into spoken English, as well as render a spoken message in English into contact varieties and signed English. Lab fee: $10.00. Prerequisite: ITT 120 and 201. Concurrent: ITT 144.

ITT 212 Transliterating II (A) **1-5-3**
This course is a continuation of ITT 211. As such, the students continue the process of actively learning how to render a signed message in a contact variety and signed English into spoken English, as well as how to render a spoken message into a contact variety and signed English. This course places more emphasis on practical "hands-on" dialogue settings; and increasing the speed, accuracy, and complexity of the transliteration. Lab fee: $10.00. Prerequisite: ITT 21 I with a "C" or better. Concurrent: ITT 145

ITT 220 Sign to Voice Interpreting/Transliterating (W) **4-0-4**
This course provides students with additional experience with the process of sign to voice interpreting and transliterating. Students will practice with a variety of deaf and hard of hearing individuals to enhance team and solo voicing skills. Lab fee: $10.00. Prerequisite: ITT 212. Concurrent ITT 203.

ITT 265 Seminar in Interpreting /Transliterating (on demand) **1 - 5**
This course is offered for interpreters who are employed, or are pre-practice interpreters, who have an issue or skill they would like to explore or further develop. Seminar topics may include any issue or skill that is germane to the field of interpreting/ transliterating, and appropriate for a diverse student population.

ITT 290 Interpreting/Transliterating Practicum Seminar I (W,SU) **1-0-1**
This course supplements the practicum experience by providing opportunities for sharing experiences via recordings in journals and group discussions. Prerequisite: Complete all first through fifth quarter courses as per the ITT Plan of Study and ITT 145 with a grade of "C" or better. Concurrent: ITT 292.

ITT 291 Interpreting/Transliterating Practicum Seminar II (A,SP) **1-0-1**
This course continues to supplement the practicum experience. Applying theory to the daily work setting, applying for jobs, and additional educational opportunities are also discussed. Prerequisite: ITT 290 with a grade of "satisfactory" and completion of all sixth quarter courses. Concurrents: ITT 121 and 293. Prerequisite: ITT 290.

ITT 292 Interpreting/Transliterating Practicum I (W,SU) 0-20-4
Students are provided opportunities to work in interpreting situations and apply the concepts learned in the classroom to the actual setting. Students are assigned to work in a variety of settings on a part-time basis and are supervised by staff interpreters. Prerequisite: 2.0 tech. average; completion of the first five quarters of the ITT Plan of Study. Concurrent: ITT 290, 220. and 203

ITT 293 Interpreting/Transliterating Practicum II (A,SP) 0-20-4
Students are provided opportunities to work in different interpreting situations and apply the concepts learned in the classroom to the actual setting. Students are assigned to work in a variety of settings on a part-time basis and are supervised by staff interpreters. Prerequisite: ITT 292 with a grade of "satisfactory" and 2.0 tech average. Concurrent: ITT 291 and 204. Prerequisite: ITT 292

Italian (ITAL)

ITAL 101 Elementary Italian I (On Demand) **5-0-5**
Italian language instruction through the use of texts, audio/visual, and other selected materials to actively and proficiently communicate in the targeted language. This course also operates on developing student's historical, and cultural consciousness through the use of film, art, music and a wide range of cultural activities particular to the Italian culture. Encourages analytical thinking, individual and group participation and strengthens writing, reading and comprehension skills. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

ITAL 102 Elementary Italian II (On Demand) **5-0-5**
Continuation of ITAL 101, with further development of listening, reading, speaking, and writing skills and further study of Italian culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: ITAL 101 with a grade of "C" or better.

ITAL 103 Intermediate Italian I (On Demand) **5-0-5**
Continued study of the Italian language and development of listening, reading, speaking and writing skills. Readings from contemporary Italian culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: ITAL 102 with a grade of "C" or better.

ITAL 104 Intermediate Italian II (On Demand) **5-0-5**
Reading and discussion of Italian short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Italian culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature programs. Lab fee: $6.00. Prerequisite: ITAL 103 with a grade of "C" or better.

ITAL 299 Special Topics in Italian (On Demand) **1-5**
Detailed examination of selected topics in Italian. Lab fee: $2.00. Prerequisites vary.

Japanese (JAPN)

JAPN 101 Elementary Japanese I (A) **5-0-5**
Elements of standard modem colloquial Japanese grammar, with emphasis on oral communications and culture. Students will learn to hear and reproduce the sounds of modem Japanese accurately; handle basic interactive skills such as greetings, invitations and apologies; learn about cultural factors that are reflected in the language. Lab fee: $6.00. Prerequisite: Entry into ENGL 101.

JAPN 102 Elementary Japanese II (W) **5-0-5**
Continuation of JAPN 101. Lab fee: $6.00. Prerequisite: "C" or higher in JAPN 101.

JAPN 103 Elementary Japanese III (On Demand) **5-0-5**
Continuation of JAPN 102. Lab fee: $6.00. Prerequisite: "C" or higher in JAPN 102.

JAPN 104 Elementary Japanese IV (On Demand) **5-0-5**
Continuation of JAPN 103. Lab fee: $6.00. Prerequisite: "C" or higher in JAPN 103.

JAPN 299 Special Topics in Japanese (On Demand) **1-5**
Detailed examination of selected topics in Japanese. Lab fee: $2.00. Prerequisites vary

Landscape Design/Build (LAND)

LAND 101 Landscape Principles (A,W,SP,SU) 2-3-3
Landscape principles will study the basic components of landscape design and those elements, that when combined together create such designs,

LAND 102 Residential Landscape Design (A,W,SU) 2-6-4
This course will study the application of landscape design principles to construction situations, design vs. style, perform site inventory and analysis and draft basic projects. Lab fee: $20.00. Prerequisites: ARCH 111 and LAND 101.

LAND 104 Specialty Gardens (W) 2-3-3
This course will study the history, development and basic design of gardens including Estate, Victorian, Colonial, Patio, Water, etc. The class will combine both in-class and field experience. Lab fee: $15.00. Prerequisite: LAND 102.

LAND 105 Spring Landscape Plants (SP,SU) 3-3-4
This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the midwest climate zone. This class will combine both in-class and field experience.

LAND 107 Landscape Maintenance (W,SP) 2-3-3
Basic landscape maintenance principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants. Other areas include soil structure, amendments, pruning and fertilization. Lab fee: $10.00.

LAND 108 Herbaceous Plants (W,SP,SU) **2-3-3**
This course will study the identification parameters, landscape features and growing conditions of herbaceous flowering plants such as annuals, perennials, bulbs and herbs. Design of perennial gardens will also be covered. Lab fee: $15.00.

LAND 109 Landscape Arboriculture (A,W) **2-2-3**
This course introduces the basic principles of tree biology and care. Arboricultural practices will be discussed and performed. Lab fee: $15.00. Prerequisite: LAND **205.**

LAND 110 Landscape Computer Applications () 2-3-3
This course will explore current computer applications as they relate to the landscape industry. Lab fee: $10.00. Prerequisites: LAND 102 and CPT 101 or permission of instructor.

LAND 152 Site Planning (A,SP) 2-6-4
This course identifies the elements of a site and influences, methods and examples of site planning for environmental design projects. Emphasis on interdisciplinary nature of site planning. Regulatory and technical requirements. Creation and evaluation of prototypical site planning projects. Lab fee: $20.00. Prerequisites: LAND 102 or ARCH 161 or SURV 141 or permission of instructor,

LAND 200 Landscape Practicum (SU) 2-4-4
Students will be exposed to many working methods of the landscape industry. Through actual hands-on experience the following areas will be taught: skid steer operation, maintenance equipment operation, irrigation line assembly, paver construction, wood construction, retaining wall construction and trencher operation. Lab fee: $40.00.

LAND 201 Landscape Pest Control (A,SU) 2-3-3
This course will study basic control methods as they apply to insects, fungi, bacteria, biotic and other pests in the landscape. Identification of pests as well as mechanical, cultural, biological and chemical controls will be discussed. Lab fee: $5.00. Prerequisite: LAND 105 or LAND 205 or permission of instructor.

LAND 202 Planting Design (W,SP) 2-6-4
This course builds on skills learned in LAND 102 and emphasizes graphic representations of plant materials and landscape structures. Lab fee: $20.00. Prerequisites: LAND 102, LAND 206 and LAND 105 and/or LAND 205.

LAND 203 Landscape Irrigation (A,W) 2-3-3
This course will study the design principles of landscape irrigation systems. Cost/estimation factors will also be discussed. Lab fee: $12.00. Prerequisites: LAND 102 and MATH 104.

LAND 204 Turfgrass Management (A,W) 2-3-3
Students will learn the basic principles of turfgrass science and culture, specifically turfgrass identification, turf disease diagnosis, turf insect pest control, turf weed control and specific turfgrass cultural and management practices. Lab fee: $10.00. Prerequisites: LAND 101, LAND 201 and BIO 125 or LAND 107.

LAND 205 Autumn Landscape Plants (A,SU) 3-3-4
The plants in this course are not the same as those covered in LAND 105. This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the midwest climate zone. This class will combine both in-class and field experience.

LAND 206 Landscape-Graphics (A,SP) 2-4-4
This course will study the graphic symbols used to create landscape drawings. Included will be such information as color renderings, graphic representation of trees and shrubs, and shadowing. Lab fee: $15.00.

LAND 207 Landscape Structures (SP,SU) 2-3-3

This course will study the design and construction principles of landscape decks, patios, site fixtures etc., and design projects of each will be created. Lab fee: $15.00. Prerequisites: LAND 102.

LAND 208 Interior Plants (W,SU) 2-3-3
This course will study the features and growing conditions of indoor plant materials and maintenance procedures for same. Lab fee: $10.00.

LAND 210 Evergreen Landscape Plants (W) 3-3-4
This course will study the identification parameters, landscape features and growing conditions of evergreen trees and shrubs of the midwest climate zone.

LAND 214 Landscape Lighting (SP,SU) **1-2-2**
This course will cover landscape lighting design concepts. The student will be able to size wire and electrical circuits, install, maintain, and trouble shoot systems.

LAND 222 Landscape Operations (W,SP) 3-3-4
This is a capstone course in the Landscape Major; students will receive an overview of the technical operations of a landscape design/build firm. Students will work on group and individual class projects simulating the day to day business operations of a landscape firm. Lab fee: $15.00. Prerequisites: LAND 202, LAND 203, and LAND 207.

LAND 291 Landscape Co-op Experience (SU) 0-40-4
Off-campus work experience in the landscape industry. Co-op experience reinforces formal education received in the landscape program, with actual work conditions and job experience. "N" credit will not be allowed for this course. Lab fee: $15.00. Prerequisite: permission of instructor.

Latin (LATN)

LATN 101 Elementary Latin I (On Demand) 5-0-5
Introduction to the fundamentals of Latin with practice in reading and writing. Includes selected studies in culture. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

LATN 102 Elementary Latin II (On Demand) **5-0-5**
Continuation of LATN 101 with further development of reading and writing skills and further study of culture. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: LATN 101 with a grade of "C" or better.

LATN 103 Intermediate Latin I (On Demand) **5-0-5**
Continuation of LATN 102. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: LATN 102 with a grade of "C" or better.

LATN 104 Intermediate Latin II (On Demand) **5-0-5**
Continuation of LATN 103. Meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. Prerequisite: LATN 103 with grade of "C" or better.

Law Enforcement (LAWE)

LAWE 101 Introduction to Criminal Justice (ASP) 3-0-3
This course examines the development of law, and the systems and procedures developed by society for dealing with law violations. Emphasis will be placed on the three major components of the system: the police, courts, and corrections.

LAWE 102 Patrol Procedures (ASP) 2-2-3
This course covers the basic concepts of police patrol. The purpose of patrol and various patrol strategies will be examined. Calls for service and response tactics as well as arrest techniques, vehicle stops, and prisoner booking and handling are covered.

LAWE 103 Academy Orientation (W,SU) 2-0-2
This course will serve as an orientation to the law enforcement profession and the Columbus State Police Academy.

LAWE 104 Government and the Law (A,W,SP,SU) 3-0-3
The role of local government in the community; its structure, organization, and responsibility. Local government politics and the community. Urban, suburban, rural and community structure will be discussed in relationship to delivery of services.

LAWE 107 Introduction to Security (TBA) 3-0-3
This course is designed to provide a general background in security for the beginner. It covers some of the fundamental systems used for loss prevention, fire prevention, and personnel safety. This course covers the basic idea of construction for security reasons as well as beauty and functionalism. It helps to relate security to all members of a company and the responsibility each has to the prevention of loss. both material and human.

LAWE 110 Criminal Investigation I (ASP) 3-2-4
Principles and techniques of criminal investigation, including those techniques and skills used in the investigation of major crimes such as: homicide, burglary, robbery, auto theft, arson and sex offenses. Lab fee: $5.00.

LAWE 111 Criminalistics I (ASP) 1-4-3
An introduction to criminalistics laboratory techniques: includes the recognition, collection, and preservation of evidence and its preparation for court presentation. An introduction to fingerprint comparison. Lab fee: $10.00.

LAWE 112 Criminal Investigation II (W,SU) 3-2-4
A continuation of LAWE 110. Emphasis will be placed on the scientific analysis of evidence and proper methods for collection and preservation of trace evidence. Lab fee: $5.00. Prerequisite: LAWE 110.

LAWE 113 Criminalistics II (W,SU) 0-4-2
Advanced study of criminalistics laboratory techniques: includes examination techniques for blood, hair and fiber, tire-arms identification, toolmark comparison, latent fingerprints, questioned document examination and trace evidence. Lab fee: $10.00.

LAWE 115 Community and Personal Relations (W,SU) 2-2-3
This course examines the complex relationship between the police and the public they serve. Areas of potential problems will be discussed and programs and procedures for enhancing the relationship will be presented. Lab fee: $5.00.

LAWE 120 Criminology (A,SP) 3-0-3
An exploration of the crime problem in the United States. Theories of the causation of crime will be analyzed and critiqued

LAWE 121 Juvenile Delinquency (SP) **3-0-3**
A study of the nature and causes of delinquent activity by juveniles. Though the development of an understanding of causative factors. appropriate criminal justice responses to such activity can be planned.

LAWE 122 Criminal Law (On Demand) **2-2-3**
A study of the development of criminal law in the United States. The common law theories upon which law in this country is based will be explored. Specific topics will include: parties to crime, capacity to commit crimes; and defenses, and the laws defining specific crimes.

LAWE 124 Penology (A,SP) **3-0-3**
An introduction to the field of corrections. The history and goals of corrections will be explored. as well as an overview of the processing of offenders from arrest through final release.

LAWE 12.5 Traffic Accident Investigation (A,SP) **2-2-3**
An in-depth study of the procedure and objectives in accident investigations. Gathering facts from road, vehicle and witnesses, hit and run investigation, measurements and diagrams, utilization of skid mark evidence, proper methods of recording accident data, use of accident template and a practical application of the recommended method of submitting the Ohio state traffic crash report. Lab fee: $3.00.

LAWE 128 Special Category Offenders **3-0-3**
This course will focus on six subject areas; treatment of sex offenders, mentally disordered offenders, mentally retarded offenders, inmates with Aids, inmates with disabilities and the substance abuse offender. Further attention will be directed to correctional personnel, impact of political influences, perceptions, training, problems and corrective actions.

LAWE 145 Self Defense for Women (TBA) **1-2-2**
Students will learn to recognize threatening behavior, situations, and appropriate responses. Simple to learn, basic physical defense techniques are taught. In addition, defensive devices will be discussed and demonstrated.

LAWE 150 The Administration of Justice (A) **3-0-3**
The major institutions and processes in the administration of justice will be covered. The role and function of the courts, the progress of criminal and civil cases and methods for development of cooperative arrangements with other criminal justice professionals are discussed.

LAWE 153 Civil Liability in Law Enforcement (SP) **4-0-4**
Coverage of potential areas of liability such as: tort law, vicarious liability, and civil rights legislation.

LAWE 155 Managing Police Operations (W) **4-0-4**
Managing police operational units such as: investigations, patrol, internal investigations and traffic.

LAWE 201 Emergency Dispatching (TBA) **2-2-3**
A comprehensive examination of the communication process, including interpersonal as well as technological communication. The role and function of dispatchers dealing with emergency situations will be explored.

LAWE 204 Juvenile Procedures (A,SP) **2-2-3**
Organization, functions, and jurisdiction of juvenile agencies. Processing and detention of juveniles. Statutes and court procedures plating to juveniles. Police services for juveniles and neglected children. Rights and liabilities of minors and their parents.

LAWE 208 Community Based Corrections (W) **3-0-3**
This course will investigate alternative models of corrections in place of institutionalizing the offender. Various alternatives. and the benefits that will derive from the placing of the offender back in the community rather than in an institution will be discussed.

LAWE 210 Crisis Intervention (A,SP) **3-0-3**
This course provides the student with intervention strategies for dealing with persons in crises. The areas of domestic disputes, suicide prevention, and the special problems of crime victims will be emphasized. Lab fee: $10.00.

LAWE 211 Institutional Corrections (A) **3-0-3**
An exploration of the development and the purposes of correctional institutions. Emphasis will be placed on major correctional facilities at the state and federal levels. Operation of such facilities and the care and treatment of prisoners will be examined.

LAWE 212 Ohio Criminal Code (A,SP) **3-2-4**
The study of the statutes of Ohio that apply to crime and criminal procedures. With emphasis on the specific elements necessary to constitute individual crimes.

LAWE 213 Techniques of Instruction (On Demand) **3-0-3**
Methods of instruction, application of audio visual equipment, testing, evaluation, and preparation of materials are introduced. Special emphasis is placed on planning an organizational training program. Lab fee: $3.00.

LAWE 218 Supervision of Public Service Personnel (A,SP) **3-0-3**
Supervision techniques applied to public service personnel. The study of the need for job descriptions and job procedures, civil service requirements, reports, oral and written directions, work evaluation, and conference leadership. Methods of instruction effective in teaching and motivating personnel.

LAWE 219 Correctional Law (W) **4-0-4**
This course will cover the various supreme court rulings that deal with the care and treatment of prisoners confined in institutions. It will include the use of force, the right to have visitors, receive mail, attend religious functions, and the right to treatment. The course will also cover due process of law.

LAWE 220 Constitutional Law (A,SP) **3-2-3**
A study of federal and state constitutional law and the Bill of Rights with emphasis on: due process of law, equal protection of the law, jury trial, and assistance of counsel. Interpretation of the constitution by the United States Supreme Court as given in their decisions.

LAWE 221 Counseling - Probation and Parole (SP) **4-0-4**
This course covers the responsibilities and duties of the correctional counselor and case worker. Emphasis is placed upon the application of professional standards of casework in the correctional setting. Emphasis is also placed on the functions of the parole and probation officers.

LAWE 223 Correctional Administration (SP) **3-0-3**
This course will cover the various phases of administration as they relate to corrections. Three basic stages are covered; executive, mid-management and line operations. Each of these levels will be discussed as they relate to institutions, community-based institutions, and operation of probation and parole. The problems and possible solutions to them will be covered for each division of corrections.

LAWE 231 Criminal Justice Planning and Analysis (W) **2-2-3**
Decision making and analysis, using research, police resource allocation, project management.

LAWE 232 Task Force/Major Case Management (A) **2-2-3**
The management of groups of people in concentrated effort to effectively handle all facets of a major case or in dealing with emergencies.

LAWE 241 Correctional Internship I (TBA) **0-10-1**
On-the-job training in the field of corrections. The student will work in a correctional agency. The course will include the interviewing of convicted felons, verification of the information received, and various other duties connected with probation and parole. Prerequisite: LAWE 205. Concurrent: LAWE 249.

LAWE 242 Community Policing (SP) **4-0-4**
Contemporary community policing issues such as crime prevention, community education, and police deployment strategies will be explored. Internal departmental changes and methods of obtaining cooperation and commitment by department personnel will also be examined.

LAWE 243 Forensic Science for Law Enforcement Managers (TBA) **2-2-3**
Managing a forensic laboratory and/or crime scene search unit. Advanced forensic techniques will be explored.

LAWE 244 Budgeting and Grant Writing for Criminal Justice Admin. (TBA) **2-2-3**
This course examines the various frameworks for budgeting and budget management in criminal justice agencies. Students will learn a process for obtaining and managing state, federal, or foundation grants. A sample grant application will be developed.

LAWE 245 Media and the Police (TBA) **3-0-3**
This course will examine the difficult relationship of the media to the police. The development of a departmental media policy, and the utilization of the media for departmental advantage will be explored.

LAWE 249 Corrections Seminar I (TBA) **1-0-1**
This seminar will cover the pre-sentence investigation report, the purpose and how they are compiled. Members of the internship program will be able to discuss the problems and events that they have encountered during their work at the probation office with each other and the instructor. Prerequisite: LAWE 205. Concurrent: LAWE 241.

LAWE 252 Police Administration (A) 3-0-3
The contemporary local law enforcement agency, its functions, structure, and operational techniques. Principles of organization, staffing, budgeting, controlling, coordination, planning and research. The development and maintenance of liaison between agencies.

LAWE 253 Criminal Procedure (W,SU) 2-2-3
A study of the rules of procedures as they apply to criminal cases and affect the ability of the officer to have the evidence he/she collects or prepares presented in court.

LAWE 254 Correctional Internship II (TBA) **0-10-1**
On-the-job training in the corrections setting. The student will work in a correctional agency. The course will consist of making background investigations for parole board, checking of inmates at various halfway houses, and interviewing persons on parole. Prerequisite: LAWE 241. Concurrent: LAWE 255.

LAWE 255 Corrections Seminar II (TBA) **1-0-1**
This course is a discussion of what has occurred during the student's internship and clarification of problems. Assignment of project and explanation of reason for the project. Prerequisite: LAWE 249. Concurrent: LAWE 254.

LAWE 256 Law Enforcement Practicum I (A,W,SP,SU) **0-14-2**
A guided work experience in a law enforcement agency. Students will observe and participate in a variety of law enforcement functions. Exact duties will be decided on by agreement of the student and the law enforcement agency. Prerequisite: Permission of the chairperson. Concurrent: LAWE 257.

LAWE 257 Law Enforcement Practicum Seminar I (A,W,SP,SU) **1-0-1**
Seminar discussions of work experience, and development strategies to improve work performance. Prerequisite: Permission of the chairperson. Concurrent: LAWE 256.

LAWE 258 Law Enforcement Practicum II (On Demand) **0-14-2**
A guided work experience in a law enforcement agency. Students will observe and participate in a variety of law enforcement functions. Exact duties will be decided upon by agreement of the student and the law enforcement agency. Prerequisite: Permission of the chairperson. Concurrent: LAWE 259.

LAWE 259 Law Enforcement Practicum Seminar II (On Demand) **1-0-1**
Seminar discussions of work experience, and development of strategies to improve work performance. Prerequisite: Permission of the chairperson. Lab fee: $5.00. Concurrent: LAWE 258.

LAWE 260 Criminal Evidence and Trial (A,SP) 2-2-3
In this course the student will study the rules of evidence as they relate to the introduction of evidence at trial. In addition to the study of rules, students will participate in a mock trial in which evidence they have collected, preserved and processed will be presented. Lab fee: $5.00.

LAWE 261 Defensive Driving and Emergency Response (SP) 0-4-2
Defensive driving is driving to prevent accidents from occurring in spite of the actions of others or the presence of adverse conditions. Students will learn recommended driving principles and practices through vehicle operation. The student will also learn the skills necessary to administer emergency aid until assistance can be obtained. Lab fee: $25.00.

LAWE 263 Arrest and Control (SU) **1-6-4**
The student will learn: the basic principles and tactics of unarmed self-defense, how to defend against physical attack, and control of aggressive behavior in effecting an arrest using minimum force. Prerequisite: LAWE 102.

LAWE 264 Police Firearms (SU) 0-6-3
Students will learn to safely use police firearms including pistol and shotgun. Shooting decisions and alternatives to firearm use are covered. Successful completion of the course requires compliance with current Ohio Peace Officers Training Council qualification standards. Lab fee: $25.00.

LAWE 265 Police Physical Fitness (A) **1-4-3**
This course will utilize the proven methods developed by the Aerobic Institute in measuring and attaining fitness. A baseline of fitness will be established for each student and an individual exercise program will be decided upon. Class activities may include aerobics, jogging, and if needed, weight training.

LAWE 266 High Rise Safety (A) **1-2-2**
Discussions of the particular problems related to the fire safety in high rise buildings. Students will research and establish life-safety plans for a building. Information gained from previous incidents in high rise buildings will be utilized. Lab fee: $5.00.

LAWE 268 Hazardous Materials I (A) 2-2-3
An introduction to the properties and behaviors of hazardous chemicals in our environment. A study of the physical and chemical characteristics of toxic, flammable, and reactive substances in the forms of solids, liquids, and gases combined with overview of methods for safely responding to emergencies involving such materials. Emphasis will be placed on safe approach to incident scenes, positive identification of materials, and accurate analysis of the hazards presented by hazardous materials. Lab fee: $6.00.

LAWE 271 Contemporary Issues in Law Enforcement (SP,A) 3-0-3
A review of important facts in modem law enforcement along with an examination of current topics and trends.

LAWE 273 Legal Computing **2-1-2**
Course is designed to focus on legal style microcomputing for law enforcement and legal assisting personnel. Emphasis is on the legal history, copyright, computer crimes, computer security and legal computer systems. Prerequisite: CPT 101/Optional LEGL 251.

LAWE 275 Police Management Assessment (SP) 3-2-4
A capstone course in which students participate in typical assessment center evaluation techniques. These techniques include: in-basket/out-basket, written problem solving, structured oral exercise, leaderless group, and subordinate counseling.

LAWE 299 Special Topics in Law Enforcement 3-0-3
Special Topics in Law Enforcement is a course that utilizes a variety of instructional techniques to meet the needs of the constantly changing law enforcement, corrections, and legal community. The course will be designed with the advice of the particular group requesting the course and/or the Law Enforcement faculty, and Department Chairperson.

Legal Assisting (LEGL)

LEGL 101 Introduction to Legal Assisting (A,W,SP,SU) 4-0-4
The role of the legal assistant, ethical responsibilities, and legal restrictions are the main focus of this course. Students will also be introduced to the function of statutes, case law, administrative regulations and constitutions within the legal system. Prerequisite: ENGL 101 or placement into ENGL 101. Lab fee: $5.00.

LEGL 102 The Legal System (A,W,SP,SU) 2-0-2
This course explores the federal and state civil law systems, federal and state criminal law systems, appellate process and such concepts as jurisdiction and venue. Lab fee: $5.00

LEGL 103 Law Office Procedures and Management (A,W,SP,SU) **3-0-3**
This course is an introduction to the day to day operation of a law office. Emphasis will be placed on the development of accurate records keeping skills and developing an understanding of office management procedures unique to law offices, including computerized time keeping and billing programs. Lab fee: $5.00

LEGL 111 Legal Research and Writing I (A,W,SP,SU) 3-2-4
An introduction to conducting legal research and the proper methods of preparing briefs, pleadings and memorandum of law. Locating, analyzing and checking of case law is emphasized. Students will learn proper citation methods, and legal writing style, as well as becoming familiar with the Ohio and Federal Rules of appellate procedure. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 112 Legal Research and Writing II (A,W,SP,SU) 3-2-4
A continuation of LEGL 111, developing advanced research skills with an emphasis on preparing legal documents. Students will be familiar with primary and secondary sources, computer assisted research and a variety of legal documents. The student will also participate in a brief writing competition. Prerequisite: LEGL 111.

LEGL 113 Legal Research and Writing III (On Demand) 4-2-5
This course is an intense production-oriented research and writing course designed to prepare the student to function under the requirement of rapid completion of research and writing assignments commonly made in law offices, and other legal environments. The student will encounter a variety of opportunities including motions, pleadings and briefs the production of which will require both speed and accuracy, and incorporate both printed and computer-based research strategies. Lab fee: $5.00. Prerequisites: LEGL 112, and LEGL 251.

LEGL 114 Family Law (W,SU) 3-0-3
Domestic relations matters including: marriage, divorce, dissolution, child custody and support, visitation and adoptions. The law regulating such matters and the drafting of appropriate documents will be emphasized. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 119 Real Estate Transactions (A, SP) 3-0-3
A study of the law governing real property, its ownership, sale, lease or other conveyance. The instruments utilized in conveyance or lease of such property will be examined and drafted. Title searching and abstracts of title are included. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 201 General Practice (A,SP) 4-0-4
This course will acquaint the student with a variety of matters that may be encountered in a law practice. The basic elements of torts and contracts will be covered as well as judgments and civil collection actions. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 205 Litigation Practice and Procedure I (A, SP) 2-2-3
A study of the Ohio Rules of Civil Procedure, the Federal Rules of Civil Procedure, and Federal and State Rules of Evidence. The basic elements of a tort claim will be discussed and the initial phases of an action, the complaint pleadings and discovery and pre-trial phases will be examined. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 210 Criminal Law and Procedure (A,SP) 3-0-3
The Ohio Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pre-trial and post-trial procedures in a criminal case. Students will be exposed to the criminal justice system from the elements of offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters will be included. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 215 L.A. Practicum I (A, W, SP, SU) **0-14-2**
A guided work experience in an office or agency providing legal services. Exact duties are decided upon by agreement of the student and administrators of the placement site. Prerequisite: Permission of instructor.

LEGL 216 L.A. Practicum Seminar I (A, W, SP, SU) **1-0-1**
Seminar discussion of work experiences and the development of strategies to improve work performance. Prerequisite: Permission of instructor

LEGL 220 Business Organizations (A, SP) 3-0-3
The fundamentals of the formation of business entities including sole proprietorships, partnerships, and corporations, Students will prepare documents regarding the formation of such organizations. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 224 Probate Law and Practice I (ASP) 3-0-3
The law of wills, estates and estate administration including estate taxation. Testate and intestate estates, law of descent and distribution, estate planning and other probate processes will be discussed. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 226 Administrative Law (A, SP) 3-0-3
Statutory law, case law, and administrative rules will be utilized to develop an understanding of the role and authority of administrative agencies. Particular attention will be paid to social security and workers compensation claims. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 227 L.A. Practicum II (A, W, SP, SU) 0-14-2
Further work experience in an office or agency providing legal services. Exact duties will be decided upon by the student and administrators of the placement site. Prerequisite: Permission of instructor

LEGL 228 L.A. Practicum Seminar II (A, W, SP, SU) **1-0-1**
Seminar discussion of current work experiences and the development of further strategies for improvement. Prerequisite: Permission of instructor

LEGL 229 Certificate Legal Assistants Exam Review (on demand) 2-0-2
This course is designed as a review course for the student/graduate wishing to take the Certified Legal Assistant Exam. It will examine all areas of procedural and substantive law included on the CLA exam as well as the ethics section of the test. Students taking the course must successfully pass a mock CLA exam to complete the course. Lab fee: $10.00. Prerequisite: LEGL 228.

LEGL 230 Special Problems in Legal Assisting (on demand) 2-0-2
This course is a special topics course designed to allow the student to research and develop an understanding of legal assisting issues unique to the interests of the student and for which there is no other course available, the content of which will address such issues. This course is offered on an independent study basis only. Prerequisites: Permission of chairperson.

LEGL 232 Taxation (W, SP) 3-0-3
Fundamentals of state, local and federal tax laws. The agencies and tribunals involved in tax matters will be examined. Specific research strategies and document preparation relative to tax issues are explored. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 234 Litigation II (W) 2-2-3
Building on the knowledge gained in Litigation I, students will examine the role of the attorney in the trial process, case preparation and organization of materials for trial. Students will prepare a hypothetical case for trial. Lab fee: $5.00. Prerequisite: LEGL 205.

LEGL 236 Probate Law II (on demand) 3-0-3
The law of guardianship and trusts with emphasis on guardianship administration, land sales and trust accounting. Lab fee: $5.00. Prerequisite: LEGL 224

LEGL 238 Insurance Law (W,SU) 3-0-3
An introduction to insurance law. The course will include principles of indemnity, interests protected, the transfer of risk and claims processes. Lab fee: $5.00. Prerequisite: LEGL 101.

LEGL 240 Professional Malpractice (W) 3-0-3
An examination of the law of malpractice with an emphasis on malpractice in health professions and an examination of risk management methods in health care. The course will focus on informed consent, vicarious liability of health professionals and health care facilities, negligence, the doctrine of res ipsa loquitur, mandatory arbitration, defenses, and medicolegal ethics. Lab fee: $5.00. Prerequisite: LEGL 201.

LEGL 243 Alternative Dispute Resolution Issues Seminar (A, SP, SU) 3-0-3
This course is designed to examine legal, ethical, and policy issues that arise in the use of mediation, arbitration, minitrials, summary jury trial and conciliation and to help you develop mediation skills. Lab fee: $5.00. Prerequisite: LEGL 205.

LEGL 244 Creditor Debtor Relations (W, SU) 3-0-3
Insure that the student is aware of the respective rights of creditors and debtors. An introduction to the pre-legal and legal procedures of debt collection. Lab fee: $5.00. Prerequisite: LEGL 220.

LEGL 245 Legal Aspects of Real Estate Title (on demand) 4-0-4
This course is an in-depth examination of the development of a contract effecting the transfer of real estate, the interests and types of title and ownership, and the methods of title transfer process is emphasized. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 246 Real Estate Title Insurance (on demand) 4-0-4
This course is designed to define and explore title insurance as a protective instrument for the purchaser of real estate. Both commercial and residential binders will be discussed along with the impact of continuations of abstracts of title, local zoning ordinances, real estate commercial and residential development on the liability of title insurers. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 247 Civil Litigation in Real Estate (on demand) 4-0-4
This course is an examination of common types of civil litigation relating to real estate transactions. Identification of causes of action will be emphasized along with the practice and procedure to complete the cause. Defenses and ADR will also be discussed. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 248 Searching and Closing the Real Estate Title (on demand) 4-0-4
This course is designed to examine the process of real estate title searches, and to prepare the student, in detail, to perform commercial and residential real estate title closings. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 251 Computer Assisted Legal Research (A, W, SP, SU) **2-1-2**
A course designed to give the Legal Assisting student exposure to the ever expanding and utilized area of computer assisted research, an alternative to traditional, manual legal research. The student will be required to complete a series of projects within the different libraries of LEXIS in which the student will become proficient with the various uses and functions of electronic legal information retrieval. Lab fee: $25.00. Prerequisite: LEGL 111

LEGL 252 Survey of Advanced Legal Technology (W, SU) **2-1-2**
The course will introduce and provide the student with computer training in document management, litigation support, billing, the Internet and Advanced computer assisted legal research. The student will be acquainted with Internet user groups where questions are asked and answered via e-mail and list servs. Legal software that supports legal administration, case management and internal network applications will be emphasized. The course will use cd-roms, extensive computer lab sessions and each student will manage a complete case on an automated platform. The goals of the course will be to provide the student with certain computer competencies that go beyond the basics and allow them to be proactive in the use of technology while at the same time utilizing creative thinking skills. Lab fee: $25.00. Prerequisite: LEGL 112, LEGL 251 or by permission of Chairperson.

LEGL 255 Introduction to Workers' Compensation Law (A,SP) 4-0-4
This course is an introduction to the Bureau of Workers' Compensation. The focus of the course is the structure of the Bureau, with an emphasis on the purpose of the agency, the hierarchy, the authority under which it operates, and basic concepts of Workers' Compensation benefits. Lab fee: $5.00. Prerequisite: LEGL 228 or permission of instructor.

LEGL 256 Introduction to BWC Claims Processing (ASP) 4-0-4
This course is designed to acquaint the student with how the Bureau of Workers' Compensation process claims made including self-insured of state fund (BWC) claims, the calculation of wages and compensation, payment of medical bills, authorization of medical treatment, as well as how the Bureau addresses motions made, application to reactivate, and permanent partial disability settlements, from injury to resolution. Lab fee: $5.00. Prerequisite: LEGL 228 or permission of instructor.

LEGL 257 Workers' Compensation Adjudication (ASP) 4-0-4
This course is designed to acquaint the student with how to deal with state agencies, in particular the Bureau of Workers' Compensation from the claimant position. The emphasis of this course is how to acquire information available through state files and computer systems. Violations of specific safety requirements, applications for permanent total disability and the hearing process will be examined. Lab fee: $5.00. Prerequisite: LEGL 228 or permission of instructor.

LEGL 258 Workers' Compensation Rating System (W,SU) 4-0-4
This course is designed to acquaint the student with the different rating plans available through the Bureau of Workers' Compensation to establish appropriate premiums. The emphasis is on the underwriting process of the Bureau. Lab fee: $5.00. Prerequisite: LEGL 228 or permission of instructor.

LEGL 259 Workers' Compensation Practice and Procedure (W,SU) 4-0-4
This course is designed to acquaint the student with the procedures to complete the hearing process in a claim against the Bureau of Workers' Compensation from both the Bureau and claimant perspective. Lab fee: $5.00. Prerequisite: LEGL 228 or permission of instructor.

LEGL 260 Debt Collection Practice and Procedure (on demand) 4-0-4
This course is an examination of the various legal tools available to creditors to successfully collect delinquent obligations or accounts which are in default. Both formal and informal methods will be explored with an emphasis on resolution mutually beneficial to both debtor and creditor, including Consumer Credit Counseling. Development of records, pleadings, discovery, motions and entries filed in appropriate jurisdictions will be included. Lab fee: $5.00 Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 261 Business Law I (A,W,SP,SU - DL) 3-0-3
Survey of the legal framework of business, the nature of legal systems and the law, including contracts, criminal, and the law of torts. Lab fee: $1.00.

LEGL 262 Business Law II (A,W,SP,SU - DL) 3-0-3
A continuation of LEGL 261. Exploring the law of agency, corporation, partnerships, and property. Lab fee: $1.00. Prerequisite: LEGL 261.

LEGL 263 Business Law III (on demand) 3-0-3
An advanced examination of law as it pertains to business with emphasis on specialty areas of the law designed for the protection of business assets including the law of sales, commercial paper and secured transactions under the Uniform Commercial Code; debtor/creditor rights under the laws of bankruptcy; and the use of wills, trusts and estate planning techniques for the protection and transfer of business interest. Lab fee: $1.00. Prerequisite: LEGL 262.

LEGL 264 Legal Environment of Business (A, W, SP, SU - DL) 4-0-4
An overview of the American legal system with an introduction to the legal concepts and principles that form its foundation. The course will examine the judicial system and methods of dispute resolution, while focusing on business crimes and torts, including product liability, ethics, contract formation and enforcement, consumer protection, employment law, environmental regulations, business organizations, particularly sole proprietorship, partnerships, and corporations. Students will be able to understand the legal ramifications of their business decisions. Lab fee: $2.00.

LEGL 265 Business Law for Accountants (A, W, SP, SU) 4-2-5
An in-depth examination of business law as it applies to the accounting discipline with an emphasis on those topics directly relating to the Business Law section of the Certified Public Accountants Examination, including Professional Responsibility of the C.P.A. Lab fee: $5.00.

LEGL 266 Liability Issues in Health Occupations (On Demand) 3-0-3
An examination of liability concerns in health occupations; examination of risk management methods in health care. The course will focus on informed consent, medical malpractice and vicarious liability issues. Lab fee: $5.00. Prerequisite: ENGL 101.

LEGL 269 Consumer Law (on demand) 4-0-4
This course is an examination of the various state and federal statutes and regulations that govern the relationship of debtor and creditor. Statutes discussed include, but are not limited to the Fair Debt Collection Act, Uniform Consumer Credit Code (UCCC) and Article 9 of the Uniform Commercial Code (UCC). Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 270 Current Trends in Alternate Dispute Resolution (on demand) 4-0-4
The course is designed to provide the student an in-depth examination of the origins, historical basis and statutory/judicial decisions regarding the establishment of ADR procedures and its growth and impact on American jurisprudence and everyday society. It is assumed that the student has a basic knowledge of ADR procedures. The student will complete a major research project on future trends of ADR and its impact on law, business, society and its use in the global economy. Class lecture, independent research and class debates discussing the advantages and disadvantages of the ADR process will be held. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 272 Mediation (W, SU) 4-4-4
This course is an intensive overview of the mediation process. Students will study, in-depth, both statutory and private mediation processes. Students will review domestic relations mediation, employment fact-finding and labor mediation processes. Additionally, the student will learn the different models of mediation with particular emphasis on the Seven Step model. Each student will be involved in preparing and conducting several mediation role playing sessions as both mediator and participants. The fundamentals of researching Arbitration decisions and legal resources in arbitration will be examined with special emphasis on Internet resources. Each student will conduct a mediation in class and prepare a mediation notebook as a final project. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 273 Conflict Resolution and Negotiation (on demand) 4-0-4
This course will introduce and provide the student with the mechanics of client interviewing, nonverbal cues, descriptions of conflicts. Methods of resolving conflicts, a study of various negotiation strategies with the "Getting To Yes" (Win-Win) model emphasized. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 274 Survey of Miscellaneous ADR Procedures (on demand) 4-0-4
The course will focus on several ADR methods and procedures which are statutorily created and privately contracted in the resolution of business disputes. Hire-A-Judge, Summary Jury Trial, mini-trails and international ADR methods will be examined and compared. Each student will prepare the necessary forms and summaries needed to complete these ADR processes. The goals of this course will to be emphasize the role of the paralegal in researching, investigating, compiling, and preparing for the ADR process. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 275 Overview of Bankruptcy Law and Practice (on demand) 4-0-4
This course is designed to acquaint the student with the statutory and regulatory structure, location and jurisdiction of bankruptcy law and bankruptcy courts and their non-judicial officers. Parties and proceedings will be discussed as well as an overview of the bankruptcy chapters, Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson,

LEGL 276 Liquidation Proceedings: Chapter 7 Bankruptcy (on demand) 4-0-4
This course is in-depth examination of Chapter 7 of the Bankruptcy Code and the proceedings for liquidation of a debtors assets pursuant to Chapter 7. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 277 Reorganization Under Chapter 11 Bankruptcy (on demand) 4-0-4
This course will introduce and intensively examine Chapter 11 (Reorganization Process). The course is designed to provide the student with the abilities to complete the necessary forms and an understanding of the statutory requirements of this legal action. A comparison of Chapter 11 with Chapters 7 and 13 and the advantages and disadvantageous of each. Strategies and negotiation with creditors will be explored and each student will write several plans and analyze the chances of being confirmed by the court. Research and drafting of the necessary documents and responding to motions will be emphasized. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 278 Adjustment of Debts Under Chapter 13 Bankruptcy (on demand) 4-0-4
This course is an in-depth examination of Chapter 13 of the Bankruptcy Code and the proceedings for the reorganization of debt pursuant to Chapter 13.

LEGL 279 Alternatives to Bankruptcy (on demand) 4-0-4
The course emphasizes workouts and other alternatives to bankruptcy from both the debtor's perspective and the creditor. Case studies in successful workouts will be analyzed. Negotiating strategies and different solutions to resolve credit problems will be highlighted. Federal and Ohio Consumer Protection Statutes are examined with an emphasis on the Fair Debt Collection Practices Act. The student will draft the necessary documents to complete a workout and research key legal issues regarding consumer rights and protection. In addition, future trends in bankruptcy law, courts, and practices are studied. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 280 Introduction to Elder Law (on demand) 3-0-3
This course is designed to introduce the student to various social and legal issues relevant to the elder person and the methods available to such persons to resolve common legal issues confronted by the same. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 281 Social Security Practice and Procedure (on demand) 4-0-4
This course is designed to introduce the student to the origination of Social Security, its jurisdiction and regulation, and the practice and procedure within the Social Security Administration, Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 282 Medicare/Medicaid and the Elder Person (on demand) 4-0-4
This course is designed to introduce the student to the origination of Medicare and Medicaid, the jurisdiction and regulation of the same, and appropriate practice and procedure for the resolution of Medicare and Medicaid issues. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 283 Asset Protection for the Elder Person (on demand) 4-0-4
This course is an examination of various methods appropriate for designing protective measures for the preservation of assets of the elder person as they encounter either catastrophic or long term medical or nursing care. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 285 Estate Administration (on demand) 4-0-4
This course id designed to familiarize the student with the various methods of estate administration including full administration of testate and intestate estates and the process of completing the same, including introduction to tax forms, and relief from administration. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 286 Guardianships (on demand) 4-0-4
This course is designed to introduce the student to the law of guardianship and the application of the same within the jurisdiction of probate courts. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 287 Wills, Trusts and Powers of Attorney (on demand) 5-0-5
This course is an in-depth examination of the law relating to wills, trusts, and powers of attorney, the development and execution of the same, and the application of these probate tools to development and protection of estates. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 288 Civil Issues in Probate (on demand) 4-0-4
This course is designed to introduce the student to the variety of matters addressed by the probate court other than will, trusts and estates, including the resolution of petitions for name changes, legitimation, marriages, ancillary administration, adoptions, land sale proceedings, and the involvement of the court in wrongful death actions.

LEGL 289 Probate Taxation (on demand) 3-0-3
This course is designed to introduce the student to the aspects of state and federal taxation as the law applies to estates. The student will examine the state and federal tax codes, conduct research and complete applicable tax forms to complete the state. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 290 Legal Aspects of Credit and Debt (on demand) 4-0-4
This course is an overview of the creation and development of the various relationships created and developed by debtors and creditors, including but not limited to secured and unsecured debt, mortgages, credit reporting, and the rights and obligations of each under state and federal law and common law. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

LEGL 291 Arbitration (on demand) 4-0-4
The course is an intensive overview of the Arbitration Process. Students will study in-depth both court annexed arbitration and private arbitration processes. The fundamentals of researching Arbitration decisions and legal resources in arbitration will be examined with special emphasis on Internet resources. Each student will conduct an arbitration in class and prepare an arbitration notebook as a final project. Lab fee: $5.00. Prerequisite: LEGL 228 or by permission of Chairperson.

Legal Office Administration Major
(See Office Administration)

Literature
(See English)

Logistics (LOGI)

LOGI 108 Principles of Logistics (A,W,SP,SU) 5-0-5
A study of the basic concepts included in the field of logistics with particular emphasis on the economic significance of distribution to business and the U.S. economy. The interrelationship between logistics and other areas of business will be covered with particular emphasis on how logistics can significantly impact customer loyalty by adding value. Knowledge of basic algebraic concepts is strongly recommended. Lab fee: $3.00.

LOGI 110 Transportation & Traffic Management. (W, SU) 3-0-3
Introduction to traffic management function including mode and carrier selection, Lab fee: $3.00. Prerequisite: LOGI 100.

LOGI 151 Purchasing Principles I (A, SP) 3-0-3
This course is designed to teach the basics of purchasing management to the newly appointed buyer or non-purchasing personnel looking to broaden their business knowledge. Topics covered include: the challenge of purchasing and materials management, objectives and organization, function, specification, quality control and inspection, computerization, and quality considerations. Lab fee: $3.00.

LOGI 152 Purchasing Principles II (W) 3-0-3
This course is a continuation of Purchasing Principles I and focuses on how the basic of good buying can be used effectively to meet the challenges and responsibilities of the constantly changing business climate. Topics include: forward buying, international purchasing, buying capital assets and purchasing transportation services. Lab fee: $3.00. Prerequisite: LOGI 151.

LOGI 205 Freight Claims (A) 3-0-3
A study of freight loss, damageclaims, and adjustment of claims in various modes of transportation including carrier and shipper liability, transportation document, and claim filing procedures. Lab fee: $3.00. Prerequisite: LOGI 100.

LOGI 208 Production (A) 4-0-4
A study of production issues as they relate to manufacturing and service firms. Lot sizing and order management techniques will be studied. Lab fee: $3.00. Prerequisites: LOGI 100, MATH 135 or permission of instructor.

LOGI 209 Quantitative Methods for Logistics (A) 5-0-5
A study of quantitative tools helpful to the logistics professional. This course is recommended for the advanced student or the working professional. Lab fee: $13.00. Prerequisite: LOGI 100 and permission of instructor.

LOGI 210 Warehouse Management (A, SP) 3-0-3
Analysis of warehousing functions and management. Topics covered include facility location and operation, labor relations, financial analysis and productivity improvement and measurement. Lab fee: $3.00. Prerequisite: LOGI 100.

LOGI 211 Inventory Control (W, SU) 4-0-4
A study of inventory control problems and methods. Topics covered include demand forecasting, independent demand inventory systems, inventory models and aggregate planning. Lab fee: $3.00. Prerequisites: LOGI 100, MATH 103, MATH 135 or permission of instructor.

LOGI 225 Export/Import (A, SP) 3-0-3
A study of global logistics with emphasis on the requirements for importing and exporting. Laws, regulations, paperwork and international billing terms will be discussed. Lab fee: $3.00. Prerequisite: LOGI 100.

LOGI 240 Transportation Law/Regulations (SU) 2-0-2
A study of transportation law and regulation, with emphasis on shipper responsibilities. Claims, undercharge avoidance, contracting, and the shipper's bill of lading are discussed. Lab fee: $3.00. Prerequisite: LOGI 100.

LOGI 241 Logistics Practicum I (A,W,SP,SU) 0-28-4
Supervised on-the-job application of knowledge and skills acquired in the classroom. Lab fee: $3.00. Prerequisite: Advisor approval required. Open to Logistics Management Technology students only. Concurrent: LOGI 242.

LOGI 242 Logistics Seminar I (A,W,SP,SU) 0-4-2
Application of logistics knowledge to specific areas of on-the-job experience. Prerequisite: Advisor approval required. Open to Logistics Management Technology students only. Lab fee: $3.00. Concurrent: LOGI 241.

LOGI 245 Transportation Rates & Pricing (SP) 2-0-2
A course of transportation rates and pricing, including carrier cost structures and industry economics. Emphasis will be on negotiation of favorable rates from carriers and proper preparation for same. Lab fee: $3.00. Prerequisite: LOGI 100.

LOGI 256 Advanced Purchasing Seminar (SP) 3-0-3
A capstone course designed for the Purchasing Management major. A comprehensive case study approach will be used to understand purchasing as the primary materials procurement activity while integrating purchasing with other materials management activities. Topics cover include: legal consideration, public purchasing, the planning process, and control functions such as inventory control, budgeting, and production. Lab fee: $3.00. Prerequisite: LOGI 152.

LOGI 271 Advanced Logistics (SP) 5-0-5
A capstone course designed to develop an overall appreciation of the logistics function and its relationship to business strategy. Lab fee: $3.00. Prerequisites: Completion of at least 12 credit hours in logistics or advisor approval and MATH 135.

LOGI 297 Special Topics in Logistics (On Demand) **1-3**
Detailed examination of special topics of interest in logistics. Topics vary. Lab fee: $3.00.

Marketing (MKTG)

MKTG 111 Marketing Principles (A,W,SP,SU - DL) 5-0-5
The fundamentals of product planning, pricing, promotion and distribution of goods and services with emphasis on the impact of a global economy and technology on marketing activities. Additional attention is given to consumer behavior, market research and market strategies. Lab fee: $3.00.

MKTG 122 Business & the Internet (ASP) 2-2-3
An overview of how to use the Internet to gather and evaluate primary and secondary sources of business information for production development, market research, sales, advertising and promotion and customer service/retention. Lab fee: $13.00.

MKTG 131 Market Research Principles (A,SU) 3-0-3
An introduction to the field of market research with particular emphasis on how to use research data to make better marketing decisions. Topics covered include the market research process, research design and data sources, data collection and the analysis of marketing research data. Lab fee: $3.00. Prerequisites: MKTG 111 and MATH 101 or instructor approval.

MKTG 140 Advertising and Promotion (ASP) 5-0-5
An introduction to the critical role that advertising and promotion play in marketing activities. Topics covered include promotional program development and analysis, the communications process and evaluating an integrated marketing communications program. Lab fee: $3.00. Prerequisite: MKTG 111 or instructor approval.

MKTG 221 Consumer Behavior (A,SU) 3-0-3
Consumer behavior is designed to assist the student in developing a fuller understanding of the influences, both internal and external, that determine consumer behavior. Lab fee: $3.00. Prerequisite: MKTG 111 or instructor approval.

MKTG 223 Sales (ASP) 3-0-3
Practical application of selling theory in a variety of personal selling situations, Techniques of all phases of the selling process from initial contact to the close of the sale will be taught. Lab fee: $3.00. Prerequisite: MKTG 111 or instructor approval.

MKTG 224 Public Relations (A,SP) 3-0-3
Public relations examines both the theoretical and practical factors that contribute to a firm's image among its many publics. The emphasis is on public relations as a function of management as well as an adjunct of promotion. Lab fee: $3.00. Prerequisite: MKTG 111 or instructor approval.

MKTG 226 Customer Service Principles (A,W,SP,SU) 3-0-3
A study of customer service principles used in business. Concepts and key elements will be explored. Techniques will be developed for small business applications. Topics include customer service overview, key elements of customer service, trends, industry examples, business impact and legal implications. Lab fee: $3.00. Prerequisite: MKTG 111 or instructor approval.

MKTG 227 Customer Service Case Studies (W,SP) 3-0-3
A study of the process for achieving excellence in customer service. Key quality characteristics will be explored and techniques will be developed for measuring and delivering excellent service. Lab fee: $3.00. Prerequisite: MKTG 226 or instructor approval.

MKTG 228 Advanced Sales (W) 3-0-3
This course is designed to help students understand the thought processes, motives and attitudes that impact the selling process. Topics covered include the 'system' used by sellers and buyers, the visual perception of behavior, the success triangle and self management. Case studies, role playing and team projects are an integral part of this course. Lab fee: $3.00. Prerequisite: MKTG 223 or instructor approval.

MKTG 229 Business-to-Business Marketing (A) 3-0-3
A comprehensive overview of the marketing principles and practices utilized in business-to-business marketing. An empirical approach is taken to analyzing marketing strategy in business to business environments. Additional emphasis is placed on organizational marketing, future trends and the impact of technology on business-to-business marketing. Lab fee: $3.00. Prerequisite: MKTG 111 or instructor approval.

MKTG 230 Small Business Marketing (SP) 3-0-3
The course provides the student a set of management techniques that will be applied directly to the marketing challenges faced by a small business in such areas as sales, public relations, distribution and market research. Students will develop a comprehensive marketing plan. Lab fee: $3.00. Prerequisites: MKTG 111 or permission of instructor.

MKTG 236 Direct Marketing (A,SP) 3-0-3
A survey of the direct marketing process including the theory and practice of direct marketing, its function and organization. Topics covered include direct response television/radio, database marketing, list selection and evaluation, direct marketing media and planning. Special emphasis is placed on how to integrate direct marketing into the overall marketing mix. Lab fee: $3.00. Prerequisite: MKTG 111 or instructor approval.

MKTG 237 Database Marketing (W) 3-0-3
An overview of the use of databases in consumer and business-to-business marketing to both acquire and retain customers. Particular emphasis is placed on developing in-house databases, list purchase and managing a marketing database. Lab fee: $3.00. Prerequisite: instructor approval.

MKTG 241 Marketing Practicum I (A,W,SP,SU) 0-28-4
Supervised on-the-job application of knowledge and skills acquired in the classroom. Lab fee: $3.00. Prerequisite: 12 hours in technology or permission of instructor. Concurrent: MKTG 242.

MKTG 242 Marketing Seminar I (A,W,SP,SU) 0-4-2
Application of marketing knowledge to specific areas of on-the-job internship. Lab fee: $3.00. Prerequisite: Open to Marketing Technology students only, permission of instructor. Concurrent: MKTG 241.

MKTG 251 Marketing Practicum II (A,W,SP,SU) 0-28-4
Continuation of MKTG 241. Lab fee: $3.00. Prerequisites: MKTG 241 and advisor approval required the quarter before the student actually begins the internship. Open to Marketing Technology students only. Concurrent: MKTG 252.

MKTG 252 Marketing Seminar II (A,W,SP,SU) 0-4-2
Application of marketing knowledge to specific areas of on-the-job internship. Lab fee: $3.00. Prerequisite: MKTG 242. Open to Marketing Technology students only. Concurrent: MKTG 251.

MKTG 260 Direct Marketing Using Electronic Media (SP) 2-2-3
An overview of electronic marketing media and how to integrate marketing strategies using these media with traditional marketing plans. Special emphasis is placed on promotional opportunities and market research that are possible using electronic media. Lab fee: $13.00. Prerequisite: MKTG 236 or permission of instructor.

MKTG 261 Financial Analysis of Direct Marketing Results (SU) 3-0-3
Overview of the bases and uses of financial and decision-making methods in consumer and business-to-business direct marketing. Particular emphasis on list database acquisition and maintenance costs, costs of creative and production, and overall assessment of program using ROI. Lab fee: $3.00. Prerequisite: MKTG 236 or permission of instructor.

MKTG 262 Telemarketing (W) 3-0-3
An overview of both outbound and inbound telemarketing activity and its role as part of a comprehensive direct marketing effort. Topics covered include developing marketing objectives, script preparation and implementation, customer list

acquisition, and measuring results. Lab fee: $3.00. Prerequisite: MKTG 236 or permission of instructor.

MKTG 263 Direct Marketing Creative (A) 3-0-3
Overview of how to create and evaluate effective direct response materials. Topics covered include: establishing a "unique selling proposition", copywriting guidelines, how to use graphic support, offer development, and the inclusion of token/ stamps to increase audience interaction. Special attention is given to how to select appropriate formats including computerized letters, self-mailers, broadsides, and brochures. Lab fee: $3.00. Prerequisite: MKTG 236 or permission of instructor.

MKTG 264 Call Center Operations (SP) 3-0-3
Introduction to the concepts and skills needed to be an effective telephone call service center supervisor. Topics covered include call center theory, impact of technology on operations, interpersonal communications, telecommunications techniques and supervisor techniques. Lab fee: $3.00. Prerequisite: MKTG 227 or permission of instructor.

MKTG 271 Advanced Marketing (A,SP) **5-0-5**
A capstone course designed to develop a broader understanding of the marketing function and its relationship to business strategy. Students will use the case method to determine appropriate marketing strategies and plans for existing organizations. Lab fee: $3.00. Prerequisite: Completion of at least 12 credit hours in technology and ACCT 106 or advisor approval.

MKTG 281 Advanced Direct Marketing (SP) **5-0-5**
A capstone course for direct marketing majors designed to provide a comprehensive understanding of direct marketing activities. Students will use the case method to determine appropriate direct marketing strategies and plans for various existing organizations. Lab fee: $3.00. Prerequisites: Completion of at least 12 credits in technology. Open to Direct Marketing majors only.

MKTG 285 The Internet &Advertising & Promotion (AU, SP) **1-0-1**
This course provides the student with an overview of how the Internet can be used as a part of an organization's advertising and promotion strategy. The focus is on the Internet as another means of communicating with an organization's various target markets. Lab fee: $3.00

MKTG 286 The Internet & Customer Service (AU, SP) **1-0-1**
This course provides the student an opportunity to see how the Internet can be used to improve the basic delivery of customer service and improve customer relations for business organizations. Lab fee: $3.00

MKTG 287 The Internet & Public Relations (AU, SP) **1-0-1**
The focus is on the real world use of the Internet in developing organizational objectives. Students will use the Internet to examine trends, basic concepts and current practices in public relations. Lab fee: $3.00

MKTG 288 The Internet & Marketing Research (AU, SP) **1-0-1**
Students will use the Internet to gather information on customers, business organizations, and non-profit institutions. Attention will be given to using the Internet as a tool to find the best sources of information to solve real-world marketing problems. Lab fee: $3.00

MKTG 289 The Internet & Direct Marketing (AU, SP) **1-0-1**
Students will use the Internet as a tool in the direct marketing process. The focus is on using the Internet as a vehicle to create databases and as a direct response mechanism for target markets. Lab fee: $3.00

MKTG 291 Advanced Customer Service (SP) **5-0-5**
A capstone course for customer service majors designed to provide a comprehensive understanding of customer service and consumer affairs, particularly as they impact corporate goals and strategies. Students will use the case method to determine appropriate customer service strategies and plans for various organizations. Lab fee: $3.00. Prerequisites: Completion of at least 12 credits in technology. Open to Customer Service majors only.

MKTG 297-298 Special Topics in Marketing (On Demand) **1-3**
Detailed examination of various topics in marketing. Prerequisites vary.

Mathematics (MATH)

MATH 100 Calculations and Dosages (A,W,SP,SU) **2-0-2**
A review of the fundamental operations of arithmetic with fractions and decimal fractions; ratio and proportion calculations; an introduction to the metric and apothecary systems of measures; metric-apothecary conversions; strengths of solutions: and calculating medication dosages; children's dosages; intravenous calculations. Lab fee: $1.00. Prerequisite: DEV 030 with a grade of "C" or higher, or by placement, Meets degree requirement for the Veterinary and Medical Assisting Technologies.

MATH 101 Business Mathematics (A,W,SP,SU - DL) **5-0-5**
Ratio, proportion and percents; checking accounts and gross earning; FICA and withholding; sales and property tax; discounts; mark-up and mark-down; simple and compound interest; discounting notes; present value and amortization; and depreciation schedules. An introduction to descriptive statistics: mean, median, mode, and standard deviation. Applications modules using LOTUS 1-2-3. Lab fee: $4.00. Prerequisite: DEV 031 with a grade of "C" or higher, or by placement. Meets degree requirement for the AAS degree in Business Management and several other technologies.

MATH 102 Beginning Algebra I (A,W,SP,SU) **4-0-4**
Review of structure and properties of real numbers; distance between two points on the number line; interval notation; numerical expressions with grouping symbols and exponents; evaluating and simplifying algebraic expressions; properties of exponents applied to monomial expressions; solving linear equation algebraically; formulas; problem solving using linear equations; introduction to the Cartesian coordinate system; graphing on the TI-82/83 calculator; linear equations in two variables; slope of a line'; writing the equation of a line. Lab fee: $1.00. Prerequisite: DEV 031 with a grade of "C" or higher, or by placement. Not open to students with credit for MATH 103 or above. A TI-82/83 graphing calculator is required. Computer-based learning: Some sections of MATH 102 will be taught each quarter providing a multimedia learning opportunity, with coursework offered on a computer. A $65.00 la fee is charged which covers the cost of all software and textbooks.

MATH 103 Beginning Algebra II (A,W,SP,SU) **4-0-4**
Review of linear equations in two variables and slope, writing the equation of a line; relations and functions; function notation and evaluation; solving linear equations algebraically and graphically; solving systems of equations in two variables, problem solving using systems of equations; operations with polynomials; factoring polynomials; solving polynomial equations using zero-factor principal; operations with rational expressions; complex fractions. The TI-82/83 graphics calculator will be used to enhance problem solving and critical thinking skills. Lab fee: $1.00. Prerequisite: MATH 102 with a grade of "C" or higher, or by placement. Not open to students with credit for MATH 104 or above. A TI-82/83 graphing calculator is required. Computer-based learning: Some sections of MATH 103 will be taught each quarter providing a multimedia learning opportunity, with coursework offered on a computer. A $65.00 la fee is charged which covers the cost of all software and textbooks.

MATH 104 Intermediate Algebra (A,W,SP,SU) **5-0-5**
Interval notation; function notation and evaluation; absolute value, rational, radical and quadratic equations; analytical and graphical approaches to solving equations; linear inequalities and systems of inequalities in two variables; double and compound inequalities in one variable; operations with rational and irrational expressions; introduction to non-real numbers; applications using inequalities, rational models, and quadratic models. Lab fee: $1.00. Prerequisite: MATH 103 with a grade of "C" or higher, or by placement. Not open to students with credit for MATH 110, 111, 112, 113, 125, 130, or 148 and above. A TI-82/83 graphing calculator is required. Computer-based learning: Some sections of MATH 104 will be taught each quarter providing a multimedia learning opportunity, with coursework offered on a computer. A $65.00 la fee is charged which covers the cost of all software and textbooks.

MATH 105 Mathematics for Elementary Teachers I (A,SP) **5-0-5**
Development of basic concepts of arithmetic and algebra as appropriate for elementary school teachers. Instruction will focus on the development of these concepts through the use of hands on manipulatives, calculators, computers and computer software programs. The role of technology in the teaching and learning mathematics will be demonstrated. Lab fee: $1.00. Prerequisites: MATH 104 or MATH 110 with a grade of "C" or higher, or by placement.

MATH 106 Mathematics for Elementary Teachers II (W,SU) **5-0-5**
A continuation of MATH 105. Development of basic concepts of geometry and statistics as appropriate for elementary school teachers, Instruction will focus on the development of these concepts through the use of hands on manipulatives, calculators, computers, and computer software programs. The role of technology in the teaching and learning of mathematics will be demonstrated. Lab fee: $1.00. Prerequisite: MATH 105 with a grade of "C" or higher.

MATH 107 Condensed Algebra I (A,W,SP,SU) **5-0-5**
This course is intended for those students who need a quicker review of algebra than what is provided in MATH 102 and 103. A brief review of the Real Number System; interval notation; simplifying algebraic expressions; properties of integer exponent; the coordinate plane; function notation and evaluation; solving linear equations and inequalities; applications of linear equations and inequalities: compound inequalities; absolute value equations and inequalities and their appli-

cations; properties of linear functions: slope, ex-and y-intercepts; equations of lines: slope-intercept and point-slope; special equations of horizontal and vertical lines. Lab fee: $1.00. Prerequisite: By Compass placement or department chairperson approval. Not open to students with credit for MATH 110, 111, 112, 113, 125, 130 or 148 and above. A TI-82/83 graphing calculator is required.

MATH 110 Condensed Algebra II (A,W,SP,SU) **5-0-5**
This course is intended for those students who need a quicker review of algebra than what is provided in MATH 103 and 104. Systems of linear equations and inequalities; operations on polynomials; factoring polynomials; solving quadratic equations using the zero-factor property, completing the square method, and the quadratic formula; solving rational and radical equations: simplifying rational and radical expressions; properties of radicals and rational exponents; applications of quadratic and rational equations; complex fractions; introduction to the Complex Number System; solving equations in quadratic form; quadratic functions. Lab fee: $1.00. Prerequisite: MATH 107 with a grade of "C" or higher, or by placement, or by permission of department chairman. Not open to students With credit for MATH 111, 112,113, 125, 130 or 148 or above. A TI82/83 graphing calculator is required.

MATH 111 Technical Mathematics I (ASP) 3-2-4
A brief review of scientific notation and other algebraic concepts; dimensional analysis; significant digits; solutions to quadratic equations; solving formulas; ratio-proportion; direct and inverse variation; algebraic functions and rectangular coordinates; solutions to 2 x 2 and 3 x 3 linear systems, including Cramer's Rule; and right triangle solutions. A TI-85/86 graphing calculator is required. Lab fee: $1.00. Prerequisite: MATH 103 or MATH 107 with a grade of "C" or higher, or by placement. Meets degree requirement for several technical programs.

MATH 112 Technical Mathematics II (W,SU) 3-2-4
Periodic functions with emphasis on graphing the Sine and Cosine curves; sequences, series, and summation notation; exponential and logarithm functions; complex numbers, including DeMoivre's Theorem; vectors and oblique triangles using the Law of Sines and the Law of Cosines. A TI-85/86 graphing calculator is required. Lab fee: $1.00. Prerequisite: MATH 111 with a grade of "C" or higher. Not open to students with credit for MATH 150. Meets degree requirement for technical programs.

MATH 113 Technical Mathematics III (ASP) 3-2-4
Solving quadratic form equations; higher-degree equations, synthetic division, remainder and factor theorems; linear, quadratic, absolute value, and rational inequalities: trigonometric identities and equations; the straight line, circle, parabola, ellipse, hyperbola, and translation of axes; an introduction to descriptive statistics, including frequency distributions, measures of central tendency and dispersion, and the Normal Distribution. A TI-85/86 graphing calculator is required. Lab fee: $1.00. Prerequisite: MATH 112 with a grade of "C" or higher. Not open to students with credit for MATH 150. Meets degree requirement for Electronic Engineering Technology and Mechanical Engineering Technology.

MATH 121 Mathematics for Computer Technology (A,W,SP,SU) 5-0-5
A study of fixed and floating-point real numbers, significant digits, scientific and normalized notations; a look at algorithm, flowchart, and pseudocode forms: a comparison of decimal, binary, octal, and hexadecimal numeration systems, conversions, and arithmetic in those systems; definitions, symbols, and operations in set theory; logical operators with truth tables and flowcharts and Boolean Algebra. Lab fee: $1.00. Prerequisite: MATH 103 with a grade of "C" or higher, or by placement. Meets degree requirement for the Computer Programming Technology, the Computer Electronics major of the Electronic Engineering Technology, and the EDP Auditing major in Accounting.

MATH 125 Mathematics in a Modem World (A,W,SP,SU) **5-0-5**
Mathematics will be used to examine real world data.. Topics will include linear, quadratic, exponential, and logarithmic functions, and their inverses, systems of equations, matrices, and right triangle trigonometry. Problems from a variety of disciplines will be studied through mathematical modeling. A TI-82/83 graphing calculator is required. Lab fee: $1.00. Prerequisite: MATH 104. MATH 110 or MATH 111 with a grade of "C" or higher, or by placement. This course is designed for the student who does not intend to take additional courses in mathematics. Meets the general education requirement for the AA degree. Not open to students with credit for MATH 130 or 148 or above.

MATH 130 Mathematical Analysis for Business I (A,W,SP,SU) 5-0-5
A review of algebra fundamentals including rational expressions, exponential rules, factoring, solving linear and quadratic equations, and solving linear inequalities. Function notation: symmetry, translations, and reflections of graphs of functions. An introduction to modeling of linear, quadratic, exponential, and logarithmic functions. The mathematics of finance including compound interest, annuities, amortization and sinking funds. Business applications throughout. A TI-82/83 graphing calculator is required. Lab fee: $1.00. Prerequisite: MATH 104 or MATH 110 with a grade of "C" or higher, or by placement. Not open to students with credit for MATH 148 or MATH 150. Meets general education requirement for the AA degree for a student planning to transfer to a business college at a four-year university.

MATH 131 Mathematical Analysis for Business II (A,W,SP,SU) **5-0-5**
An introduction to finite mathematics: matrices; determinants; Cramer's Rule; linear programming; simplex method; interpretation of graphs; applications. An introduction to sets, permutations, and combinations. An introduction to the fundamentals of calculus. A TI-82/83 graphing calculator is required. Lab fee: $1.00. Prerequisite: MATH 130 or MATH 148 with a grade of "C" or higher, or permission of Mathematics Department. Meets general education requirement for the AA degree for a student planning to transfer to a business college at a four-year university.

MATH 132 Business Calculus (A,W,SP,SU) **5-0-5**
An introduction to differential and integral calculus: Limits, continuity, derivatives, curve sketching, anti-differentiation, definite integrals, the Fundamental Theorem of Calculus, area, and calculus applications for business and economics. A TI-82/83 graphing calculator is required. Lab fee: $1.00. Prerequisite: MATH 131 with a grade of "C" or higher. Meets general education requirement for the AA degree for a student planning to transfer to a business college at a four-year university. Not open to students with credit for MATH 151 or MATH 152.

MATH 135 Elementary Statistics (A,W,SP,SU) **5-1-5**
Descriptive statistics; percentiles and z-scores; probability; binomial and normal distributions; Central Limit Theorem; sampling statistics; statistical inference, estimation; testing hypothesis; linear correlation and regression. Microcomputers will be used. A TI-82/83 graphing calculator is required. Lab fee: $5.00. Prerequisite: MATH 103 with a grade of "C" or higher, or by placement. Not open to students with credit for MATH 233. Meets basic related requirements for several AAS Degree technical programs. MATH 135 may be available as an honors class.

MATH 147 Trigonometry Module (On Demand) **1.2-0-1.2**
Right triangle and unit circle trigonometry is studied along with related trigonometric applications. A TI-82/83 graphing calculator is required. Calculators that can do symbolic manipulations are not allowed. Prerequisite: Permission from the Mathematics Department Chairperson. This module is intended to prepare students who have an adequate algebra background but lack the necessary trigonometry to succeed in Physics 117, Physics 181, or Physics 183.

MATH 148 College Algebra (A,W,SP,SU) 5-0-5
The concept of function is used to analyze quadratic, higher degree polynomial. and rational functions. The function concept is applied to solving related equations and inequalities. Right triangle and unit circle trigonometry is included, along with related triangle applications. Conic sections are defined and analyzed. A TI-82/83 graphing calculator is required. Calculators that can do symbolic manipulations are not allowed. Lab fee: $1.00. Prerequisite: MATH 104, MATH 110, or MATH 111 with a grade of "C" or higher, or by placement. Meets general education requirement for AA degree. Not open to students with credit for MATH 150 and above. MATH 148 may be available as an honors class or as an honors contract.

MATH 150 Precalculus (A,W,SP,SU) **5-0-5**
A continuation of the study of functions, including the exponential, logarithmic, and trigonometric functions; triangle trigonometry, analytic trigonometry; applications of trigonometry; the trigonometric form of complex numbers; vectors; parametric equations; and polar coordinates. A TI-82/83 graphing calculator is required. Calculators that can do symbolic manipulations are not allowed. Lab fee: $1.00. Prerequisite: MATH 148 with a grade of "C" or higher. Meets general education requirement for AA degree. Not open to students with credit for MATH 151 or above.

MATH 151 Calculus and Analytic Geometry I (A,W,SP,SU) 5-0-5
An introduction to differential calculus: functions; limits, continuity, derivatives, differentiation rules, derivatives of the trigonometric functions, related rates, extrema, curve sketching, optimization, antiderivatives; applications to problems in science and engineering. Lab fee: $1.00. Prerequisite: MATH 113 or MATH 150 with a grade of "C" or higher, or permission of the Mathematics Department. Meets general education requirement for AS and AA degrees. MATH 151 may be available as an honors class or as an honors contract.

MATH 152 Calculus and Analytic Geometry II (A,W,SP,SU) 5-0-5
Introduction to integral calculus: definite integral, area under a curve, Fundamental Theorem of Calculus, integration of exponential, logarithmic, trigonometric, inverse trigonometric, and volume and surface area of solids of revolution, arclength, and methods of integration. Applications to problems in science and engineering. Lab fee: $1.00. Prerequisite: MATH 151 with a grade of "C" or higher. Meets general education requirement for AS and AA degrees.

MATH 153 Calculus and Analytic Geometry III (A,W,SP,SU) **5-0-5**
Continuation of differential and integral calculus: L'Hopital's Rule and indeterminate limits, improper integrals, infinite sequences and series, conic sections, plane curves and polar coordinates, vectors in the plane and in space, and analytic geometry in space. Applications to problems in science and engineering. Lab fee: $1.00. Prerequisite: MATH 152 with a grade of "C" or higher. Meets general education requirement for AS and AA degrees.

MATH 233 Statistics for Business (A,W,SP,SU) **5-1-5**
Numerical and graphical descriptions of sample data; measures of central tendency and dispersion; probability; Bayes' Theorem; the binomial, Poisson, uniform, exponential, and normal distributions: sampling distributions, the Central Limit Theorem. Applications to the business sciences. Microcomputers will be used. Lab fee: $5.00. Prerequisite: MATH 132 or MATH 152 with a grade of "C" or higher. Meets general education requirement for AS and AA degrees.

MATH 254 Multivariable Calculus (A,W,SP,SU) **5-0-5**
Introduction to multivariable calculus; vector valued functions and motion in the plane and in space, functions of several variables, partial derivatives, directional derivatives, gradients, extrema, multiple integrals, line integrals and Green's Theorem; applications to problems in science and engineering. Lab fee: $1.00. Prerequisite: MATH 153 with a grade of "C" or higher. Meets general education requirement for the AS and AA degrees.

MATH 255 Elementary Differential Equations I (ASP) 5-0-5
A study of the basic concepts and methods of solving ordinary differential equations, first and second order, higher order linear equations, Laplace transform methods, series solutions, and numerical solutions of differential equations. Applications to the physical sciences and engineering. Lab fee: $1.00. Prerequisite: MATH 254 with a grade of "C" or higher. Meets general education requirements for AS and AA degrees.

MATH 256 Elementary Differential Equations II (On Demand) 5-0-5
Partial differential equations: boundary value problems; Bessel Functions; orthogonality relations; Fourier series; vibrating string; steady state heat; LaPlace transforms; with applications. Lab fee: $1.00. Prerequisite: MATH 255 with a grade of "C" or higher. Meets general education requirements for the AS and AA degrees.

MATH 266 Discrete Mathematical Structures (W,SP,SU) 5-0-5
Mathematical formalization and reasoning; logic; Boolean algebra; sets, relations, and functions; recursive definitions; mathematical induction; probability theory and counting principles. Lab fee: $1.00. Prerequisite: MATH 152 with a grade of "C" or higher. Meets general education requirements for the AS and AA degrees.

MATH 268 Elementary Linear Algebra (SP,SU) 5-0-5
Linear systems, matrices, and determinants; vector spaces, R N and its subspaces; Eigenvalues, Eigenvectors, and applications; orthogonal matrices; linear transformations: and complex scalars; with applications. Lab fee: $1.00. Prerequisite: MATH 254 with a grade of "C" or higher, or permission of Mathematics Department. Meets general education requirement for the AS and AA degrees.

MATH 285 Ordinary and Partial Differential Equations (W,SP) 6-0-6
Ordinary and partial linear and nonlinear differential equations; Fourier series; boundary value problems. Applications to engineering and the physical sciences. Lab fee: $1.00. Prerequisite: MATH 254 with a grade of "C" or higher, or permission of the Mathematics Department. Not open to students with credit for MATH 255. Meets general education requirement for the AS and AA degrees.

MATH 290 Capstone in Mathematics (On Demand) 2-2-3
A capstone course focusing on mathematics. This course is intended to provide the student with an introduction to a baccalaureate major in the mathematical sciences. Topics include the historical and philosophical developments of mathematics and how they affect the advancements of mathematics; the interdependence of science, technology, and mathematics; mathematical methods and how they are used in modeling problems in science and engineering; majoring in mathematics and professional career opportunities. The laboratory utilizes a scholarly approach to reviewing research in mathematics or the history of mathematics, taking students through the process of identifying a research topic, conducting a literature review, writing a paper, and presenting the results. This course is required of all students in the AA or AS degree program preparing for a major in one of the mathematical sciences. Lab fee: $10.00. Prerequisite: MATH 152.

Mechanical Engineering Technology (MECH)

MECH 110 Introduction to Manufacturing Technology (A,SU) 2-3-3
This course is designed to introduce the beginning student to Engineering Technology and the Engineering Technology Department of Columbus State. Topics such a blueprint reading, engineering procedures and calculations, and engineering terminology are covered. In addition, current manufacturing trends, manufacturing organizations, and professional societies are examined.

MECH 111 Manufacturing Processes (A,SU) 3-2-4
This course is designed to be an introduction to primary processing and the six main secondary manufacturing processes-casting and molding, separating, hot and cold forming, conditioning, assembling, and finishing. Lab fee: $5.00.

MECH 112 Computer Applications in Manufacturing 2-3-3
An introductory level computer course for Engineering Technology students. The course introduces computer technology critical to the subsequent success in studies of CAD, CAM, Numerical Control Machining and Computer Programming for Technicians. Students will complete assignments in Microsoft Office as well as cover DOS commands and applications, Windows, the web and the basic hardware of the computer. Lab fee: $10.00.

MECH 120 Mechanical Drafting I (W,SU) **1-5-3**
This course is designed to instruct students in the principles of orthographic and isometric projection and dimensioning. Additional topics covered include section views, auxiliary views, fasteners and assembly drawings. The course focus is on producing working detail drawings. Lab fee: $10.00. Prerequisite: MECH 110.

MECH 130 Statics (SP,SU) 2-3-3
This course deals with the principles of trusses, frames, machines and machine components. The course will offer the student experience in dealing with coplanar load systems that are concurrent, parallel and noncoplanar. Prerequisites PHYS 181. Lab fee: $15.00

MECH 131 Hydraulics (SP,SU) 2-3-3
This is a course designed to instruct students in the basics of fluid flow and power transmission in hydraulically controlled machines. The principles of system design and practical uses of hydraulic systems for industrial, agricultural, and off-road applications are emphasized. Hands-on laboratory experiences are used to demonstrate basic operating principles including piping, pumps, cylinders, and motors. Lab Fee: $10.00.

MECH 240 Machine Tools (A,SU,) 2-6-4

This course features hands-on operation of mills, lathes; shapers, and grinders in addition to instruction on safety practices and related theory needed for operating these machines. Additional instruction will be given on cutting tool materials and geometry, feeds and speeds, and associated bench practices. Lab fee: $30.00.

MECH 242 Strength of Materials (W,SU) 2-3-3
This course is a study of the application of external loads to rigid bodies and the analysis of the resulting stresses produced within those bodies. Study will be devoted to thermal expansion, bolted, and welded joints, thin walled pressure vessels, beam stresses and deflection, beam design, column stresses, and column design. Lab Fee $15.00. Prerequisite: MECH 130.

MECH 243 Robotics (A) 2-3-3
This course presents robotic operations and system configurations. Students are required to flowchart, code, compile, and debug programs using the Fanuc Karel programming language. Hands on experience with robotic systems is gained through teaching and executing the programs on an articulated 6 axis Fanuc S-6 robot. Lab fee: $10.00. Prerequisites: MECH 112. and MATH 111.

MECH 244 Statistical Process Control (W,SP) 2-3-3

This course provides a broad overview of statistical process control practices commonly found in business and industry. This course includes presentation of the philosophy and practices of modem qualify control principles, basic probability, control chart applications, acceptance sampling, frequency distributions, and process capability studies

MECH 250 Materials Science (W) 2-3-3
This is a course that will acquaint the engineering technician with the nature, properties, performance, characteristics and practical uses of various engineering materials. Materials such as ferrous and nonferrous metals as well as plastics, and selected organic materials will be covered. Non-destructive and destructive testing practices commonly found in industry today will be presented. Lab fee: $15.00.

MECH 251 Computer Aided Drafting I (W,SP) 1-5-3
Introduces students to the basic terminology and fundamental concepts of computer aided drafting. Commands and functions presented are applicable to other CAD systems. Students apply this knowledge to generate orthographic and other two-dimensional mechanical drawings using AutoCAD software. Lab fee: $20.00. Prerequisites: MECH 112 and MECH 120.

MECH 252 Computer Programming for Technicians (W) **1-5-3**
A course designed to instruct students in the use of QBasic in solving engineering problems. Students will design, flowchart, code, compile, and debug programs in this course. Hands-on experience is gained through interfacing digital I/O boards to QBASIC. Lab fee: $10.00. Prerequisites: MECH 112 and placement into MATH 103 or higher.

MECH 253 Numerical Control (W) **1-5-3**
This course is designed for the beginning student and covers manual computer numerical control programming. Each student will prepare numerical control programs in both absolute and incremental positioning systems using standard industrial G and M codes. Students will program for state-of-the-art computerized numerical control equipment including mills and lathes. Each student will prepare and debug programs and setup and operate computer numerical controlled equipment in the lab. Lab fee: $25.00. Prerequisite: MATH 112 and MECH 240.

MECH 260 Basic Mechanisms (SP,SU) **2-4-4**

A graphical and mathematical study of the displacement, velocity, and acceleration of typical industrial mechanisms such as linkages, cams, and gears. Additional topics such as bearings and lubrication are also discussed. Lab fee: $6.00. Prerequisites: MECH 120.

MECH 261 Machine Design (SP,SU) **2-6-4**
This course is designed as a capstone experience for Mechanical Engineering Technology students. Students are required to demonstrate their ability to solve engineering problems using skills and knowledge gained through their course work. The class, as a team, will participate in designing and prototyping a machine or mechanism related to the field. Lab fee: $25.00. Prerequisites: MECH 131 MECH 242 and EET 102.

MECH 262 Computer Aided Drafting II (SP,SU) **1-5-3**

This course is an extension of MECH 251. Course includes the study of practical applications of computer graphics with isometric and three dimensional drawings including wireframe and solid modeling techniques to produce mechanical and production type drawings using AutoCAD software. Lab fee: $20.00. Prerequisites: MECH 251

MECH 263 Computer Aided Manufacturing (SP) **2-6-4**
This course provides the manual numerical control programmer with an understanding of computer aided manufacturing including instruction in Feature-Cam computer aided manufacturing language. Lab fee: $30.00. Prerequisites: MECH 251, and MECH 253.

MECH 264 Computer Aided Drafting III (SP) (New Course) **1-5-3**
An advanced course in 3D design and production oriented information. Students will create production drawings and documentation required to take a product from concept to design, sales, prototyping, production, and final assembly. Students will be utilizing AutoCAD V14 % and additional software operating in conjunction with AutoCAD. Lab fee: $20.00. Prerequisites: MECH 262.

Medical Assisting (MAT)

MAT 100 Introduction to Medical Assisting (A,SP) **1-2-2**
This course provides an overview of the medical assisting profession. Topics to be presented include the roles and responsibilities of a medical assistant in different environments, medical-legal issues, and professional organizations. Lab fee: $25.00. Prerequisite: Acceptance into program. Concurrent: BIO 101 and MULT 101.

MAT 110 Clinical Procedures (W,SU) **3-3-4**
This course introduces the student to common clinical procedures routinely performed in physician's offices. Lab fee: $25.00. Prerequisite: MAT 100. Concurrent: MAT 112, MULT 102 and HIMT 121.

MAT 112 Diseases of the Human Body (W,SU) **3-0-3**
This course focuses on human diseases that arc frequently first diagnosed or treated in the medical office or clinical setting. Consideration as to what disease is, how the physician might diagnose and treat disease, and the likely consequences of the disease for the person experiencing it are included. Specific areas discussed are disease process, infectious diseases, neoplasms, and congenital diseases, the coverage of major conditions as organized by body system. Prerequisite: BIO 101.

MAT 120 Office Procedures (A,SP) **3-3-4**
This course introduces the student to the administrative aspects of the medical office through both theoretical and practical presentations. Topics to be covered include: communications, computer concepts, medical records management, screening and processing mail, scheduling and monitoring appointments, operating office equipment and managing practice finances. Also included is a medical office software package. Students will complete simulations of medical computer programs. Lab fee: $25.00. Prerequisite: MCT 106.

MAT 130 Pharmacology (ASP) **3-3-4**
This course is an introduction to the pharmacology of commonly used drugs. Topics to be covered include procedures for administering drugs, components of a prescription and drug actions and uses. The laboratory section will include demonstration, technique and theory of administration of medications in the medical office setting; included will be intradermal, subcutaneous, and intramuscular routes as well as oral, topicality, sublingual, vaginal and rectal administration, The principals of recording medications in the medical record are also covered.

MAT 140 Physician's Office Laboratory (ASP) **3-3-4**
This course is designed to provide the student with an overview of the procedures utilized to collect and process specimens in a physician's office setting. Emphasis is placed on methods of collections, processing of specimens and quality control, Additionally, the student is introduced to the microscope, the techniques of capillary puncture and venipuncture (vacutainer method), urinalysis, blood typing, microbiology procedures and understanding the normal ranges and the various laboratory reports. Lab fee: $25.00. Prerequisites: MAT 110, 112, Concurrent HIMT 255

MAT 150 Advanced Clinical Procedures (ASP) **2-3-3**
This course will instruct the advanced medical assistant student in the skills beyond the basic entry-level. These advanced skills will include: electrocardiography, minor surgery in the medical office, rehabilitation and physical therapy care, radiology in the medical office, nutrition and diet therapy and the importance of accurate patient education. An overview of supervisory skills in the medical office will also be studied. Prerequisite: MAT 110, MAT 112, Concurrent: MAT 130, HIMT 265

MAT 160 Ethical and Professional Principles in the Medical Office (W, Su or on demand) **2-0-2**
An examination of the medical ethical, legal and bioethical issues in today's medical office. The course will focus on legal/ethical aspects of medicine. Additional focus will be placed on current legislative statutes that affect the practicing medical assistant, Prerequisite: MAT 140 & MAT 150 Concurrent: MAT 190, MAT 195, or permission of instructor.

MAT 190 Practicum I (W,SU) **0-21-3**
Practical experience in a physician's office combining the administrative and clinical aspects of patient care under the supervision of a licensed physician or certified medical assistant. Students will be placed into various health care facilities serving 210 unpaid externship hours. Lab fee: $25.00. Prerequisite: 150 Concurrent: MAT 195, MAT 160

MAT 195 Seminar **2-0-2**
Group discussion of topics related to practicum experiences as well as current trends and topics in the medical assisting profession. Students will also be responsible for projects and simulations of daily medical office activities. Concurrent: MAT 190, MAT 160.

Medical Laboratory Technology (MLT)

MLT 100 Introduction to Health Care (A,W,SP,SU) **2-2-3**
This course is designed to provide the student with an overview of the structure and organization of the current health care system and their role as a future health care practitioner in an integrated system. Students interested in health care as a profession and/or consumers will benefit from this course. The student will utilize numerous campus and community resources, including computer search systems and the Internet, to access a variety of information pertaining to health care issues as well as to investigate various health care professions. Each student will have the opportunity to visit clinical settings and network with practicing professionals in their area of interest. Legal and ethical issues, professional standards of behavior, communication skills and safety issues will be addressed. Lab fee: $15.00. Prerequisite: Placement into ENGL 100.

MLT 120 Role and Responsibility of the MLT (W) **1-2-2**
This course will provide an in-depth examination of the role and responsibilities of the MLT as an important professional in the delivery of quality health care. Discussions will include such topics as professionalism, the general organization and operational activities of a clinical laboratory, and career opportunities for MLT graduates. Students will be exposed to actual clinical settings and meet with

practicing laboratory personnel. In addition, students will be introduced to basic laboratory equipment, specimen processing techniques, the application of laboratory math, and the techniques of phlebotomy. Prerequisites: MLT 100 and MLT 141.

MLT 130 Immunology (W,SU) 3-4-5
This course provides a study of the immune system, the nature of immune responses, and the application of immunological reactions to a variety of laboratory procedures. Emphasis is placed on the commonly performed serological tests. Also included are discussions of the etiology and diagnosis of immunologically mediated diseases. Upon successful completion of this course the student will be able to perform the routine serological tests during the clinical practicum. Lab fee: $80.00. Prerequisite: MLT 141. Concurrent: MLT 120.

MLT 141 Hematology I (A) 3-9-6
An introduction to basic laboratory skills, and the origin, formation, and differentiation of blood formed elements. Included are techniques in counting red cells, white cells, platelets (by both manual and automated methods), reticulocytes, eosinophils, and the preparation and study of normal blood smears. Lab fee: $80.00. Prerequisite: Admission to the program.

MLT 180 Special Topics in Medical Laboratory (A,W,SP,SU) 1-0-1

MLT 181 Special Topics in Medical Laboratory (A,W,SP,SU) 2-0-2

MLT 182 Special Topics in Medical Laboratory (A,W,SP,SU) 3-0-3
These courses are independent studies of advanced topics in laboratory management, instrumentation, computerization, hematology, immunology, immunohematology, microbiology, clinical chemistry, urinalysis, coagulation or phlebotomy. Prerequisite: Permission of Coordinator.

MLT 220 Immunohematology (A) 4-12-8
This course is designed to teach students to perform, according to American Association of Blood Banks (AABB) standards, the routine serological procedures used in any transfusion service or blood bank. Stress is placed on the performance of pretransfusion testing and the recognition of the presence of serological incompatibilities in a patient's specimen. Students will be introduced to the techniques used in the resolution of the most commonly encountered serological difficulties. Class discussions will also include donor blood collection and processing for component therapy, blood transfusion practices, adverse affects of blood transfusion, investigation of transfusion reactions, and fetal -maternal blood incompatibilities. Upon successful completion of this course, the students will be able to perform the routine pretransfusion procedures during the clinical practicum. Lab fee: $80.00. Prerequisite: MLT 130 or permission of Coordinator. Open to Medical Laboratory Technology students only.

MLT 240 Hematology II (W) 3-6-6
This course builds on the routine Hematology procedures covered in Hematology I. Blood smears are prepared and studied for the identification of blood cells which aid in the diagnosis of anemias, leukemias, hemoglobinopathies, and other disease states. Also included is the study of coagulation and the routine procedures used to evaluate hemostasis. Upon completion of this course the student will be able to perform routine hematology procedures during clinical experience. Lab fee: $80.00. Prerequisites: MLT 141 and previous technical courses. Concurrent: MLT 242.

MLT 242 Body Fluids (W) 2-4-4
The physical, chemical, and microscopic evaluation of urine and other nonblood body fluids will be studied. Prerequisites: Previous technical courses. Concurrent: MLT 240.

MLT 244 Medical Laboratory Case Studies (W) 1-3-2
This course provides students with the opportunity to review major technical areas of the curriculum. It is a capstone course in which students demonstrate their abilities to complete work assignments and examinations in each of the major laboratory sections. Students take examinations similar to the Registry Exam and must meet minimum scores. Prerequisite: All technical courses.

MLT 250 Clinical Microbiology (SU) 4-12-8
A practical introduction to the laboratory identification of microbial agents associated with disease in man. Students will be instructed in the techniques necessary to isolate, identify, and evaluate the presence of clinically significant microorganisms. The course also includes a brief introduction into medical mycology and parasitology. Students who successfully complete this course will be able to perform routine clinical microbiology procedures and evaluate test results in clinical experience. Lab fee: $80.00. Prerequisites: BIO 115 and previous technical courses.

MLT 260 Clinical Chemistry (SP) 3-9-6
This course is a study of the application of biochemistry to laboratory medicine and the understanding of the human in health and disease. Analytical procedures utilized to determine chemical constituents in blood, urine and other body fluids will be presented. The chemical principles of the methods will be discussed as well as the correlation of test results as indicators of presence or absence of disease. Students who successfully complete clinical chemistry will be able to perform routine clinical chemistry procedures and evaluate test results in clinical experience. Lab fee: $80.00. Prerequisites: CHEM 113 or CHEM 111 and previous technical courses.

MLT 270 Clinical Practicum (SP, SU, A, W) 0-35-5
Practical experience in area health care facilities in which students are given the opportunity to practice in a laboratory setting under the guidance of laboratory professionals. Students will be placed in one of several clinical affiliates within an approximate 60 mile radius of Columbus. Students will be required to provide their own transportation. Lab fee: $45.00. Prerequisite: all technical courses. Concurrent: MLT 271.

MLT 271 Clinical Seminar (SP) 2-0-2
This course is an informal seminar that provides the students with an opportunity to meet and share selected case studies and other problem solving experiences they have encountered during their practicum. In addition, guest speakers are provided to help students better prepare for the credentialing examinations and other anticipated postgraduate activities such as employment selection and further education. Concurrent: MLT 270.

Medical Office Admin. Major
(See Office Administration)

Mental Health/Chemical Dependency/ Mental Retardation (MHCR)

MHCR 111 Introduction to Mental Health (A,W,SP,SU) 3-0-3
This entry level course provides the student with a comprehensive overview of the mental health field as it relates to: historical and contemporary issues impacting the mental health field, mental health service delivery provisions, providing clinical base mental health skills, and assessing familial, environmental, and community adjustment needs for the mentally ill consumer. Lab fee: $4.00. Prerequisite: DEV 031. Concurrent: ENGL 101 and PSY 100.

MHCR 112 Introduction Mental Retardation (A,W,SP,SU) 3-0-3
This entry level course provides the student with a comprehensive overview of the mental retardation field as is relates to: sociocultural, psychosocial, political and economic variables that impact the field of mental retardation and its overall service delivery to the mentally retarded and/or individuals with disabilities and their families. Lab fee: $4.00. Prerequisite: DEV 031. Concurrents: ENGL 101 and PSY 100.

MHCR 114 Introduction to Chemical Dependency (A,W,SP,SU) 4-0-4
This entry level course provides the student with a comprehensive overview of the chemical dependency field as it relates to: historical and contemporary issues impacting the chemical dependency field, state and local, public and private service delivery systems, the impact of drugs of abuse on the individual, family, and society, models to define chemical dependency, signs and symptoms indicative of chemical dependency and resources available to persons with chemical dependency and their families. Lab fee: $4.00. Prerequisite: DEV 031. Concurrents: ENGL 101 and PSY 100.

MHCR 115 Interviewing in Human Services (A,W,SP,SU) 2-2-3
This introductory course focuses on the development of basic interviewing, rapport building and active listening skills for the beginning student. The student will gain a beginning understanding of the process and principles in establishing effective helping relationships using observation and behavioral writing. Lab fee: $4.00. Prerequisite: Completion of DEV 031. Prerequisites or concurrents: PSY 100 and ENGL 101.

MHCR 117 Documentation Skills (A,W,SP,SU) 2-0-2
This core course focuses on the use of behavioral observations and writing to document client interactions and behavior. Students will learn beginning skills needed to maintain records necessary for rendering professional services to clients. Lab fee: $4.00. Prerequisites or concurrents: MHCR 111, MHCR 112, MHCR 114 and MHCR 115.

MHCR 135 Intervention Strategies (A,W,SP,SU) 3-0-3
This core course focuses on understanding client behavior. Students will learn to apply positive intervention skills with a varied client population. Lab fee: $4.00.

Prerequisites: MHCR 111, MHCR 112, MHCR 114, MHCR 115 and MHCR 117. Concurrent: MHCR 191.

MHCR 191 Fundamentals in Human Service Practice **6-14-8**
This is a core course which focuses on the planning process used to deliver service to clients. The steps studied in the helping process are data collection, assessment, treatment planning, implementation, and evaluation. The student will become knowledgeable in specific methods to collect data, assess and prioritize client needs, develop treatment plans, implement the treatment plan, and evaluate the effectiveness of the plan. The student will observe and participate in the delivery of service to clients at any agency which provides a range of services. The students will also practice basic skills under close supervision. Lab fee: $20.00. Prerequisites: MHCR 111, MHCR 112, MHCR 114 and MHCR 117.

MHCR 222 Alcohol and Drugs in the Workplace 4-0-4
This course provides the student in the Human Resources Technology and the community with an overview of alcohol and drugs as it relates to historical and contemporary workplace issues. The impact of drugs of abuse on the individual, family, and society, models to define chemical dependency, signs and symptoms indicative of alcohol and drug use and resources available to persons with chemical dependency and their families are explored. There is emphasis on the Drug Free Workplace Act and the Americans with Disabilities Act, and developing a Drug Free workplace policy. Employer response including Employee Assistance Programs and drug testing and legal and ethical issues are explored. Lab fee: $4.00. Prerequisites: HRM 121 and HRM 122.

MHCR 241 Counseling Skills (A and On Demand) 4-0-4
This core course focuses on theoretical and practical aspects of effective helping through the counseling relationship. Skills which form the foundation of effective communication using a microtraining model are emphasized. Critical thought and creativity is stressed. Course emphasizes practicing skills in small study groups, and in role play/simulations. Lab fee: $4.00. Prerequisites: MHCR 191, ENGL 102 and PSY 240.

MHCR 242 HIV/AIDS in Human Service Practice 4-0-4
This course covers HIV/AIDS as an epidemic, its origins, disease progression, medical information, drugs and treatment, psychosocial factors affecting the patient, camgivers and professionals, ethical and legal considerations impacting the patient and others, and the role of human service professionals in helping clients and families. Students will be exposed to cultural sensitivity issues of race, ethnicity and sexual orientation. Psychosocial stages of the disease will be explored with the focus on the role of the human service worker. Lab fee: $4.00. Prerequisites: SSCI 101 and MHCR 191.

MHCR 245 Chemical Dependency I (A) 3-0-3
This course offered as part of the Chemical Dependency Track only. Course content includes historical/cultural overview and various philosophies and approaches to treatment of addictions. Physical, mental, emotional and social impact of drugs of abuse. Assessment procedures, developing a diagnostic impression, identifying levels of care and referral procedures, issues with families and special populations. Students will develop and demonstrate a didactic presentation. Legal and ethical issues in the field will be explored. Lab fee: $4.00. Prerequisite: MHCR 191. Concurrents: MHCR 241 and MHCR 293.

MHCR 247 Teaching and Supporting People with Disability (A) 3-0-3
This advanced course provides the student a comprehensive overview of the principles and techniques for teaching and supporting people with disabilities. Skills related to job coaching and habilitation programming are practiced. Particular attention is paid to the concepts of person centered planning and inclusion. Lab fee: $4.00. Prerequisites: MHCR 191. Concurrent: MHCR 291.

MHCR 251 Social Policy and Programs 4-0-4
Social policy and its relationship to the work of the human services professional. An overview of U.S. social welfare institutions: family, church, government, and economical institutions is presented. This second level course examines social welfare policies/programs at national, state, and local levels in areas of housing, health care, and income maintenance. Agency analysis and social action for social change model is emphasized. Lab fee: $5.00. Prerequisites: MHCR 191 and ENGL 102.

MHCR 253 Therapeutic Group Work Skills (W,SP) 4-0-4
This course offered as a part of all three tracks in the technology, is focused on knowledge and experiential learning using group as the unit of attention. Course content includes process, stages of development, leadership skills, therapeutic factors and problematic issues of groups for mentally ill, mentally retarded, chemically dependent and dually diagnosed clients. The student will participate as a member in a peer group to compliment classroom theoretical constructs. Lab fee: $4.00. Prerequisite: MHCR 241 and ENGL 102. Concurrent: MHCR 295.

MHCR 258 Service Coordination/Case Management (SP) 3-0-3
This advanced course provides the human service student with a comprehensive overview as well as an in-depth investigation and assessment of newly defined skills, treatment approaches and contemporary issues impacting the service coordination/case management field. Lab fee: $4.00. Prerequisite: MHCR 191. Concurrent: MHCR 298.

MHCR 265 Chemical Dependency II (SP) 3-0-3
This is an advanced course offered as part of the Chemical Dependency track only. Course content includes specialized settings and services and approaches to treatment of addictions. Motivation for recovery and service/recovery resistance issues. Developing a diagnostic summary from an assessment and developing a comprehensive treatment plan. Issues with dial diagnosis and relapse. Exploration of patterns of behavior in the workplace and prevention of burnout for helping professionals. Legal and ethical issues in the field will be explored as well as the credentialing process for chemical dependency counselors. Lab fee: $4.00. Prerequisite: MHCR 241. Concurrent: MHCR 296.

MHCR 274 and 284 Special Studies in MH/CD/MR (On Demand) 4-0-4
These two courses are designed to meet specific needs of students who wish to pursue in-depth training in the MH/CD/MR/DD field. Typical subject areas may include theory and skills in helping chemically dependent, severely mentally disabled, 'dual diagnosed', or persons with mental retardation/developmental disabilities. Instructional methods may include clinical experience, seminar format, field placement. lecture. research, videotape and role play. Lab fee: $10.00.

MHCR 291 Field Practicum in Teaching and Supporting People w/Disabilities **2-14-4**
A clinical experience for the student specializing in the Mental Health/Mental Retardation track which takes place in a community agency matching the students interest and training needs. The student will practice the skills needed to teach and support people in a variety of settings, vocational residential and community with an emphasis on inclusion. The student is expected to assume the role of service provider and is responsible for professional conduct and acceptable work habits. Lab fee: $20.00. Prerequisite: MHCR 191. Concurrent: MHCR 247.

MHCR 293 Field Practicum in Chemical Dependency I (A) **2-14-4**
This is a required clinical experience for the student majoring in Chemical Dependency. The training needs of the student are matched to the community agency. The student has had training in the fundamental skills requisite to being an effective helper. The student plans an extended placement of two consecutive quarters in a setting which provides chemical dependency treatment and becomes involved in assessments and on-going work with clients when applicable. The student is expected to assume the role of service provider and is responsible for professional conduct and regular work habits. Lab fee:
$20.00. Prerequisite: MHCR 191. Concurrent: MHCR 245.

MHCR 295 Field Practicum in Group Work (W,SP) **2-14-4**
This is a clinical experience for the student in all three tracks in the MH/CD/MR department. The student will lead and/or co-lead a group using skills learned in the classroom. The student will assume the role of service provider and demonstrate professional conduct. Lab fee: $30.00. Prerequisites: MHCR 241 and MHCR 293. Concurrent: MHCR 253.

MHCR 296 Field Practicum in Chemical Dependency II (SP) **2-14-4**
This is an advanced clinical experience for the student who has chosen to work in the alcohol/drug dependency field. The student will be responsible for collecting data, making assessments and developing treatment plans, facilitating groups, and making referrals. Emphasis on dual-diagnosis and relapse prevention throughout the field experience. Lab fee: $20.00. Prerequisite: MHCR 253. Concurrent: MHCR 265.

MHCR 298 Field Practicum in Service Coordination/Case Management (SP) **2-14-4**
A clinical experience for the Mental Health/Mental student specializing in the field of Mental Health/Mental Retardation and Chemical Dependency tracks which takes place in a community agency matching the students interest, skill level and training needs. The mental health student will practice case management skills in order to deliver effective services. The mental health student is expected to assume the role of service provider and is responsible for professional conduct and acceptable work habits. Lab fee: $20.00 Prerequisite: MHCR 191. Concurrent: MHCR 258.

MHCR 299 Portfolio Completion Capstone Course in MH/CD/MR (A,W,SP,SU) **(1-0-1)**
This course will provide the student with the opportunity to assemble, edit, and ready for presentation in portfolio format the collected assignments from each course in the major. Feedback regarding each course will be solicited from the student. In addition, the content areas of ethical concerns in human services, effective team participation and avoiding "burnout" will be addressed. Lab Fee: $3.00. Completion of / or concurrent with MHCR 191 and one set of the follow-

ing: CD TRACK [MHCR 245, 293, 265, 296, 253, and 295] or MR TRACK [MHCR 247, 291, 258, 298, 253, and 295] or MH TRACK MHCR 247, 291, 258, 298, 253, and 295] Concurrent: fourth and last technical course paired with clinical practicum.

Microcomputing Technology (MCT)

For other required and elective courses in this curriculum see Computer Programming Technology and Office Administration.

MCT 091 Computer Concepts (A,W,SP,SU) 0-2-1
This one-credit-hour course provides students with an introduction to computer technology, computer hardware and software, and how computers can be used to produce meaningful information. Lab fee: $10.00. Not open to students who have taken CPT 101 or MCT 106..

MCT 092 Introduction to HTML (A, W, SP, SU) 0-2-1
Learn the most important topics of HTML, including creating an HTML document; viewing an HTML tile in a WEB browser; working with tag text elements; inserting special characters, lines, and graphics; creating hypertext links; working with color and images; creating text and graphical tables; using tables to enhance page design; creating and working with frames; and controlling the behavior of hyperlinks on a page with frames. Lab fee: $10.00. Prerequisites: MCT 095 or MCT 121.

MCT 093 Introduction to MS Project (A, W, SP, SU) 0-2-1
Learn to develop, plan, schedule, and chart project information, and balance workloads for people working on several projects at once, tracking all phases of the project to meet deadlines and stay on budget. Uses Microsoft approved text. Lab Fee: $10.00. Prerequisite: MCT 095 or MCT 12 1.

MCT 094 Internet Fundamentals (A,W,SP,SU) 0-2-1
This one-credit-hour course provides students with an introduction to the Internet. Students will learn how to find information and explore the World Wide Web using Netscape Navigator. An e-mail account is required. Lab fee: $10.00. Not open to students who have taken MCT 231.

MCT 095 Introduction to Windows 95 (A,W,SP,SU) 0-2-1
This one-credit-hour course is an introductory course on the Windows 95 operating system. The objective of the course is to teach fundamental skills in working with the Desktop, Drives, Folders, Files, and Applications. Lab fee: $10.00. Not open to students who have taken MCT 12 1.

MCT 096 Introduction to Information Presentation (A,W,SP,SU) 0-2-1
This one-credit-hour course is an introductory course teaching the fundamentals of creating and enhancing a presentation using PowerPoint. Uses Microsoft approved text. Lab fee: $10.00

MCT 097 Introduction to Database (A,W,SP,SU) 0-2-1
This one-credit-hour course introduces the student to creating, modifying, and enhancing a Database using Access. Uses Microsoft approved text. Lab fee: $10.00. Not open to students who have taken MCT 106.

MCT 098 Introduction to Spreadsheets (A,W,SP,SU) 0-2-1
This one-credit-hour course teaches the student how to create a Worksheet, modify a Worksheet and work with Charts using Excel. Uses Microsoft approved text. Covers skill set for Microsoft Excel proficiency certification. Lab fee: $10.00. Not open to students who have taken MCT 106.

MCT 099 Introduction of Word Processing (A,W,SP,SU) 0-2-1
This one-credit-hour course gets the student started with Word for Windows creating and editing a document, formatting a document, and arranging text and graphics. Uses Microsoft approved text. Covers skill set for Microsoft Word proficiency certification. Lab fee: $10.00. Not open to students who have taken MCT 106.

MCT 106 Computer Literacy 2 (A,W,SP,SU - DL) 2-2-3
A continuation of CPT 101. This course will introduce software application packages for word processing, spreadsheets, database management and presentation graphics for the PC. Hands-on experience in the microcomputer lab is emphasized to allow the student to acquire skills which will enable the use of the software mentioned above. Uses Microsoft approved text. Covers skill set for Microsoft Expert certification in WORD, Excel, Access and PowerPoint. Lab fee: $20.00. Prerequisite: CPT 101. (Note: some sections are offered on the Internet.)

MCT 121 PC Operating Systems (A,W,SP,SU) 2-3-3
This course covers operating systems used with microcomputer systems. Students will learn to use MS/PC-DOS, and Windows. Lab fee: $25.00. Prerequisites: CPT 101 and MATH 102.

MCT 131 Advanced Excel (A,W,SP,SU) 2-3-3
A continuation of spreadsheets from MCT 106. Basic functions are reviewed and advanced features and formats are presented including the use of graphics and macros. Uses Microsoft approved text. Covers skill set for Excel Expert certification. Lab fee: $25.00. Prerequisites: MCT 106, MCT 121 and MATH 102. Not open to Computer Programming Technology students.

MCT 141 Advanced Access (A,W,SP,SU) 2-3-3
A continuation of database from MCT 106. This course presents an overview of Database software, including tile creation, screen and report generators. Not open to students in Computer Programming Technology. Computer Programming Technology students should take CPT 221 and CPT 225 instead. Uses Microsoft approved text. Covers skill set for Access Expert certification. Lab fee: $25.00. Prerequisite: MCT 106 and MCT 121.

MCT 205 Page Design and Electronic Publishing (A,W,SP,SU) 2-3-3
Learn to create effective, high-impact publications and Web sites. Activities create awareness of design and layout by developing brochures, newsletters, flyers, business forms, business cards, logos, and more using Microsoft Publisher software. Lab fee: $25.00. Prerequisites: MCT 106 and MCT 231.

MCT 211 Advanced Information Presentation (A,W,SP,SU) 2-3-3
A continuation of information presentation from MCT 106. This course presents how computer graphics are used to communicate information effectively. Computer lab assignments include chart format and data content. Students will learn how to create pie, line, area, multiple, text, and organization charts, researching a topic and developing a presentation. The student will integrate these skills into a computerized slide show. Uses Microsoft approved text. Covers skill set for PowerPoint Expert certification. Lab fee: $25.00. Prerequisite: MCT 106.

MCT 215 Microcomputer Fundamentals (A,W,SP,SU) 2-3-3
This is the capstone course for the PC Hardware/Software Installation & Maintenance Certificate which focuses on maintaining, troubleshooting, and upgrading PCs. Discussion is focused on emphasizing the analysis and design of PC systems as well as installation of expansion cards, hard drives, video cards, memory upgrades, loading drivers, disk maintenance, and loading application and system software. Lab fee: $25.00. Prerequisite: MCT 106 and MCT 121.

MCT 221 Local Area Networks (A,W,SP,SU) 2-3-3
An introductory course on Local Area Networks (LANs). This course will explore the current technology available for LANs including both hardware and software. Lab fee: $25.00. Prerequisite: MCT 121 for Microcomputing Technology students, MCT 106 for Computer Programming Technology students.

MCT 231 Introduction to the Internet (A,W,SP,SU - DL) 1-4-3
Students will learn how to: use electronic mail (email), to send and receive messages, find information on the Internet, explore World Wide Web (WWW) sites, transfer tiles, and create a simple home page. Hands-on experience using the Internet will be emphasized. An Internet email account is required. The course is taken entirely on the Internet with two exceptions (1) the student must attend the first class to get syllabus and other instructions, and (2) to take the final examination. Lab fee: $10.00. Prerequisite: CPT 101. MCT 121 is recommended.

MCT 235 Web Page Design (A, W, SP, SU) 2-3-3
This course offers Web page design, implementation, maintenance, and creation of a recognized presence on the Internet. Hands-on lab experience using the IBM PC and Microsoft FrontPage software is emphasized. Uses Microsoft approved text. Lab fee: $30.00. Prerequisites: MCT 095 or MCT 121 and MCT 231.

MCT 241 Intranet for Business Applications (A,W,SP,SU) 2-3-3
This course provides students with knowledge on the automation of office functions. The student will receive practical experience in document management (word processing and document filing/retrieving); electronic transfer of data (graphs & documents); and administrative support (time management, calendars, schedules, directory management and reminders). Lab fee: $25.00. Prerequisites: MCT 121 and MCT 106. An e-mail account is required.

MCT 251 Introduction to Systems Analysis (A,W,SP,SU) 2-3-3
Covers basic concepts of systems analysis and design with an emphasis on small business systems. Not open to students in the Computer Programming Technology. Computer Programming students should take CPT 211 and CPT 212 instead. Lab fee: $25.00. Prerequisite: MCT 141.

MCT 261 Introduction to Visual BASIC (A,W,SP,SU) 2-3-3
Emphasizes building graphical user interfaces (GUI) from a microcomputing aspect. Students will use macros to call objects relating to business applications and integrate Excel and Access applications with Visual Basic. Lab fee: $25.00. Prerequisites: MCT 121, MCT 131 and MCT 141.

MCT 281 Final Project (A,W,SP,SU) 2-8-5
This is the capstone course for the Microcomputing Technology. Students will work in small groups or individually to design and develop a typical business system. Not open to students in Computer Programming Technology. Computer Programming students should take CPT 281. Lab fee: $40.00. Prerequisite: MCT 251.

Multi-Competency Health (MULT)

MULT 101 Medical Terminology (A,W,SP,SU) 2-0-2
This course includes the presentation of 350 medical terms using the Dean Vaughn system. Students are taught to spell, pronounce and define using an audionym technique. Lab fee: $10.00.

MULT 102 Cardiopulmonary Resuscitation (CPR) (A,W,SP,SU) **1-0-1**
Cardiopulmonary resuscitation for adults, pediatrics and infants including early warning signs of heart attacks, airway blockage, and stroke are taught. Students completing the course will be eligible for American Heart Association Basic Life Support Certification, Lab fee: $15.00. Offered as flexibly scheduled in one weekend.

MULT 103 Responding to Emergencies (A,W,SP,SU) **1-2-2**
Requirements for Red Cross Certification including artificial respiration, bleeding control, treatment of shock, and care of fractures are presented. Lab fee: $23.00.

MULT 108 Twelve Lead Electrocardiography 1-2-2
This course provides students with theory and procedure for performing a twelve lead EKG. Discussion of the instrument and review of anatomy and physiology are included. Lab fee: $10.00. Prerequisites: Admission to a health and human services technology, CPR certification.

MULT 110 Basic Electrocardiography (EKG) (A,W,SU) 5-2-6
This course is designed-to provide basic entry-level skills in cardiovascular technology. The course covers an introduction to health care, anatomy and physiology of the heart, operation of the electrocardiograph and recording of EKG's, cardiac pathology and basic cardiac rhythm recognition skills. Completion of the course qualifies the student to function as an EKG technician, a skill ordinarily utilized in an acute health care setting or physician's office. Lab fee: $38.00. Prerequisite: Placement into ENGL 101.

MULT 112 Identifying Cardiac Rhythms (ASP) 2-0-2
This course provides students with the necessary information to correctly identify cardiac dysrhythmias, recognize potentially life threatening dysrhythmias and complications which may follow, along with appropriate treatment, cardiac anatomy, physiology, electrophysiology, monitoring equipment, lead placement, and steps in analyzing a rhythm strip are all addressed. Lab fee: $5.00. Prerequisite: Permission of instructor.

MULT 114 Phlebotomy Practicum II (A,W,SP) **0-5-1**
This course is designed to be a continuation of MULT 115 by providing an additional 50 hours clinical phlebotomy experience and requiring an additional 50 successful collections. Phlebotomy Practicum II is designed for students who intend to be a professional phlebotomist and will be arranged individually during the first five weeks of the quarter. MULT 114 and MULT 115 completes the NAACLS approved program. Lab fee: $10.00. Prerequisite: Completed health record.

MULT 115 Phlebotomy (A,W,SU) 3-9-6
Blood collection by both venipuncture and capillary puncture techniques, using various equipment are performed in class and in the hospital. Professional ethics and liability, composition and appearance of blood, safety, anticoagulants and clinical relevance of laboratory tests are studied. Problems encountered in phlebotomy, in addition to special specimen collection for transfusion services, blood cultures, coagulation tests, timed tests and the nursery are also reviewed. This course includes a 60 hour clinical experience in a Central Ohio health care facility. Lab fee: $55.00. Prerequisite: Completed health record.

MULT 116 Venipuncture for Health Care Providers **1-4-2**
Basic blood collection techniques using vacuum tubes and syringes will be covered and practiced in a laboratory and clinical setting. Emphasis is on basic skills, safety and infection control. Not open to students who have credit for MULT 114 and MULT 115. Lab fee: $28.00. Prerequisite: Completed health record and be enrolled in Medical Laboratory Technology or Medical Assisting Technology.

MULT 120 Nurse Aide Training Program (A,W,SP,SU) 2-6-5
The Nurse Aide Training Program (NATP) is designed to instruct prospective long-term care nurse aides in preparation for State of Ohio testing. The 76 hour NATP course includes 60 hours of classroom and 16 hours of clinical preparation, which meets the requirements for nurse aide training in Ohio. Lab fee: $38.00. Prerequisite: Completed health record.

MULT 121 Nurse Aide to Home Health Aide (A,W,SP,SU) 2-0-2
This course will prepare students who have taken the Nurse Aide Training program to transition into home care and work as home health aides. Lab fee: $30.00. Prerequisites: State Tested Nursing Aide or eligible.

MULT 122 Home Health Aide (A,SP) **4-1-5**
This course uses the curriculum published by the National Home Caring, 1990 Edition. This course contains a generic body of knowledge including home management and personal care information are presented through lecture and lab practicum hours. Lab fee: $28.00. Prerequisite: Completed health record.

MULT 123 Waived Laboratory Tests for Health Care Providers 2-2-3
Physician's Office Urinalysis is the study of the composition of urine and its clinical significance through physical properties, routine chemical tests and microscopic evaluation. This course is not tech- restricted and not intended for Medical Laboratory Students. Lab fee: $38.00. Prerequisite: Completed health record.

MULT 125 Information Processing Assistant in Health Service Org. **5-0-5**
This course is designed to create the knowledge base necessary to permit an individual to function as an information processing assistant. The focus is on knowledge, comprehension, application, analysis, synthesis, and evaluation of the role of the information processing assistant in the health service organizations. Lab fee: $30.00.

MULT 126 Patient Care Skills I (A,W,SP,SU) 2-6-4
Presentation of skills commonly used by patient care technicians in an acute care setting, utilizing both lecture and laboratory. Major topics include: wound care, specimen collection, airway care, oxygen administration, enteral tubes and elimination assistance. Lab fee: $35.00. Prerequisite: MULT 120.

MULT 127 Patient Care Assistant (A,SP,SU) 3-6-5
This course provides the student with knowledge and skills to function as a patient care assistant at Mount Cannel Health Systems. Lab fee: $30.00.

MULT 128 Patient Care Assistant (A,W,SP,SU) 2-6-5
This course provides the student with knowledge and skills to function as a patient care assistant in the Mount Carmel Health Systems. Lab fee: $30.00. Prerequisites: Mount Carmel employee or completed health record.

MULT 129 Patient Care Skill: Rehabilitation Technique 3-3-4
This course provides information and skills using safe, effective techniques in the care of mobility-impaired patients. Discusses the role of the physical therapy and nursing staffs use of therapeutic modalities, patient positioning, patient transfer techniques, exercise, ambulation, and utilization of assistive and adaptive equipment for patients with impaired mobility. Lab fee: $11.00.

MULT 130 Acute Care Skills for Patient Care Assistants (A,W,SP,SU) **1-0-1**
This course provides the student with additional knowledge and skills to function as a patient care assistant in an acute care setting. Lab fee: $5.00. Prerequisite: MULT 120.

MULT 131 Referral Strategies for Chronically III Clients 2-2-3
This course introduces the student to the theory and rationale for appropriate referral of clients experiencing chronic physical health problems. The availability and accessibility of community resources for selected health problems will be presented. Lab fee: $5.00.

MULT 133 Success Strategies for Patient Care Assistants (A,W,SP,SU) **2-0-2**
This course updates and enhances the knowledge and skills of patient care assistants in a hospital. Lab fee: $5.00. Prerequisites: Employed full-time during the previous year as a patient care assistant in a hospital.

MULT 135 Basic PCA/MSP Training (A,W,SP,SU) 2-2-3
This is a workforce training course for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn sterile technique and patient care skills. Prerequisite: MULT 120 or permission of instructor.

MULT 136 Advanced Patient Care Assistant (A,W,SP,SU) **1-2-2**
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory, and clinical settings, students learn advanced patient care skills such as tracheostomy care and tube feeding. Prerequisite: MULT 135 or permission of instructor.

MULT 137 Phlebotomy Training (A,W,SP,SU) **1-2-2**
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn the skills of drawing blood. Prerequisite: MULT 135 or permission of instructor.

MULT 138 EKG Training (A,W,SP,SU) **0-2-1**
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn the skill of performing electrocardiograms. Prerequisite: MULT 135 or permission of instructor.

MULT 139 Basic PCA Training (A,W,SP,SU) 2-4-4
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom and laboratory settings, students learn basic patient care skills.

MULT 140 Patient Care Technician Training (A,W,SP,SU) 1-4-3
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom and laboratory settings, students learn sterile technique and advanced patient care skills. Prerequisite: MULT 139 or permission of instructor.

MULT 142 Home Care Skills for Nurses (A,W,SP,SU) 2-2-3
This course provides the student with appropriate adaptations of the skills and concepts traditionally used in the hospital care of patients that are now used in the home care setting. Lab fee: $25.00. Prerequisite: Permission of the instructor or nursing license.

MULT 143 Advanced Skills for Home Health Aides (A,W,SP,SU) 2-2-3
This course will prepare the student to perform procedures in the home above the basic patient care skills. Lab fee: $30.00. Prerequisite: Certified Home Health Aide State, Tested Nurse Aide.

MULT 153 Point-of-Care Testing **0-2-1**
Point-of-care testing or bedside testing, is intended to provide more rapid test results than is routinely possible with traditional laboratory settings. Application is particularly important in ICUs, emergency rooms, bedside in hospitals, home care, hospices and physician office laboratory where rapid treatment decisions must be made or for added convenience to the patients. This course provides performance of frequently ordered analyses and an overview of regulatory considerations, instrumentation and quality assurance requirements. Lab fee: $45.00. Prerequisite: Permission of instructor or completion of MULT 123.

MULT 160 Tissue Identification (A) **1-6-3**
A modem day study of histology involves the study of cell and tissue structure in relation to function. Consequently the emphasis of this course will be twofold. The first emphasis will be on learning to recognize various cellular structures and arrangements and applying them to the identification of different tissue sources. The second emphasis will be correlating the tissue identification with function. Study will begin with the single cell then progress through the four basic tissue types, organ structure, and organ systems. Students will spend considerable time examining already prepared tissue sections. This examination will include macroscopic observation with emphasis on microscopic study using the light microscope. Prepared slide examination will be supplemented with other visual aides whenever possible. Lab fee: $8.00. Prerequisite: MULT 169 or permission of program director.

MULT 161 Chemistry of Stains I (A) **3-0-3**
Fixation, processing and staining of tissue is discussed. The theory behind each process and the purpose of each process is defined with specific technical details related to the staining of each type of tissue. Lab fee: $8.00. Prerequisite: MULT 169 or permission of program director. Concurrent: MULT 163.

MULT 162 Chemistry of Stains II (W) **2-0-2**
Continuation of MULT 161. First term. Lab fee: $3.00. Prerequisite: MULT 161 or permission of program director. Concurrent: MULT 164.

MULT 163 Basic Histology Techniques I (A) **0-12-4**
This course provides laboratory practice in all phases of the practice of histology. Lab fee: $73.00. Prerequisite: MULT 169 or permission of program director.

MULT 164 Basic Histology Techniques II (W) **0-9-3**
Continuation of MULT 163. First term. Lab fee: $48.00. Prerequisite: MULT 163 or permission of program director. Concurrent: MULT 162.

MULT 165-166 Case Study Review and Seminar (W,SP) **1-3**
This course is concurrent with the clinical experience and includes instruction on preparation for employment, taking the registry and preparation of specimens for the registry exam. Case studies are presented and prepared by the students to demonstrate the total histological process. Lab fee: $3.00. Prerequisites: MULT 161 and MULT 163.

MULT 167 Histology Clinical Experience I (W) **0-16-4**
The student will attend three (3) different clinical facilities 32 hours per week for 17 weeks including two weeks at Battelle Research Institute. During this time, the student will perform all functions in the clinical site as a histology technician. Lab fee: $8.00. Prerequisite: MULT 162 or permission of program director. Concurrent: MULT 165.

MULT 168 Histology Clinical Experience II (SP) 0-32-8
Continuation of MULT 167. Lab fee: $18.00. Prerequisite: MULT 167 or permission of program director. Concurrent: MULT 166.

MULT 169 Introduction to Histology (SU) 0-6-2
The student will be introduced into the laboratory environment and histology profession. The major areas of study will include instrumentation, laboratory safety (including state and federal regulations), and laboratory mathematics as they apply to reagent preparation in the histology laboratory. Lab fee: $65.00. Prerequisite: Completed health record.

MULT 170 Cancer Prevention, Diagnosis & Treatment (W 2nd term) 1-1-0
The course will present an overview of the prevention, diagnosis and treatment of a variety of cancers including breast cancer, cancers associated with smoking (cancer of the mouth, throat, voice region, lung and bladder), skin cancer (including skin carcinoma and melanoma), cancers affecting men (including prostate and testicular malignancies), and cancers affecting women (including uterine, cervical, endometrial and ovarian cancers). Presentation will be provided through photomicrographs of cancer biopsies, photographs of x-rays, and clinical and histological laboratory results and will emphasize the role of various health care professionals.

MULT 171 Current Issues: HIV Infection (A,W,SP,SU) **1-0-1**
Introductory course covering the psycho social, legal, epidemiologic issues surrounding HIV infection. Offered as a term course. Lab fee: $9.00.

MULT 172 Instructor HIV/AIDS Course **0-2-1**
In-depth study of the implications of HIV virus in society in which students complete requirements for the Red Cross HIV/AIDS Instructor Certification. Include Red Cross Instructor Candidate Training Course. Lab fee: $5.00. Prerequisite: MULT 171.

MULT 174 Personal Health (A,W,SP,SU) 3-0-3
The study of health issues which affect Americans today and in the future; to establish a basis for positive health and efficiency through consideration of various factors which affect health. Lab fee: $5.00.

MULT 175 Principles of Homeopathy (A,W,SP,SU) 4-0-4
This course is designed to introduce students to the principles and theories behind the use of homeopathic preparations to treat most disease and disorders. Lab fee: $5.00

MULT 176 Fundamentals of Herbology (A,W,SP,SU) 4-0-4
This course outlines the uses of herbs in the healing process from ancient history to present day. Herbs will be discussed in relation to both flowers and in cooking. Emphasis will be on therapeutic self-care first aide. Lab fee: $5.00.

MULT 177 Holistic Healing Methods (A,W,SP,SU) 4-0-4
This course offers an introduction to the fundamentals of holistic healing which includes philosophical and theoretical foundations, alternative methods and their uses for health maintenance and development of personal healing capacities. Lab fee: $5.00.

MULT 178 Animals and Nature - Therapeutic Programs (SP) 2-2-3
The Animal-Assisted Therapy and Education Certificate Program is designed to meet the Delta Society's standards for accreditation. The Delta Society is an international organization devoted to research and service in the area of human-animal relationships and is the leading resource center on the interactions of people, animals and the environment. The program will include the Delta Society's Pet Partners home-study course and its two-day course on temperament testing. Prerequisite: MULT 179. Admission to a Health and Human Services Technology.

MULT 179 Companion Animals and Health (W) 2-0-2
This course will review the recent scientific evidence which confirms the ancient wisdom that our living environment - our pets, gardens, parks, rural landscapes and wild and domestic animals - have important, positive effects on health and well-being of humans. Topics to be covered include the cognitive, emotional, behavioral, and physiological effects of contact with animals and nature; Biophilia, our natural affinity for life that binds us to all living species; the psychobiology of nurturing; the ecology of pets, gardens and natural places. Prerequisite: MULT 181.

MULT 180 Professionalism for Health Care Providers 2-0-2
The Code of Ethics for each of the technologies is reviewed. Concepts of death and dying, patient as consumer, professional standards of behavior and team work are addressed. Lab fee: $7.00. Prerequisites: Admission to a Health and Human Services Technology. Concurrent: ENGL 101.

MULT 181 Introduction to the Human-Animal Interaction (A) 2-0-2
This course will investigate the origins, nature and application of the human-animal bond. The course content is designed to promote understanding of the mutually nurturing relationship between people and animals and to explore services by animals to aid people with health difficulties and physical and emotional challenges. Lab fee: $8.00. Prerequisite: Placement into ENGL 101.

MULT 183 Introduction to Inpatient Coding (A,W,SP,SU) **1-0-1**
Students will be introduced to the application of ICD-9-CM coding as it relates to payment of health services. This course is flexibly scheduled in 2 days. Lab fee: $3.00.

MULT 184 Introduction to Ambulatory Coding (A,W,SP,SU) **1-0-1**
Students will be introduced to the application of CPT coding as it relates to payment of health services. This course is flexibly scheduled in 2 days. Lab fee: $3.00.

MULT 18.5 Introduction to Third-Party Reimbursement (A,W,SP,SU) 1-0-1
Students will receive an overview of how coding systems are used in outpatient and inpatient health care settings for the purpose of reimbursement to the providers of health care services. This course is flexibly scheduled in 2 days. Lab fee: $3.00.

MULT 190 Radiation Protection for General Machine Operator (A,W,SP,SU) 2-0-2
This course is designed to prepare non-radiographers with a specific background in radiation protection and radiation biology necessary to be eligible to apply for the State of Ohio, Radiologic Technology Division, General Machine Operator examination. Areas of instruction include radiation physics, radiographic technique, darkroom processing and film handling, radiation health, safety and protection, and radiation biology. Basic radiographic positioning skills and terminology are also presented. Lab fee: $3.00. Prerequisite: Admission to College.

MULT 203 Diagnostic and Interventional Proc. for the Mammographer 3-0-3
This course is designed to familiarize the radiographer with diagnostic imaging and interventional procedures utilized in the diagnosis and treatment of breast disease. In-depth positioning of routine and specialized mammographic projections and localization/biopsy procedures are presented, as well as the performance of other imaging procedures which may be performed in conjunction with mammography. Patient assessment skills and patient education techniques, to include the American Cancer Society's Breast Self -Examination Instruction are also discussed. Lab fee: $3.00. Prerequisite: ARRT registered Radiologic Technologist.

MULT 205 Mammographic Physics and Quality Assessment (ASP) 4-0-4
This course is designed to familiarize the radiographer with principles of radiation physics and radiographic exposure specific to mammography. The Mammographic Quality Standards Act is discussed and the course includes the knowledge necessary to prepare for and pass federal accreditation standards/inspections. In-depth quality assurance testing methods are presented to ensure adherence with federal standards, as well as "hands-on" performance of QC test in the clinical laboratory environment. Lab fee: $3.00. Prerequisite: Graduate of an accredited Radiography Program.

MULT 207 Clinical Experience in Mammography (W,SU) **0-14-2**
This course is designed to provide clinical experience in the field of mammography. Clinical experience is gained in the performance of screening mammography, diagnostic mammography, needle localization procedures, core needle biopsy procedures and allied imaging modalities. The student begins the course by performing procedures under the direct supervision of a registered mammographer. As the course progresses, the student assumes a more independent role in the performance of mammographic procedures and must demonstrate mastery of the clinical competencies for successful completion of the course. Lab fee: $25.00. Prerequisites: Graduate of an accredited Radiography Program, MULT 203 and MULT 205 or permission of instructor.

MULT 221 Introduction to Sleep Problems (SU,A,W,SP) 2-0-2
This introductory course will provide an overview of the physiology and architecture of sleep, common sleep disorders, their prevalence in the population, causes and treatment, the factors related to risk and risk management for shift workers, and the role of the polysomnography laboratory in monitoring and recording physiologic data during sleep. Lab fee: $3.00.

MULT 223 Level I Polysomnography Technician (SU,A,W,SP) 2-0-2
This course will prepare the student for performing Level I polysomnographic technician responsibilities in the clinical area, and will provide an introduction to polysomnography. Lab fee: $3.00. Prerequisites: MULT 102, MULT 221 or BIO 101, CHEM 100 and MATH 102 and placement into ENGL 101 or permission of instructor.

MULT 224 Level I Polysomnography Technician Clinical (SU,A,W,SP) 0-4-2
This course will prepare the student for performing Level I polysomnographic technician responsibilities in the clinical area. The student will complete a supervised clinical experience in a sleep lab under the guidance of a clinical preceptor. The course focuses on preparing the equipment and instrumentation used in the sleep lab, as well as patient preparation. Lab fee: $3.00. Prerequisites: MULT 102 or permission of instructor.

MULT 225 Polysomnography Level II Technician (SU,A,W,SP) 2-0-2
The Level II Technician course is designed for nurses, respiratory therapists, paramedics and other health care practitioners who are interested in polysomnography. This course focuses on scoring of polysomnography tracings, applying and titrating CPAP/BiLevel therapy, and patient education. Lab fee: $3.00. Prerequisite: Permission of chairperson,

MULT 226 Level II Polysomnography Technician (SU,A,W,SP) 0-4-2
The Level II is designed to provide clinical practice for skills covered in the Level II Technician Course. Lab fee: $3.00. Prerequisite: MULT 223 and MULT 224 or permission of instructor.

MULT 228 Polysomnography Current Topics (SU,A,W,SP) 2-0-2
This course will examine current changes in the field of polysomnography. Changes may include new techniques in instrumentation, diagnosis, new approaches to disorder, new approaches to assessment. Lab fee: $3.00. Prerequisite: MULT 223 or MULT 225 or permission of instructor.

MULT 231 Maternal Child Home Care (A,SP) 2-0-2
This course is designed to provide students with an introduction to maternal child home care from home pregnancy through the postpartum period. The course provides lecture and skills practice for learning. Prerequisite: Registered Nurse.

MULT 233 Pediatric Home Health Care (A,SP) 3-0-3
The course is designed to provide students with an introduction to all facets of pediatric home health care. The course combines lecture, skills, laboratory and clinical observation in a home health setting. Prerequisite: Registered Nurse/Licensed Practical Nurse.

MULT 245 RN First Assistant Program (A,SP) 5-0-5
This is an intensive training program which is designed to provide the experienced perioperative nurse with the advanced preparation and study necessary to assume the role of first assistant. The course is based on AORN's official statement of the RNFA role. Lab fee: $8.00. Prerequisite: RN Licensure: Two years perioperative experience; CNOR certified or eligible; CPR certified, liability insurance; letters of recommendation.

MULT 246 RNFA Experiences in the Operating Room (W,SU) **2-14-4**
This course provides the student with continued practicum for completion of the RN First Assistant Program. Lab fee: $8.00. Prerequisite: MULT 245.

MULT 250 N.A.T.P. Train the Trainer (A,W,SP,SU) 3-0-3
This course prepares qualified nurses to teach, coordinate, and supervise a Nurse Aid Training Program. Federal and State of Ohio requirements are met. Lab fee: $25.00. Prerequisite: RN/LPN Licensed in Ohio minimum of 2 years experience in caring for elderly or chronically ill.

MULT 270 Human Resource Management for Health Services 4-0-4
The focus of this course is the application, analysis, synthesis, and evaluation of human resource management principles and practices for health care managers. Practical application to past and current life/work experience is provided and emphasized. Case studies are used as simulations to provide future application in the real work setting. Lab fee: $5.00.

MULT 272 Health Care Resource Management 4-0-4
This course is designed to provide management approaches to health care resources (budget, equipment, supplies, etc.). It is intended for health care managers with limited financial skills. Lab fee: $5.00.

MULT 274 TQM/UM/Accreditation 4-0-4
This course prepares health care professionals to apply, analyze, synthesize, and evaluate principles and practices of Total Quality Management (TQM), Utilization Management (UM), and Accreditation. TQM focuses on methods and systems to identify and resolve problems that interfere with optimal care and explore continuous quality improvement processes. UM enlightens the health care manager to their essential involvement in the review process and examines the meaning of utilization review to institutional performance. Accreditation process is presented in a practical manner to approach a very complex concern of health care managers. Health care managers will be more knowledgeable of and compliant with external accreditation processes. Lab fee: $5.00. Prerequisites: ENGL 101, COMM 110, and BMGT 218.

MULT 275 Advanced Homeopathic Theories (A,W,SP,S) 4-0-4
This course will discuss homotoxicology and details of homeopathic care in acute and chronic conditions as they relate to self-care. Referral protocols will also be addressed. Lab fee: $5.00. Prerequisite: MULT 175 or permission of instructor.

MULT 276 Legal Aspects and Risk Management 3-0-3
This course is designed to provide the student with an overview of the legal aspects and risk management of the health care system. It is intended for health care practitioners preparing to enter supervisory positions. Lab fee: $5.00. Prerequisites: ENGL 101, COMM 110, and BMGT 218.

MULT 290 Special Topics in Health Care (A,W,SP,SU) 1 -5
This is a workforce training course for employees of health care facilities who have entered into a partnership with CSCC. Various current and timely topics will be offered to give students an opportunity to expand their knowledge and/or skill level in a special area of interest. Prerequisite: permission of instructor.

MULT 291 Special Topics in Health Care Facilities (A,W,SP,SU) 1-5
This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. Students will discuss various current and timely topics related to patient care. Prerequisite: permission of instructor. 1-5 credits to a maximum of 10 hours.

Multimedia Production Technology (MMPT)

MMPT 101 Introduction to Multimedia (A,W,SP,SU - DL) 2-6-5
This is the first of a three course series introducing students to the products, tools and environment of the multimedia production technology profession. This first course introduces students to the communication vehicles used throughout the curriculum, including the Internet World Wide Web, File Transfer Protocols, Newsgroups, Electronic-Mail, Networks and several software applications. This course relies on industry web sites to bring state-of-the-art information directly to the student in a timely manner. The course content changes during the course if necessary to reflect the latest technology of multimedia. Lab fee $25.00. Prerequisite: CPT 101 or permission of instructor

MMPT 111 Multimedia Computer Systems (A,W,SP,SU - DL) 2-6-5
The second of a three course series introducing students to the products, tools and environment of the multimedia production technology profession. Primary focus in this course centers on the hardware, software, professional job responsibilities and production sequences of the multimedia project. This course relies heavily on industry web sites to bring state-of-the art information directly to the student in a timely manner. The course content changes during the course if necessary to reflect the latest technology of multimedia. Lab fee: $25.00. Prerequisite: CPT 101 and MMPT 101.

MMPT 116 Information Logistics (A,W,SP,SU - DL) 2-6-5
The third of a three course series introducing students to the products, tools and environment of the multimedia production technology profession. Primary focus in this course centers on the understanding of various file types, sizes and compression techniques used in multimedia. Further, a study of basic networking investigates how to best store or transmit these files in the appropriate multimedia environment. This course relies heavily on industry web sites to bring state-of-the-art information directly to the student in a timely manner. The course content changes during the course if necessary to reflect the latest technology of multimedia. Lab fee: $25.00. Prerequisite: CPT 101, MMPT 101 and MMPT 111.

MMPT 131 Multimedia Project Planning (A,W,SP,SU - DL) 2-6-5
This core technology course focuses student education in three areas of time or project management. These three areas include personal time management, group management /interaction and project management. Understanding of these concepts will help students become more organized as an individual, plus give practical communication skills for interacting with others in a project grouping system. Lab fee: $20.00. Prerequisites: MMPT 101, MMPT 111, and MMPT 116, ENGL 102.

MMPT 201 Multimedia Authoring (A,W,SP,SU) 2-6-5
The course provides an introduction to the fundamental concepts and applications of multimedia authoring. The software used as the authoring tool for multimedia applications and the Internet is Macromedia Director. Students will learn to import and integrate media elements such as 2D and 3D graphics, animation, sound, and digital video from a wide variety of sources. Lab fee: $25.00. Prerequisites: MMPT 101, MMPT 111, MMPT 116, MMPT 131 and MMPT 226.

MMPT 206 Multimedia Authoring with Macromedia Authorware Pro (A,W,SP,SU) 2-6-5
Students will be introduced to all phases of the multimedia authoring software application Authorware Pro. Instruction, demonstration and analysis of this software tool set the stage for student laboratory projects in Authorware Pro. Projects i transition and completed format will be stored at Columbus State with retrieval and storage enabled through the Internet medium. Lab fee: $25.00. Prerequisites: MMPT 101, MMPT 111, MMPT 116, MMPT 131 and MMPT 226.

MMPT 211 Multimedia Scripting Languages (A,W,SP,SU) 2-6-5
Scripting languages of Lingo, Hypertext, Applescript and/or HTML are the focus of this course. Students will be introduced to each scripting language with explanation and examples of their utilization. Complete materials will enable students to have a ready reference to all scripting alternatives. Students will perform projects with each scripting language as part of the laboratory exercise portion of the course. Lab fee: $40.00 Prerequisites: MMPT 201, MMPT 206, MMPT 101, MMPT 111. MMPT 116, MMPT 131 and MMPT 226.

MMPT 216 Still Video Image Editing (A,W,SP,SU) 2-6-5
Image input, storage and retrieval are the focus of this course. Each electronic photograph must be handled from digitization, through augmentation and final storage or utilization phases. Raster image software such as Adobe Photoshop will enable students to manipulate images for laboratory projects. Files will be transported over the Internet utilizing industry-standard file compression and transmission technologies. Lab fee: $25.00. Prerequisites: MMPT 101. MMPT 111, MMPT 116, MMPT 131 and MMPT 226.

MMPT 217 Digital AN Editing (A,W,SP,SU) 2-6-5
The basic principles of digital video are presented. Course includes laboratory work dealing with the standards and methods for recording/editing and the interconnection of digital video. Concepts of digital conversion, video coding and processing, and digital audio with video are presented. Lab fee: $25.00. Prerequisites: MMPT 101. MMPT 111, MMPT 116, MMPT 131 and MMPT 226.

MMPT 226 Multimedia Telecomm/Network Systems (A,W,SP,SU - DL) 2-6-5
A study of the mechanics of connectivity for multimedia is the center of this core course. Students are introduced to the mechanics, jargon and physical attributes of network systems within a controlled environment, modem and other telecommunications systems and how to plan for the best utilization of transport systems in the multimedia presentation. Lab fee: $20.00. Prerequisites: MMPT 116, MMPT 111 and MMPT 101, ENGL 102.

MMPT 231 Technical Illustration (A,W,SP,SU) 2-6-5
This course presents students with content and application for the vector graphic areas in multimedia. Specifically, instruction, demonstration and student projects will focus on such illustration software applications as Adobe Illustrator and Macromedia Freehand for creation of two dimensional vector illustrations. Lab fee: $25.00. Prerequisites: MMPT 226, MMPT 101, MMPT 131, MMPT 111 and MMPT 116.

MMPT 236 Modeling (A,W,SP,SU) 2-6-5
A course following the Technical Illustration course, in which students will be able to take two-dimensional vector images and convert them to 3D and solid model formats. Further, sequencing animation techniques will be presented with students performing laboratory exercises for both static and moving animation images. Lab fee: $40.00. Prerequisites: MMPT 216, MMPT 217, MMPT 101, MMPT 111, MMPT 116, MMPT 131 and MMPT 226.

MMPT 237 Animation Development (A,W,SP,SU) 2-6-5
An advanced course where students apply the theory and concepts learned in earlier courses to assemble and produce a moving animation production with sound. Lab fee: $40.00. Prerequisites: MMPT 216, MMPT 217, MMPT 101, MMPT 111, MMPT 116, MMPT 131, MMPT 226 MMPT 231.

MMPT 241 Multimedia Authoring for the Internet/WWW (A,W,SP,SU) 2-6-5
Students will be introduced to multimedia authoring for delivery on the Internet World Wide Web. Components include authoring software tools, practical applications, Internet Service Providers, Netscape Navigator page construction and related issues. Students will be able to apply their knowledge in these areas through the use of their own "homepage" assignments. Lab fee: $40.00. Prerequisites: MMPT 201, MMPT 206, MMPT 101, MMPT 116, MMPT 111, MMPT 131 and MMPT 226.

MMPT 251 Multimedia Practicum (A W SP SU) 0-28-4
Supervised on-the-job application of knowledge and skills acquired in the classroom. Lab fee: $3.00. Prerequisites: MMPT 101, MMPT 111, MMPT 116, MMPT 131 MMPT 226 and MMPT 23 1. To be taken concurrently with MMPT 252.

MMPT 252 Seminar on Multimedia Production (A,W,SP,SU) 0-4-2
Application of business knowledge to specific areas of on-the-job practicum experience. Lab fee: $3.00. Prerequisites: MMPT 101, MMPT 111, MMPT 116, MMPT 13 1 MMPT 226 and MMPT 23 1. To be taken concurrently with MMPT 251.

Music (MUS)

MUS 101 History of Western Music (A,W,SP,SU) 5-0-5
A survey of Western music from earliest times to the present including the development of notation in music, the development and limitations of standard instruments, the role of patronage in musical developments, the relationship of changes in music to changes in society, and a consideration of the attributes of "great" music in any time or age. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in History, Humanities and the Arts. Lab fee: $8.00. Prerequisite: Placement into ENGL 101.

MUS 102 Introduction to Vocal Technique (A,W,SP) **0-2-1**
An introduction to vocal technique intended for non-music majors. This class will develop basic skills for both solo and group singing through the use of traditional song materials. Lab fee: $2.00.

MUS 103 Vocal Technique II (A,W,SP) **0-2-1**
Continuation of MUS 102: continued development of skills for solo and group singing through traditional song material. Admission by audition. Lab fee: $5.00.

MUS 110 Basic Keyboard and Music Fundamentals I (On Demand) **1-2-2**
Basic applied keyboard combined with the development of music reading and basic aural skills. This course is for those without prior musical experience. Lab fee: $6.00.

MUS 111 Basic Keyboard and Music Fundamentals II (On Demand) **1-2-2**
Continued development of keyboard technique and basic musical theory. Lab fee: $6.00. Prerequisite: MUS 110 or demonstrable equivalent; permission of instructor.

MUS 120 Introduction to Electronic Music (On Demand) 3-0-3
This course will introduce students to the fundamentals of synthesized music. The origin, development, and present day applications of computerized sound manipulations will be studied. Prototypical synthesizing, MIDI sequencing, and digital sampling will be discussed, demonstrated, and used in classwork. Instruction is through a combination of lecture and hands-on experience. Lab fee: $3.00. Prerequisite: MUS 110 or permission of instructor.

MUS 121 Fundamentals of Music Theory (On Demand) **5-0-5**
An introduction to the elements of music for non-music majors, including notation, composition, and the basic skills necessary for listening and performance. The class is designed to introduce the students to the elements and procedures necessary for the composition and performance of music. Lab fee: $5.00. Prerequisite: Placement into ENGL 101.

MUS 140 World Music (On Demand) **5-0-5**
A survey of nonwestern musical traditions, including forms of music, instrumental development and function, and the role of music and the musician in society. Meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in History, Humanities and the Arts. Lab fee: $6.00. Prerequisite: Entry into ENGL 101.

MUS 160 Concert Band (A,W,SP) **0-2-1**
Admission by audition. Preparation of a variety of wind literature for performance. Prior experience in instrumental music expected. Elective credit for AA/AS degrees. Lab fee: $5.00.

MUS 165 Small Instrumental Ensemble (A,W,SP) **0-2-1**
Placement by audition. Specialized ensemble to concentrate on specific instrumental techniques or to explore specialized musical literature. Prior experience in instrumental music expected. Elective credit for AA/AS degree. Lab fee: $5.00.

MUS 180 Vocal Ensemble (A,W,SP) **1-6**
Admission by audition only. Preparation for performance in concert of a variety of music. Music reading ability helpful but not required. It is suggested that a new Ensemble member take MUS 102 concurrently. Lab fee: $2.00.

MUS 221 Musicianship I (A) 3-4-5
Elements of music and musical notation; analytical concepts and terminology; fundamentals of harmony and melody as well as development of basic aural skills: solfege, dictation, and keyboard drill. For students intending to major in music or those with strong interest in music and possessing music reading ability. Lab fee: $6.00.

MUS 222 Musicianship II (W) 3-4-5
Principles of diatonic harmony and non-chordal melodic technique; introduction to seventh cord structures; major, minor, pentatonic and blues scales. Continued development of aural skills. Lab fee: $6.00. Prerequisite: MUS 221.

MUS 223 Musicianship III (SP) 3-4-5
Continued study of diatonic modulation and secondary dominants as well as modal and pentatonic harmonic patterns with an emphasis on creative projects. Continued development of aural skills. Lab fee: $6.00. Prerequisite: MUS 222.

MUS 241 Music History I (A) 3-0-3
A survey of the development of music from earliest times to the 18th Century. Student ability to read music is assumed. Lab fee: $10.00. Prerequisite: Entry into ENGL 101.

MUS 242 Music History II (W) 3-0-3
A survey of music from the rococo through the early romantic (1850) periods. Student ability to read music is assumed. Lab fee: $10.00. Prerequisites: Entry into ENGL 101.

MUS 243 Music History III (SP) 3-0-3
A survey of music from the late romantic period to the present. Student ability to read music is assumed. Lab fee: $10.00. Prerequisite: Entry into ENGL 101.

MUS 290 Capstone Experience in Music (On Demand) 2-2-3
A capstone course focusing on Music. Students will work on developing techniques and methodologies in the field of music. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00.

MUS 299 Special Topics in Music (On Demand) **1-5**
Detailed examination of selected topics in music. Lab fee: $2.00. Prerequisites vary.

Natural Science (NSCI)

A mandatory safety lesson (normally given in the laboratory) must be completed before the student is admitted to certain natural science laboratory sessions. Approved safety goggles are required for some laboratory sessions and may be purchased through the Bookstore. Attendance during the first week of class is mandatory and may affect a student's continued enrollment in these classes. Students must complete 60% of the laboratories in the course to receive credit.

NSCI 101 Natural Science I (A,W,SP,SU - DL) 4-3-5
This course covers the evolution of the physical and biological sciences from antiquity to the modem era. Topics include early ideas of the physical world, the principles of mechanics and optics, microscopy and its role in the development of cell and germ theory, germ theory, the atomic nature of matter, and the classification and bonding of the elements. Related laboratory and demonstrations. Safety training and goggles are required for the laboratory. Lab fee: $19.00. Prerequisites: Placement into ENGL 101 and placement into MATH 102 or higher or completion of DEV 031.

NSCI 102 Natural Science II (A,W,SP,SU) 4-3-5
A continuation of NSCI 101. Topics include the laws of chemical combination, chemical reactions, evolution and natural selection, the diversity of life and ecology, the concept of energy, heat and thermodynamics, kinetic theory, electricity and magnetism, the nature of light, and quantum mechanics. Related laboratory and demonstrations. Safety training and goggles are required for the laboratory. Lab fee: $19.00. Prerequisite: NSCI 101 or equivalent.

NSCI 103 Natural Science III (A,W,SP,SU) 4-3-5
This course integrates the study of chemistry and biology with an emphasis on topics which have had an impact on the development of science in the twentieth century. Topics include the ways scientists communicate information, the modem advances of organic chemistry and biochemistry, protein synthesis, the processes of mitosis and meiosis, and genetics. Discussions cover scientific information as well as any ethical and moral implications of scientific advances. Related laboratory and demonstrations. Safety training and goggles are required for the laboratory. Lab fee: $19.00. Prerequisite: NSCI 102 or equivalent or permission of instructor.

Nursing (NURS)

NURS 109 Student Transition (A,W,SP,SU) 1-0-1
This course is designed to assist the student who has life experience credit for one or more designated nursing courses with transition into the nursing sequence. The components of the course include socialization into the ADN student role at Columbus State, nursing process, communications skills, and selected psychomotor skills. Prerequisite: Acceptance into Nursing via LPN route or transfer student route.

NURS 110 Introduction to Nursing (ASP) 1-6-3
The student will examine the historic and current role of the nurse in the health care delivery system. The nursing process is introduced as a method for planning care and self-care activities that promote, maintain, and restore health in adult and geriatric clients. Communication techniques, teaching/learning principles, and computer skills used by the nurse in delivery of care will be discussed. The student will examine the economics and services available within the health care delivery system. Ethical and legal issues as they relate to the practice of nursing are introduced. Safe implementation of technical skills with a holistic approach and attention to cultural consideration is stressed. Beginning principles of critical thinking are discussed. Clinical experiences are provided in a variety of community settings. Lab fee: $30.00. Prerequisite: Admission to Nursing Technology. Concurrents: BIO 161, PSY 100, ENGL 101 and NURS 120.

NURS 111 Health Promotion of Women and Families (W,SU) 1-9-4
The student will focus on the role of the nurse as a provider of care in the promotion of health for women and families. The influence of cultural diversity and health care economics on women and families will be included. The student will use the nursing process in providing care and promoting self-care activities. Emphasis will be placed on the teaching /learning process. Concepts of mental and spiritual health will be introduced. Community resources available to women and families will be examined. Clinical experiences will be provided in a variety of community settings. The student will begin application of critical thinking principles Lab fee: $30.00. Prerequisites: NURS 110, NURS 120, BIO 161, PSY 100 and ENGL 101. Concurrents: BIO 169, PSY 240, NURS 12 1 and NURS 130.

NURS 112 Introduction to Nursing Concepts of Health Maintenance and Restoration (A,SP) 2-12-6
The student will focus on the role of the nurse as a provider of care for persons in need of maintenance and/or restoration of health. The student will study the impact of developmental levels and the effect of acute, chronic or terminal conditions as they relate to the ability of the person and family to care for themselves. The physical, psychological, and spiritual well being of the person and family during the dying and death process will be emphasized. The concepts studied include perioperative nursing, pain management, infectious processes, cancer, fluid and electrolyte imbalances, and altered nutrition. A variety of community settings for adults and children will be utilized for the clinical experience. Lab fee: $30.00. Prerequisites: NURS 111, NURS 121, NURS 130, BIO 169 and PSY 240. Concurrents: BIO 170, NURS 131 and NURS 113.

NURS 113 Nursing Skills (A,W,SP,SU,DL) 1-3-2
Principles and concepts underlying the performance of select nursing skills as well as the technical aspects necessary in performing those skills will be discussed. Critical thinking and communication techniques, which are integral components of the application of these skills in nursing practice, are included. As a provider of care the nurse implements nursing skills with consideration to the developmental level of the person and to the venue in which they practice. In each unit of instruction the legal, ethical and economic issues related to the skills will be presented. Lab fee: $45.00. Prerequisites: NURS 130 or permission of instructor.

NURS 120 Health Assessment in Nursing I (A,SP) 1-3-2
Nursing assessment of the person is presented in two courses. In the first course the student is introduced to techniques of physical assessment. The student will be involved in holistic assessments of adults with consideration to ethnic variations. Developmental considerations in the geriatric client will be discussed. Legal ramifications of nursing assessment will be presented. Lab fee: $23.00. Prerequisites: Admission to Nursing Technology or permission of instructor. Concurrent: BIO 161.

NURS 121 Health Assessment in Nursing II (W,SP) 1-3-2
This is the second of two nursing assessment courses. The focus will be on holistic assessments of the childbearing, newborn, and pediatric client. Assessment of mental health status and family relations will also be included. Consideration will be given to ethnic and developmental variations. The assessment of community resources available to promote, maintain, and restore health will be explored. Lab fee: $25.00. Prerequisite: NURS 120. Concurrents: BIO 169, and PSY 240

NURS 130 Concepts of Pharmacology I (W,SP) 2-3-3
The student is introduced to the general principles of pharmacology. This is the first of two courses where the focus will be on the nurse's role in drug administration to person's of all ages. Drug classifications and their relationship to promotion, maintenance and restoration of health will be presented. Safe administration and documentation of oral, topical, and injectable medication is presented in the laboratory component. Calculations of medications for each administration form will be taught. Lab fee: $35.00. Prerequisite: NURS 120 or permission of instructor. Concurrent: BIO 169.

NURS 131 Concepts of Pharmacology II (ASP) 2-3-3
This is the second of two courses where the focus will be on the nurse's role in drug administration to persons of all ages. Drug classifications and their relationship in promotion, maintenance and restoration of health will be presented. Safe administration of enteric, intravenous and inhalation mediations is presented in the laboratory component. Calculations of medications for each administration form will be taught. Lab fee: $35.00. Prerequisite: NURS 130. Concurrent: NURS 113.

NURS 190 Special Topics (A,W,SP,SU,) 1-5
Lab Fee. $5.00.

NURS 191 Special Topics in Nursing (A,W,SP,SU,DL)

NURS 192 Special Topics in Nursing (A,W,SP,SU) 1-5
Lab fee: $5.00.

NURS 193 Special Topics in Nursing (A,W,SP,SU) 1-5
Lab fee $10.00

NURS 194 Special Topics in Nursing (A,W,SP,SU) 1-5
Lab fee: $5.00.
Various current and timely topics will be offered to give students an opportunity to expand their knowledge and/or skill level in a special interest area. A minimum of one nursing elective will be required. These courses will be small group classes. They may or may not have a laboratory component based on the topic. No clinical offering accompanies these courses. Lab fee: $5.00. Prerequisite: Enrolled in Nursing program 3-7 quarters or permission of instructor.

NURS 210 Nursing Concepts of Health Maintenance and Restoration (W,SU) 2-12-6
The student is introduced to the concepts of care management while continuing to function as a provider of care and promoter of health for pediatric and adult clients. The focus is on meeting the holistic needs of the client. Maintenance and restoration of health are presented in relation to the integumentary, gastrointestinal, urinary, sensory, and endocrine systems. The nursing process is the framework for continued development of critical thinking skills. Each unit of instruction will contain content on the influence of legal, ethical, cultural. and economic issues related to health care. In the clinical component of the course, which is conducted in a variety of community settings, the student is accountable for his nursing practice. Lab fee: $30.00. Prerequisites: NURS 112, NURS 113, NURS 131 and BIO 170. Concurrents: BIO 115 and ENGL 102.

NURS 211 Nursing Concepts of Health Maintenance and Restoration II (A,SP) 2-12-6
The student continues to develop the role of manager of care while providing care and promoting health of pediatric and adult clients. The focus is on meeting the holistic needs of clients. Maintenance and restoration of health are presented in relation to the respiratory, cardiovascular, hematological, and reproductive systems. The nursing process is the framework for continued development of critical thinking skills. Each unit of instruction will contain content on the influence of legal, ethical, cultural, and economic issues related to health care. In the clinical component of the course, which is conducted in a variety of community settings, the student is accountable for his nursing practice. Lab fee: $30.00. Prerequisites: NURS 210, a passing grade on nursing outcome exam, and BIO 115.

NURS 212 Nursing Concepts of Health Maintenance and Restoration III (W,SU) 2-12-6
The student continues to develop the role of manager of care while providing care and promoting health of pediatric and adult clients. The focus is on meeting the holistic needs of clients. Maintenance and restoration of health are presented in relation to mental health, and the neurological, musculoskeletal, and immune systems. The nursing process is the framework for continued development of critical thinking skills. Each unit of instruction will contain content on the influence of legal, ethical, cultural, and economic issues related to health care. In the clinical component of the course, which is conducted in a variety of community settings, the student is accountable for his nursing practice. Lab fee: $30.00. Prerequisite: NURS 211. Concurrent: MATH 135.

NURS 213 Concepts of Nursing Management (A,SP) **2-18-8**
The student will synthesize concepts of care management to develop leadership skills inherent in the profession of nursing. The student will assume the roles of provider of care, manager of care, and member within the discipline of nursing. Ethical, legal, political, and economic issues as they relate to professional nursing will be presented. Current trends in nursing practice are analyzed. The student will focus on holistic care of groups of clients and their families in the promotion of self-care activities. The clinical experience will be conducted in a variety of community settings. Lab fee: $30.00. Prerequisites: NURS 212, MATH 135, an entry placement, and a passing grade on nursing outcome exam and a 2.0 G.P.A.

Office Administration (OADM)

OADM 101 Business Grammar Usage (A,W,SP,SU - DL) 2-3-3
This course is a structured program reviewing all eight parts of speech in detail. In addition, it is designed to assist the student to become skillful in sentence analysis, word choice, punctuation, vocabulary, capitalization, number expression, and spelling.

OADM 102 Editing Business Documents (W,SP) 2-3-3
Editing Business Documents is a course which has application for anyone who writes, edits, or prepares final copy for distribution or publication. Includes basic rules regarding grammar usage and aspects of style, as well as techniques and procedures for producing many different kinds of written communications. In addition to editing and proofreading at the computer, letters. memos, and reports will be formatted. Lab fee: $3.00. Prerequisites: OADM 101 and OADM 132, or permission of instructor.

OADM 111 Accounting Basics (A,W,SP,SU) 3-2-4
This course is designed to provide students with a basic understanding of accounting principles and procedures including analysis of business transactions, journalizing, posting, adjusting and closing entries, and financial statement preparation. Also included arc transactions involving payroll accounting, bank accounts, and cash funds.

OADM 112 Computerized Accounting Using QuickBooks (A,W) **1-0-1**
Students will learn how to keep a set of computerized books for small businesses using QuickBooks. Lab fee: $1.00. Prerequisites: OADM 111 or permission of instructor.

OADM 121 Records Management (A,W,SP) 2-3-3
This course is designed to provide knowledge of efficient handling of business records, ARMA filing methods and systems, and principles for the selection of records systems and supplies.

OADM 131 Keyboarding I (A,W,SP,SU - DL) 2-3-3
An introductory interactive system of keyboarding by touch and applications using microcomputers and software; development of basic keyboarding skills measured in words per minute and accuracy of one error per minute. To receive credit for this course, students must (a) complete all keyboarding lessons in assigned text, and (b) be able to type at least two different two-minute timings, each demonstrating minimum speed of 25 words a minute with accuracy of two errors or less. Lab fee: $3.00.

OADM 132 Keyboarding II (A,W,SP,SU) 2-3-3
An intermediate interactive system of reinforcing keyboarding skills by touch and applications using microcomputers and Microsoft Word designed to teach formats for business correspondence, tabulations, and manuscripts with emphasis on correct techniques, proofreading, decision-making skills, and accuracy; further development of keyboarding speed measured in words per minute and accuracy of one error per minute on three-minute timings. To receive credit for this course, students must demonstrate assigned formatting skills and be able to type at least two different three-minute timings, each demonstrating minimum speed of 35 words a minute with accuracy of three errors or less. Lab fee: $3.00. Prerequisite: OADM 131 or proficiency test.

OADM 133 Keyboarding III (W,SP,SU) 2-3-3
An advanced interactive system of reinforcing keyboarding skills by touch and applications using microcomputers and Microsoft Word software designed to teach business correspondence, tabulations, manuscripts, reports, and various business forms with emphasis on correct techniques, proofreading, decision-making skills, and accuracy; further development of keyboarding speed measured in words per minute and accuracy of one error per minute on five-minute timings. To receive credit for this course, students must demonstrate assigned formatting skills and be able to type at least two different five-minute timings, each demonstrating minimum speed of 45 words per minute with accuracy of five errors or less. Lab fee: $3.00. Prerequisite: OADM 132 or proficiency test.

OADM 134 Keyboarding IV (SP,SU) 2-3-3
The focus in this course is in three areas of learning: developing keyboarding speed and accuracy, building production-level mastery on a wide variety of business documents, and using word processing functions and features to streamline the creation of professional-looking documents. To receive credit for this course, students must demonstrate assigned formatting skills and be able to type at least two different five-minute timings at 50 words per minute with accuracy of five errors or less. Lab fee: $5.00. Prerequisite: OADM 133.

OADM 139 Keyboarding Improvement (A,W,SP,SU) **1-4-3**
This elective course is designed to provide students with increased skills in the operation of the keyboard. Greater speed and accuracy are the goals. The emphasis is on speed and accuracy using straight-copy material. Lab fee: $3.00. Prerequisite: OADM 131.

OADM 144 Notetaking Using Super Write (W,SP) 2-3-3
This course introduces the basics of Super Write, an abbreviated writing system based on the longhand alphabet and secondarily on phonetics. Practice is stressed for speed and accuracy. Lab fee: $5.00. Prerequisites: OADM 131.

OADM 151 Machine Transcription (SP,SU) 3-2-4
This course is designed to develop skill in the use of machine transcription equipment. Mailable copy is the goal in transcribing machine dictation of business correspondence, technical reports, drafts, and other business communications in a broad range of business formats. Emphasis on the fundamentals of English in grammar, spelling, and vocabulary will reinforce transcription skills. Lab fee: $3.00. Prerequisite: OADM 132. Concurrent: OADM 133.

OADM 164 WordPerfect for Windows I (A,W,SP,SU) 2-3-3
Provides a solid foundation for this word processing software. Covers basic to advanced features including the use of icons, the ruler bar, line and page formatting, tabs, headers, footers, footnotes, endnotes, merging, tools, and file management. Lab fee: $5.00

OADM 165 WordPerfect for Windows II (A,W,SP,SU) 2-3-3
Covers such special features as using multiple windows, merging, macros, envelopes and labels, sorting and selecting, columns, tables, desktop publishing, style sheets, and manuscripts. Lab fee: $5.00. Prerequisite: OADM 164.

OADM 167 Desktop Publishing Using PageMaker (A,W,SP,SU) 2-3-3
Principles of design and hands-on experience with PageMaker. Lab fee $5.00. Requirements: 35 wpm typing skill and knowledge of a personal computer in general, Windows, and word processing.

OADM 172 Advanced Microsoft Excel (A,W,SP,SU) 2-3-3
A foundation course in spreadsheets for office workers. Covers major spreadsheet features of the program including spreadsheet design, formulas, functions, and charts. Applications investigate Excel's powerful features in business situations. Lab fee: $5.00. Prerequisites: CPT 101, MATH 101, or permission of instructor.

OADM 191 Microsoft Word for Windows I (A,W,SP,SU) 2-3-3
Provides a solid foundation for this word processing software. Covers basic to intermediate features including creating, editing, printing documents, using icons, rulers, and the tile manager. Lab fee: $5.00. Prerequisites: OADM 131 or permission of instructor.

OADM 192 Microsoft Word for Windows II (A,W,SP,SU) 2-3-3
Advanced features of Microsoft Word are presented including creating charts, formatting text into columns, formatting with styles, merging documents, sorting, creating tables and indexes. Lab fee: $5.00. Prerequisites: OADM 191 or MCT 106.

OADM 224 Office Field Experience I (W, SP) 0-24-2
The student is employed for approximately 24 hours a week in an office position that will provide application of as many of the theories taught in the office administration program as is practical for each individual. The on-the-job field experience is supervised by a field experience coordinator to aid in the student's growth and development. Prerequisites: OADM 134, OADM 165 and OADM 261.

OADM 261 Electronic Office Procedures (A) 3-2-4
This upper-level course is designed for second-year students who are preparing to enter an Office Administration position or who are currently working in an office. The student will prepare for a job search, consider topics such as incoming and outgoing communications, reprographics, travel arrangements, meetings and conferences, preparing presentations and meeting minutes, as well as other advanced topics. Lab fee: $5.00. Prerequisite: OADM 134 and OADM 165 or permission of instructor.

OADM 297 Special Topics in Office Administration (On Demand) **1-3**
Detailed examination of selected topics of interest in office administration. Lab fee: $20.00 Prerequisites vary.

Physics (PHYS)

Students must complete 60% of the laboratories to receive course credit. Courses in this area may require additional hours outside of the scheduled class time.

PHYS 100 Introduction to Physics (A,W,SP,SU) 3-3-4
A survey of the basic concepts of physics with emphasis on energy and its various forms. Topics include mechanics. heat, electricity. and waves. Related laboratory and demonstrations. Lab fee: $10.00. Prerequisites: MATH 102 or equivalent, and placement into ENGL 100. Not open to students with credit for PHYS 117, PHYS 118, PHYS 177, PHYS 178, PHYS 181, PHYS 182, PHYS 183, or PHYS 185.

PHYS 117 College Physics (Mechanics and Heat) (A,W,SP,SU) 4-3-5
A study of classical mechanics. including statics and kinematics, Newton's laws of motion, linear and angular momentum. work and energy. and properties of solids and fluids. Elementary concepts of heat arc introduced, including temperature and thermal expansion, the ideal gas law. calorimetry, and heat transfer. Related laboratory and demonstrations. Lab fee: $11.00. Prerequisites: MATH 148 or MATH 111 or equivalent, placement into ENGL 101. Not open to students with credit for PHYS 177 or PHYS 178. This course and PHYS I 18 provide a two-quarter sequence in physical science that will fulfill the elective requirement for the Associate of Science Degree.

PHYS 118 College Physics (Electricity. Magn. and Light) (A,W,SP,SU) 4-3-5
A continuation of PHYS 117. Topics in classical electricity and magnetism include electric potential, current and resistance, dc circuits, magnetic forces and fields, and electromagnetic induction. The nature of light is introduced and the principles of geometrical and physical optics, including optical instruments, are treated. Related laboratory and demonstrations. Lab fee: $10.00. Prerequisites: PHYS 117, and MATH 150 or MATH 112 or equivalent. Not open to students with credit for PHYS 177. PHYS 178 or PHYS 179.

PHYS 119 College Physics (Modern Physics) (A,W,SP) 4-3-5
A continuation of PHYS 118. Topics include alternating current. electromagnetic waves, kinetic theory of gases, thermodynamics, and modern physics. The major emphasis of the course is on topics in modern physics, including special relativity, quantum mechanics, atomic and nuclear physics, nuclear radiation, and nuclear energy. Related laboratory and demonstrations. Lab fee: $10.00. Prerequisites: PHYS 118. Not open to students with credit for PHYS 177, PHYS 178 or PHYS 179.

PHYS 177 General Physics I (A,W,SP,SU) 4-3-5
A course in the fundamental principles of mechanics for physics majors and engineers. Topics treated include vectors, equilibrium, kinematics and dynamics of a particle, energy, momentum, rotation, elasticity, simple harmonic motion, and the behavior of fluids. Related laboratory and demonstrations. Lab fee: $11.00. Prerequisites: MATH 151, high school physics or PHYS 100 recommended and placement into ENGL 101. This course and PHYS 178 provide a two-quarter sequence in physical science that will fulfill the elective requirement for the Associate of Science Degree.

PHYS 178 General Physics II (A,W,SP,SU) 4-3-5
A continuation of PHYS 177. Topics covered include Coulomb's law, electric fields and potentials. capacitors and dielectrics, current and resistance, dc circuits. Magnetic fields and forces, electromagnetic properties of matter. ac circuits. Related laboratory and demonstrations. Lab fee: $10.00. Prerequisite: PHYS 177 and MATH 152.

PHYS 179 General Physics III (A,W,SP,SU) 4-3-5
A continuation of PHYS 178. Topics include mechanical waves, sound, electromagnetic waves, light, mirrors, lenses, interference, diffraction, polarization, relativity, photons, structure of atoms, nuclei, and solids. Related laboratory and demonstrations. Lab fee: $10.00. Prerequisite: PHYS 178 and MATH 153.

PHYS 181 Technical Physics (Mechanics) (A,W,SP,SU) 3-3-4
A course in the basic principles of mechanics. Major topics include equilibrium or rigid bodies, particle motion, Newton's laws of motion, work and energy, conservation principles, and rotational motion. Related laboratory and demonstrations. Lab fee: $10.00. Prerequisite: MATH 111 or MATH 148 or equivalent, and placement into ENGL 100. Not open to students with credit for PHYS 117 or PHYS 177.

PHYS 183 Technical Physics (Properties of Matter) (W,SU) 3-3-4
A course in the basic principles associated with the mechanical and thermal properties of matter. Major topics include elasticity, fluid mechanics, heat and temperature, energy transformations, heat transfer, ideal and real gases, thermodynamics, vibrations and wave motion. Related laboratory and demonstrations. Lab fee: $10.00. Prerequisites: MATH 111 or MATH 148 or equivalent, and placement into ENGL 100. Not open to students with credit for PHYS 117 or PHYS 177.

PHYS 185 Technical Physics (Heat, Light, Sound) (A,W,SP,SU) 3-3-4
A course in the basic principles associated with heat, light, and acoustic phenomena. Major topics include temperature and heat, heat transfer, wave and particle nature of light. atomic theory, solid-state theory, electronics, and acoustics. Related laboratory and demonstrations. Lab fee: $12.00. Prerequisites: MATH 112 or equivalent. and placement into ENGL 100. Not open to students with credit for PHYS 117 or PHYS 177.

PHYS 290 Capstone Experience in Physics (On Demand) 2-2-3
An integrated science course blending elements of chemistry, physics and biology. Topics include the historical development of the sciences, ethical issues in science and how they affect the advancement of scientific thought, and the scientific method as it relates to experimental design and interpretation of scientific results. The laboratory utilizes an investigative approach taking students through the process of identifying a research problem, conducting a literature review, writing a research proposal, collecting and analyzing data, writing a scientific paper and presenting results. Lab fee: $18.00. Prerequisites: 75 hours or more of course work completed with a minimum of 20 credit hours within the sciences. This course is required for all physics majors seeking either the Associate of Arts or Associate of Science degree.

PHYS 293 Independent Study in Physics (On Demand) 1-5
Detailed examination of selected topics of interest in physics. Lab fee: $6.00. permission of instructor.

PHYS 299 Special Topics in Physics (On Demand) 1-5
Detailed examination of selected topics of interest in physics. Lab fee: $ 6.00. Prerequisite: Permission of the instructor.

Philosophy (PHIL)

PHIL 101 Introduction to Philosophy (A,W,SP,SU) 5-0-5
An introduction to the problems, methods, and terminology of philosophy, the types of questions addressed by philosophers, and the pivotal thinkers and systems of Western civilization from the Greeks to the 20th century. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in philosophy and humanities. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

PHIL 130 Ethics (A,W,SP,SU) 5-0-5
An introduction to moral reasoning, examining theories of right and wrong, good and bad, justice and injustice as they have been viewed in the past and as they shed light on contemporary ethical issues. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in philosophy and humanities. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

PHIL 150 Introduction to Logic (A,W,SP,SU) 5-0-5
An introduction to critical thinking and the methods of inductive, deductive and symbolic logic. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in philosophy, humanities, and, in some instances, mathematics and science. Check with your academic advisor. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

PHIL 250 Symbolic Logic (On Demand) 5-0-5
A presentation of deductive logic focused on propositional logic, natural deduction and predicate logic. This course develops in greater detail principles of deductive logic covered in PHIL 150. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and distributive transfer requirements in philosophy, humanities. and in some cases, mathematics and sciences. Check with your academic advisor. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

PHIL 270 Philosophy of Religion (On Demand) 5-0-5
An introduction to the major issues in the philosophy of religion including the existence of God, faith and reason, the problem of evil, miracles, death and immortality, and God and morality. Meets elective requirements in the Associate of Arts and Associate of Science programs. Lab fee: $2.00. Prerequisite: Placement into ENGL 101.

PHIL 290 Capstone Experience in Philosophy (On Demand) 2-2-3
A capstone course focusing on philosophy. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State,

and participate in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00.

PHIL 299 Special Topics in Philosophy **1-5**
Detailed examination of selected topics in philosophy. Lab fee: $2.00. Prerequisites vary.

Political Science (POLS)

POLS 101 Introduction to American Government (A,W,SP,SU) **5-0-5**
This course introduces students to the nature, purpose and structure of the American political system. Attention is given to the institutions and processes that create public policy. The strengths and weaknesses of the American political system are discussed, along with the role of citizens in a democracy. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

POLS 165 Introduction to Politics (A,W,SP,SU) 5-0-5
This course introduces students to the basic concepts and issues in the study of politics, The course compares various political institutions, ideologies, and economic systems: examines political socialization and culture; explores methods of resolving international conflict, and explains the impact of modem bureaucracies on policy-making. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

POLS 290 Capstone Experience in Political Science (On Demand) 2-2-3
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have special interest in continuing a baccalaureate degree program in political science. Course requirements include the completion and presentation of a research project that relates to the students' academic interests after reviewing research methodologies and findings in political science; assembly of a portfolio that covers their academic career at Columbus State Community College; and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00. Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree with five credit hours in political science.

POLS 293 Independent Study in Political Science (On Demand) **1-5**
An individual, student-structured course that examines a selected topic in political science through intensive reading or research. The independent study elective permits a student to pursue his/her interest within the context of a faculty-guided program. Lab fee: $5.00. Prerequisite: Permission of the Instructor and the Chairperson.

POLS 299 Special Topics in Political Science (On Demand) **1-5**
A detailed examination of selected topics of interest in political science. Lab fee: $5.00. Prerequisites vary.

Psychology (PSY)

PSY 100 Introduction to Psychology (A,W,SP,SU - DL) **5-0-5**
This introductory course provides an overview of the origins. growth, content and applications of psychology, including the application of the scientific method to the following topics: research methodology; beginning statistics; theories of physical, cognitive, moral and emotional development; sensation; perception; learning; motivation; intelligence; memory; personality; coping processes; abnormality; adjustment; and the individual in small groups and a pluralistic society. Lab fee: $6.00. Telecourse lab fee: $25.00. Prerequisite: Placement into ENGL 101.

PSY 200 Educational Psychology (A,W,SP,SU) **5-0-5**
This course explores the concepts and factors affecting application of psychological principles to the education process, Topics include theories of learning, motivation, classroom management, planning, teaching, and student evaluation in relationship to developmental stages. Lab fee: $6.00. Prerequisite: PSY 100 and placement into ENGL 101.

PSY 201 Field Based Experience in Educational Psychology (On Demand) **1-5**
A field-based experience designed to teach the relationship between psychological principles and the education process. The supervised field experience emphasizes appropriate teaching strategies for different age groups and settings. Practical experiences are related to classroom organization, management, and learning activities. The field-based course consists of 12 hours per academic credit hour in an educational or community setting. Lab fee: $6.00. Prerequisite: PSY 100 and placement into ENGL 101. Concurrent: PSY 200.

PSY 230 Abnormal Psychology (A,W,SP,SU) 3-0-3
Abnormal Psychology presents the basic concepts of abnormalities as defined by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). The course focuses on classification schemes of diagnoses and looks at descriptive terms and symptoms. Research, major perspectives, and myths in the field of mental health are examined. Lab fee: $6.00. Prerequisite: PSY 100 and placement into ENGL 101.

PSY 235 Psychology of Adjustment (A,W,SP,SU) 3-0-3
This course examines psychological factors which influence individual growth, development, and behavior. Current theoretical approaches to understanding and achieving self -awareness, application of conditioning and motivation techniques to behavior modification, group dynamics, methods of self-help, and methods of improving interpersonal communications and relationships are investigated. Lab fee: $6.00. Prerequisite: PSY 100 and placement into ENGL 101.

PSY 240 Human Growth and Development Through the Life Span (A,W,SP,SU) 4-0-4
This course surveys developmental change from conception to death. The following stages of human growth and development are covered: conception and prenatal growth, infancy, childhood, adolescence, young adulthood, middle age, old age, and death. This course focuses on physical, social, emotional and cognitive development. Lab fee: $6.00. Prerequisite: PSY 100 and placement into ENGL 101.

PSY 261 Introduction to Child Development (A,W,SP,SU) **5-0-5**
This course examines the nature, nurture, and development of children from conception through eight years of age. The traditional child development approach is used with emphasis upon physical, cognitive, social, emotional, and language development. Observation of children is an integral part of the course. Lab fee: $6.00. Prerequisites: PSY 100 and placement into ENGL 101.

PSY 267 Social Psychology (A,W,SP,SU) **5-0-5**
This course provides an overview of the origins, growth, content, and interaction of individuals in social settings, including the application of the scientific method and cultural influence to the following topics: attitudes and attitude change, attribution, social identity (self and gender), social perception (understanding others), social cognition (thinking about others and their social environment). prejudice and discrimination, non-verbal communication, obedience to authority, conformity, aggression, prosocial behavior, interpersonal attraction, and behavior in groups. Lab fee: $6.00. Prerequisite: PSY 100 and placement into ENGL 101.

PSY 290 Capstone Experience in Psychology (on Demand) 2-2-3
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing a baccalaureate degree program in psychology. Course requirements include the completion and presentation of a research project that relates to the students' academic interests after reviewing research methodologies and findings in psychology; assembly of a portfolio that covers their academic career at Columbus State Community College, and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00. Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree with five credit hours in psychology.

PSY 293 Independent Study in Psychology (On Demand) **1-5**
An individual, student-structured course that examines a selected topic in psychology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab fee: $5.00. Prerequisite: Permission of the Instructor and the Chairperson

PSY 299 Special Topics in Psychology (On Demand) **1-5**
A detailed examination of selected topics of interest in psychology. Lab fee: $5.00. Prerequisites vary.

Purchasing Major
(See Logistics)

Quality Assurance Technology (QUAL)

For Statistical Process Control, see MECH 244 in the Mechanical Engineering Technology course descriptions. For other related course descriptions, see Electronic Engineering Technology and Mechanical Engineering Technology.

QUAL 150 Quality Transformation (A,W,SP) 3-2-4
This course focuses on teamwork and the applications of Total Quality Transformation, tools. Teams of students and employees from business and industry solve existing quality problems in their organization with careful direction.

QUAL 240 Total Quality Management (A,W) 2-2-3
This course is a study and practice of the major elements and concepts of total quality management, including principles and styles of quality management, systems thinking, continuous improvement, management by data, and historic influences of leaders in quality management.

QUAL 250 Metrology (SP) 2-2-3
Making precise measurements is an important part of producing quality products for the customer. This introductory course covers the correct procedures for the linear and angular measures of features or attributes on machine components. Traceability to standards is also presented and instrument capability discussed. Students use a variety of instruments and systems to make precision measurements. Lab fee: $10.00

QUAL 251 Value Engineering (W) 2-2-3
Value engineering is the systematic application of recognized techniques which identify the function of a product or service, establish a monetary value for that function, and provide the necessary function reliably at the lower overall cost. Students will be introduced to value engineering concepts and applications for the practitioner. Prerequisite: MECH 244.

QUAL 260 Reliability and Systems Maintainability (SP) 3-0-3
This course is an examination of the basic methods that companies use to ensure the reliability of their products. Students learn statistical methods used to determine reliability, the effectiveness of data analysis, use of simulations, and ways to improve system performance. Prerequisites: MECH 244.

QUAL 261 Technical Project Management (SP) 2-2-3
Course provides an integration of the elements involved in planning, developing, and managing a successful and efficient technical project. Several methods are used including current software and Gantt charts.

Radiography (RAD)

RAD 111 Introduction to Radiologic Technology (SU) 3-0-3
Basic introduction to radiologic principles and clinical radiography. Areas of emphasis include fundamentals of radiobiologic concepts, medical ethics, body mechanics, patient care skills, and clinical observation. This course is a prerequisite for all other radiologic technology courses. Prerequisite: Completed health record, acceptance into program.

RAD 113 Radiologic Science (W) **5-0-5**
The course begins with a review of basic concepts of electricity, electromagnetism, and electrical circuits. The student is then introduced to the theory of x-ray production, x-ray emissions, and x-ray interactions. Applications of equipment are discussed to include special x-ray equipment such as tomography, stereoradiography, mammography, and fluoroscopy. Prerequisite: RAD 111.

RAD 118 Radiographic Exposure and Processing (SP) 4-2-5
This course consists of a study of film processing through analysis of radiographic film characteristics, film processing, film storage and handling, and silver recovery methods. Photographic and geometric properties necessary to the production of a quality radiograph are discussed, as well as technical conversions necessary to maintain film density. Lab fee: $25.00. Prerequisite: RAD 113.

RAD 123 Advanced Exposure and Processing (W) 3-2-4
This advanced course analyzes factors which affect the diagnostic quality of the radiograph. Technique charts are developed. The importance of a quality assurance program is emphasized and quality control testing is presented. Students are required to conduct quality control testing and troubleshooting of radiographic equipment. Lab fee: $30.00. Prerequisite: RAD 118.

RAD 126 Radiation Biology and Protection (A) 3-0-3
This advanced science course examines human responses to ionizing radiation. Early and late effects of radiation exposure are discussed, as well as an in-depth analysis of radiation protection standards and practices. Lab fee: $30.00. Prerequisite: RAD 113.

RAD 141 Radiographic Procedures I (SU) 3-3-4
The student is introduced to radiologic terms specific to imaging, equipment operation, and patient positioning. Specific areas of study include physician assisting, and radiographic anatomy to include gastrointestinal system, upper and lower extremities, chest, abdomen, and basic urography. Lab provides the opportunity for practice and demonstration of proficiency. Lab fee: $55.00. Prerequisite: Admission to program.

RAD 142 Radiographic Procedures II (A) 3-3-4
This course serves as a continuation of RAD 141, with progression through the positioning categories and radiographic anatomy. Course topics include basic fluoroscopic procedures, the vertebral column, bony thorax, specialized biliary and urographic studies, and tomography. Lab fee: $55.00. Prerequisite: RAD 141.

RAD 143 Radiographic Procedures III (SP) 3-3-4
This course serves as the final of a series of three, with progression through the remaining categories of positioning and radiographic anatomy. Course topics include specialized fluoroscopic and radiographic studies, skull and facial bones, operative radiography, and trauma radiography. Lab fee: $55.00. Prerequisite: RAD 142

RAD 148 Special Radiographic Procedures (SP) 3-0-3
This course provides a detailed examination of cardiovascular, neurologic, interventional radiologic studies and common specialized procedures. The course begins with discussion of specialized equipment and materials. Emphasis is placed on pertinent anatomy, diagnostic value and/or therapeutic value of each examination. Lab fee: $5.00 Prerequisite: RAD 143.

RAD 211 Sectional Anatomy (A) **1-0-1**
Sectional anatomy is introduced. Emphasis on head, chest, abdomen and pelvis. Students will be required to give a presentation demonstrating correlations between different sectional imaging modalities. Lab fee: $3.00. Prerequisite: RAD 143.

RAD 222 Computerized Imaging (A) **1-0-1**
This course presents a survey of computerized modalities related to radiography to include an introduction to computers in medical imaging, digital radiography, computed tomography, magnetic resonance imaging, positron emission tomography and Picture Archival and Communication Systems (PACS). Lab fee: $3.00. Prerequisite: RAD 113.

RAD 231 Radiographic Pathology (W) 3-0-3
The course begins with a review of common terms relating to pathology. Using a survey approach, this course continues with a study of various disease processes and their effect on body systems as they relate to radiography and allied imaging modalities. Students are required to write a term paper on a specific pathologic process. Lab fee: $3.00. Prerequisite: RAD 148.

RAD 254 Seminar I (SU) **1-0-1**
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.

RAD 255 Seminar II (A) **1-0-1**
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences. Concurrent: RAD 265.

RAD 256 Seminar III (W) **1-0-1**
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences. Concurrent: RAD 266.

RAD 257 Seminar IV (SP) **1-0-1**
Evaluation and review of radiography cases and discussion of current issues in the radiologic sciences. This summative course also reviews all program requirements. (Elective course.) Concurrent: RAD 267.

RAD 261 Clinical I (A) **1-16-2**
Clinical provides the opportunity for the student to become familiar with the care and positioning of the patient. Proficiency requirements are completed using a competency-based educational format over the course material presented in Radiologic Procedures I. Film Critique is incorporated to provide a correlation of all factors that comprise a finished radiograph to include an analysis of anatomic structures, patient positioning, radiation protection, and fundamental exposure techniques. Lab Fee $18.00 Prerequisite: RAD 111.

RAD 262 Clinical II (W) **1-16-2**
Clinical II provides the practical experience necessary to function as a radiographer and is designed to enhance and compliment didactic studies. Clinical experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, and on portable radiography rotations. Film critique is continued to provide a correlation of all factors that comprise a finished radiograph. Case presentations are introduced. Lab Fee $18.00 Prerequisite: RAD 261.

RAD 263 Clinical III (SP) **1-16-2**
A continuation of Clinical II. Clinical III provides the practical experience necessary to function as a radiographer and is designed to complement and enhance the didactic studies. Clinical experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, the operating room, tomography, portable radiography, and digital imaging. Film critique and case presentations are continued. Lab Fee $18.00 Prerequisite: RAD 262.

RAD 264 Clinical IV (SU) **1-24-3**
A continuation of Clinical III. Clinical IV provides the practical experience necessary to function as a radiographer and is designed to enhance and compliment the didactic studies. Clinical experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, the operating room, tomography, portable radiography, the computed tomographic area, to include an evening rotation In addition, each student is required to observe a radiologist during film reading and dictation. Film critique and case presentations are continued. Lab fee: $18.00. Prerequisite: RAD 263.

RAD 265 Clinical V (A) **1-24-3**
A continuation of Clinical IV. Clinical V provides the practical experience necessary to function as a radiographer and is designed to enhance and compliment didactic studies. Clinical experience is gained in the general radiographic and fluoroscopic areas; emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extra-corporeal shock wave lithotripsy. Film critique and case presentations are continued. Lab Fee $18.00 Prerequisite: RAD 264.

RAD 266 Clinical VI (W) **1-24-3**
A continuation of Clinical V. Clinical VI provides the practical experience necessary to function as a radiographer. Clinical experience is obtained in general radiographic and fluoroscopic areas, the emergency room, the operating room, tomography, mammography, portable radiography, digital imaging, computed tomography, and magnetic resonance imaging. Film critique and case presentations are continued. Lab Fee $18.00 Prerequisite: RAD 265.

RAD 267 Clinical VII (SP) **1-24-3**
A continuation of Clinical VI. Students are required to complete the Final Competency Examination during this quarter. Clinical rotations are scheduled in the general radiographic and fluoroscopic areas, the operating room, the emergency room, mammography, and computed tomography. Once the Final Competency Examination has been satisfactorily completed, the student may custom design their own specific clinical rotations. Critique and case presentations are continued. Lab Fee $18.00 Prerequisite: RAD 266.

RAD 268 Clinical IV-B (SU) 0-32-4
A continuation of Clinical III. Clinical IV-B description is the same as RAD 264 (Clinical IV). This course is an elective, which gives program students an opportunity to increase the clinical contact hours while in the program. Lab fee: $18.00. Prerequisite: RAD 263. Concurrent: RAD 254.

Real Estate (REAL)

REAL 101 Real Estate Principles and Practices (A,W,SP,SU) 3-0-3
An introduction to the language of real estate, the economics of the real estate business and the general practices performed in the listing and selling of real estate. Provides a basic knowledge of the real estate business. Course covers the physical, legal, locational and economic characteristics of real estate, real estate markets, regional and local economic influences on real estate values, evaluation, financing, licensing and professional ethics. Meets all state requirements for licensing. Lab fee: $3.00.

REAL 102 Real Estate Law (A,W,SP,SU) 3-0-3
Real estate law includes all of the areas of law of common concern to the typical real estate practitioner and investor-consumer. Among topics covered are the law of agency as applied to real estate brokers and salespersons, law of fixtures, estates (including leases), conveyancing of real estate, real estate managers, licensure laws of Ohio, zoning, cooperatives and condominiums. Meets state requirements for licensing. Lab fee: $3.00.

REAL 104 Real Estate Mathematics (A,W,SP,SU) 3-0-3
A review of arithmetic processes including common fractions, decimal fractions, and percentage. Topics include sale, list, net prices and commissions, unique problems in area and volume, principal, interest, and points computed on mortgages, taxes and transfer tax stamps, prorations of insurance, mortgage interest, and taxes to date of sale and preparation of closing statements. Course may meet continuing education requirement (see advisor). Lab fee: $3.00.

REAL 111 Real Estate Finance (A,W,SP,SU) 3-0-3
Covers four major concerns of real estate financing: 1) financing instruments and creative financing techniques: 2) in-depth mortgage payment patterns and concepts, economic characteristics and standards, and financing of single and income-producing properties; 3) sources and availability of mortgage money and credit and the impact of various factors on the mortgage market; and 4) special government activities having an impact on real estate financing. Meets requirements for licensing. Lab fee: $3.00.

REAL 112 Real Estate Appraisal (A,W,SP,SU) 3-0-3
Stresses the methodology of appraising the single family residential property and the theory underlying appraisal techniques. The three basic techniques of appraising: market comparison; penalized cost of replacement; and income approach (GMRM) are covered. A term appraisal project is assigned to give the student practical experience in applying these techniques. Meets state requirements for licensing. Lab fee: $3.00.

REAL 121 Residential Sales Practices (SP) 3-0-3
A "how to" course providing a step-by-step approach for success as a real estate professional based on sound principles and acceptable techniques. Course sets forth basic fundamentals which must be mastered by real estate practitioners regardless of their specialization or type of property involved. Underlying theme is communication. Course may meet continuing education requirement (see advisor). Lab fee: $3.00. Prerequisites: REAL 101 and REAL 102 or Real Estate License.

REAL 123 Real Estate Marketing (SP) 3-0-3
An in-depth study of the marketing of real property. Various techniques will be used to help the practitioner use the many resources available. Areas of exploration will include computers, telemarketing, radio, television and the print media. All types of property will be used. Course may meet continuing education requirement. (See advisor) Lab fee: $5.00. Prerequisite: Real Estate License.

REAL 202 Real Estate Commercial Investment (A) **5-0-5**
The practical application of real estate investment concepts used in daily real estate practice. A step-by-step approach through a typical case study involving, a typical client beginning with investment in general, yield analysis, taxation, then continuing through property analysis, tax deferred exchange, the installment sale and alternative investments. Course may meet continuing education requirement (see advisor). Lab fee: $3.00. Prerequisite: REAL 101.

REAL 212 Income Property Appraisal (W) 3-0-3
A selective research into specific income producing property for applying appropriate analytical techniques. Studies the principles of anticipation and use of the capitalization process, and translates income projection into a present capital value indication. A term appraisal project is required. Course may meet continuing education requirement (see advisor). Lab fee: $3.00. Prerequisite: REAL 112 or real estate license.

REAL 213 Advanced Real Estate Investment Analysis (W) 3-0-3
An overview of the scope and nature of real estate investments. Discusses advantages and disadvantages, individual versus group forms of realty ownership, financing investments, tax ramifications and mathematical analysis. Different types of opportunities are discussed from vacant lots to land. houses, apartments, shopping centers, industrial developments and government sponsored projects. Course may meet continuing education requirement (see advisor). Lab fee: $3.00. Prerequisite: REAL 212. or instructor permission.

REAL 214 Marketing Investment Analysis for Real Estate (SP) 3-0-3
An analysis and guide for investigating real estate opportunities. covering the problems of residential, office and retail properties. Details of conducting market and feasibility studies, analyzing materials and data collected and evaluating the relevancy of the studies are studied. A term project is to prepare a detailed market investment analysis for a user-client. Course may meet continuing education requirement (see advisor). Lab fee: $3.00. Prerequisite: REAL 213.

REAL 221 Professional Property Management (SP) 3-0-3
A course studying decision-making as it affects management of residential. commercial and industrial property. The emphasis shall be on the practical application of theory to actual management problems. Specific topics include Ohio Tenant Landlord Act, forcible entry and detainer, typical leases, office management, hiring, merchandising, advertising, collection problems, taxes insurance and maintenance. Course may meet continuing education requirement (see advisor). Lab fee: $3.00. Prerequisite: REAL 101.

REAL 233 Practical Financial Analysis (On Demand) 3-0-3
Emphasis is on hand-held calculators as a tool to analyze the many financial problems that realtors encounter in the conduct of their practice. Deals with a special class of hand-held calculators, namely financial calculators, such as the HP-12c and TI financial I and II calculators. Course may meet continuing education requirement (see advisor). Lab fee: $3.00.

REAL 234 Human Resource Management (SP) 4-0-4
An introduction to human resources management as it applies to the real estate business. Provides basic knowledge for present and prospective real estate brokers. The course covers the recruiting, selection, and training of personnel: the motivation and retention of sales associates, and the management of salespeople. Lab fee: $3.00.

REAL 236 Real Estate Development (A) 3-0-3
An overview of the entire field of real estate development including its methodology, history, marketing, and specific operations of planning, analysis, feasibility studies, negotiation techniques, and property management. Lab fee: $3.00. Prerequisites: REAL 101, REAL 102, REAL 111 and REAL 112 or permission of instructor.

REAL 281 Real Estate Today Seminar I (on Demand) **1-0-1**
A specially designed course which offers to meet the needs of the constantly changing real estate community, industry and the student population. Creative seminar topics are relative to today's market, and will provide flexibility in meeting a variety of needs. Lab fee: $3.00

REAL 282 Real Estate Today Seminar II (on Demand) 2-0-2
Continuation of REAL 28 1. Lab fee: $3.00.

REAL 283 Real Estate Today Seminar III (on Demand) 3-0-3
Lab fee: $3.00.

REAL 284 Uniform Standards of Professional Appraisal Practice (On Demand) 2-0-2
Capstone course for the Ohio appraisal certification. Course user to apply the standards of the industry to the instruments of appraisal process. Lab fee: $3.00. Prerequisites: REAL 211, REAL 212, equivalent experience, or permission of instructor.

REAL 290 Post Licensure Sales Course (once each quarter) **1-0-1**
Mandatory 10 hour Post Licensure course for Real Estate Salepersons. Course covers the following topics: The housing market today; Future trends impacting real estate markets; License law matters; Legal matters; Environmental concerns; Real estate specialties; The image of real estate licensees; and Finance, taxes, and legislation. Lab fee: $3.00.

REAL 291 Post Licensure Brokers Course (offered twice per year) **1-0-1**
Mandatory 10 hour Post Licensure course for Real Estate Brokers. Course covers the following topics: The housing market today; Future trends impacting real estate markets; License law matters; Legal matters; Environmental concerns; Real estate specialties; The image of real estate licensees; and Finance, taxes, and legislation. Lab fee: $3.00.

Respiratory Care (RESP)

RESP 100 Introduction to Respiratory Care (A) 3-4-5
This course presents an integrated introduction to the care of pulmonary patients. Course content will focus on the skills required and the methods used to manage cardiopulmonary problems. Lab fee: $35.00. Prerequisite: Acceptance into the technology.

RESP 114 Introduction to Pulmonary Disease (W) 3-2-4
This course provides an integrated approach to the anatomy, physiology and pathology of the cardiopulmonary system. Normal and abnormal function will be compared. Emphasis will be placed on cardiopulmonary functions that are frequently measured to monitor patient status. Prerequisite: RESP 100 or permission of instructor. Concurrent: RESP 150.

RESP 130 Patient Assessment I (SP) **1-2-2**
This course presents a holistic approach to assessment of adult and pediatric patient in the subacute/homecare setting. Special emphasis will be placed on assessment of the cardiopulmonary function. Prerequisites: RESP 114, RESP 150 or permission of instructor. Concurrents: RESP 152 and RESP 196.

RESP 132 Patient Assessment II (SU) **1-2-2**
This course presents a holistic approach to assessment of adult and pediatric patients in the acute care setting. Special emphasis will be placed on assessment of the cardiopulmonary system. Prerequisite: RESP 130. Concurrents: RESP 154 and RESP 198.

RESP 150 Introduction to Pharmacology (W) 2-0-2
This course provides an introduction to the basic principles of therapeutic drug administration. Classification of drugs will be included. Special emphasis will be directed to safety issues, sources of drug information, and application to respiratory care practice. Prerequisites: RESP 100 or permission of instructor. Concurrent: RESP 114.

RESP 152 Case Management I (SP) **1-2-2**
This course presents a holistic approach to the management of adult and pediatric patients in the subacute settings. Special emphasis will be placed on the management of the cardiopulmonary problems. Prerequisites: RESP 114, RESP 150 or permission of instructor. Concurrents: RESP 130 and RESP 196.

RESP 154 Case Management II (SU) **1-2-2**
This course presents a holistic approach to the management of adult and pediatric patients in the acute care setting. Special emphasis will be placed on the management of the cardiopulmonary problems. Prerequisite: RESP 152 or permission of instructor. Concurrents: RESP 132 and RESP 198.

RESP 170 Mechanical Ventilators (A) **0-2-1**
Students will learn operational characteristics of critical care, home care, transport, and neonatal ventilators. Prerequisite: permission of instructor.

RESP 196 Clinical Practice/Therapeutic Procedures I (SP) **2-12-8**
This course is focused on conducting respiratory care procedures in the subacute setting. Lab fee; $35.00. Prerequisites: RESP 150 or permission of instructor. Concurrents: RESP 130 and RESP 152.

RESP 198 Clinical Practice/Therapeutic Procedures II (SU) **2-12-8**
This course is focused on conducting respiratory care procedures in the acute care setting. Lab fee: $35.00. Prerequisites: RESP 196 or permission of instructor. Concurrents: RESP 132 and RESP 154.

RESP 230 Patient Assessment III (A) **1-2-2**
This course presents a holistic approach to the assessment of adult and pediatric patient in the critical care setting. Special emphasis will be placed on assessment of the cardiopulmonary system. Prerequisite: RESP 132 or permission of instructor. Concurrents: RESP 256 and RESP 290.

RESP 232 Neonatal and Pediatric Respiratory Care (W) 3-0-3
A study of the management and treatment of neonatal and respiratory diseases. Special emphasis is placed on the therapeutic procedures of respiratory care which are associated with pediatric and neonatal patients. Lab fee: $20.00. Prerequisite: permission of instructor.

RESP 238 Pulmonary Function (A,W,SP,SU) 3-0-3
A study of the equipment and the techniques utilized in pulmonary function testing and blood gas analysis. This course examines the types of analyzers used in performing lung volume tests, lung flow tests, and gas analysis test with a discussion of the advantages and disadvantages of such systems. Procedures used in each test are discussed including patient instruction and calculation of the data. Prerequisite: Permission of instructor.

RESP 251 Respiratory Rehabilitation Home Care Techniques (A,W,SP,SU) 3-0-3
This course provides the student with the appropriate adaptations of skills and concepts traditionally used in the hospital to alternate care settings in order to educate the patient and caregiver to maintain the highest possible functional capacity. Included are: medication regimens, smoking cessation, breathing retraining, bronchial hygiene, and other self -care techniques. Other topics include monitoring the patient's disease and servicing the equipment needs of the patient. Lab fee: $15.00. Prerequisite: Permission of instructor.

RESP 252 Patient Management in Respiratory Rehabilitation 3-0-3
The study of the patient's adaptation to chronic pulmonary disease. Emphasis will be placed on problem identification, appropriate interventions, and referral to community resources using a multidisciplinary approach in coordinating the various systems of care. Prerequisite: RN, LPN, RRT, CRTT, or permission of instructor.

RESP 253 Respiratory Rehabilitation Home Care Administration **4-0-4**
This course concentrates on the management of a respiratory rehabilitation or home care organization. Topics include the development of policies and procedures for respiratory rehab home care services, the preparation of the certificate of medical necessity, and the documentation necessary for reimbursement, accreditation, regulatory requirements, and quality assurance. Other topics include marketing strategies and community health promotion. Prerequisite: RN, LPN, RRT, CRTT, or permission of instructor.

RESP 256 Case Management III (A) **1-2-2**
This course presents a holistic approach to the management of adult and pediatric patients in the critical care setting. Special emphasis will be placed on the management of the cardiopulmonary problems. Prerequisite: RESP 154 or permission of instructor. Concurrents: RESP 230 and RESP 290.

RESP 260 Respiratory Care Seminar 2 (SP) 2-0-2
A course dealing with general management concepts as they relate to the administrative duties in a respiratory care department. A portion of the course is devoted to preparing for the national credentialing exams. Lab fee: $60.00. Prerequisite: Permission of instructor.

RESP 270 Current Issues in Respiratory Care (A,W,SP,SU) 2-0-2
This course is intended to be focused on current trends in the care of patient's with cardiopulmonary problems. Course content will change as current issues change. Prerequisite: RESP 256. Concurrent: RESP 292.

RESP 290 Clinical Practice/Therapeutic Procedures III (A) 2-12-8
This course is focused on conducting respiratory care procedures in the critical care setting. Lab fee: $35.00. Prerequisite: RESP 198 or permission of instructor. Concurrents: RESP 232 and RESP 256.

RESP 292 Clinical Practice/Therapeutic Procedures IV (W) 2-12-8
This course allows students to select a specialty area for additional clinical practice. Students can select a rotation in critical care, pediatric/neonatal care, subacute care, or homecare. Lab fee: $35.00. Prerequisites: RESP 290 or permission of instructor. Concurrent: RESP 270.

RESP 295 Clinical Experience (SP) 1-24-4
In the Clinical Practicum students apply skills that they have learned in the previous four quarters. Students spend 24 hours per week practicing respiratory care with a clinical affiliate. Lab fee: $30.00. Prerequisite: RESP 292 or permission of instructor.

Retail Management (RETL)

RETL 101 Introduction to Retailing (A,W,SP,SU) 5-0-5
Principles and methods of retail management, including organization policy making, and a survey of the functions of merchandising, sales promotion, finance and control, store operations and personnel. Lab fee: $3.00.

RETL 205 Quantitative Methods for Retailing (ASP) 5-0-5
This course provides the student with an overview of the impact of merchandising strategies on the fiscal management of store operations. Special emphasis is given to the mathematical tools that aid in merchandise planning, selection, and pricing. Students will use basic math formulas that are used by buyers, department managers and store owners in order to operate their businesses, stores or departments profitably. Lab fee: $3.00. Prerequisite: RETL 101.

RETL 213 Retail Buying (A,SP) 3-0-3
An in-depth review of the many different duties of a buyer and the role the buyer plays in assuring profitability. Topics covered include the buyer's role in risk management, inventory shortage control, people management, promotion and the legal environment that impacts retailing. Lab fee: $3.00. Prerequisite: RETL 101.

RETL 223 Textiles (SP,SU) 3-2-4
This course covers the fundamentals of textile science with a focus on the uses of textiles in the realm of fashion merchandising. Areas of emphasis include textile labeling laws, the properties of natural and synthetic fibers, the properties and structure of yams and fabrics and the processes used to finish and color textile products. Lab fee: $10.00. Prerequisite: RETL 101.

RETL 271 Retail Store Operations and Control (W,SU) 4-0-4
This course is designed to deal with the management and operations of the major functions of a retail establishment including location selection, distribution, customer service, merchandising, inventory control, human resource management, and financial strategies for retail success. Lab fee: $5.00. Prerequisite: RETL 101 and ACCT 106.

RETL 281 Retail Internship I (A,W,SP,SU) 0-40-4
Supervised on-the-job appreciation of knowledge and skills acquired in the classroom. Focus on internship will be on retail sales. Open to Retail Management Technology majors only. Lab fee: $3.00. Prerequisites: MATH 101, RETL 101, BMGT 111, MKTG 111 and permission of advisor two quarters in advance. Concurrent: RETL 285.

RETL 282 Retail Internship II (A,W,SP,SU) 0-40-4
Supervised on-the-job application of knowledge and skills acquired in the classroom. Focus on internship will be on store operations and management. Open to Retail Management Technology students only. Lab fee: $3.00. Prerequisites: RETL 281 and permission of instructor. Concurrent: RETL 286.

RETL 283 Retail Internship III (A,W,SP,SU) 0-40-4
Supervised on-the-job application of knowledge and skills acquired in the classroom. Focus of internship will be determined by student career interests. Open to Retail Management Technology students only. Lab fee: $3.00. Prerequisites: RETL 282 or permission of instructor. Concurrent: RETL 287.

RETL 285 Special Problems in Retailing I (A,W,SP,SU) 0-4-2
Application of theoretical knowledge to analyze and recommend solutions to specific problems encountered during the retail internship. Lab fee: $3.00. Prerequisites: MATH 101, RETL 101, BMGT 111, MKTG 111 or permission of instructor. Concurrent: RETL 28 1.

RETL 286 Special Problems in Retailing II (A,W,SP,SU) 0-4-2
Application of theoretical knowledge to analyze and recommend solutions to specific problems encountered during the retail internship. Lab fee: $3.00. Prerequisite: RETL 285. Concurrent: RETL 282.

RETL 287 Special Problems in Retailing III (A,W,SP,SU) 0-4-2
Application and theoretical knowledge to analyze and recommend solutions to specific problems encountered during the retail internship. Lab fee: $3.00. Prerequisites: RETL 286 or permission of instructor. Concurrent: RETL 283.

RETL 288 Merchandising (A,SP) 4-0-4
An overview of merchandising principles and practices. The focus is on merchandising strategies, target market identification, pricing, assortment, styling and timing in the apparel industry. Lab fee: $3.00. Prerequisite: RETL 101, ACCT 106.

RETL 297 Special Topics in Retailing (On Demand) 1-3
Detailed examination of special topics of interest in Retail. Topics vary. Lab fee: $3.00.

Small Business Management Major
(See Business Management)

Social Sciences (SSCI)

SSCI 101 Cultural Diversity (A,W,SP,SU - DL) 5-0-5
An interdisciplinary course that focuses on the anthropological, psychological, sociological, political, and economic diversity among various groups. Topics include the ways individual beliefs, social values, and political, and economic systems affect our perspectives and life-styles. Students explore the effects of social inequity on groups within society and, through the use of team projects, participate in interactive group work. The course emphasizes the development of critical thinking skills as applied to social science research and diversity issues that students may encounter in their lives. A general education core course. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SSCI 102 America in Transition (A,W,SP,SU) 5-0-5
An interdisciplinary course that focuses on the major changes (or transitions) in the social, economic, political, and global arenas, and their impact on the United States. Students identify the causes and consequences of these changes, through selected readings, written assignments, and group projects. Possible ways to respond to and meet the challenges posed by this transitional era are addressed. A general education core course. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SSCI 103 Social Problems (A,W,SP,SU) 5-0-5
An interdisciplinary course that examines how various conditions within society come to be defined as social problems. Individual, social, cultural, economic, and political causes and consequences of such problems are analyzed with contemporary social science research (i.e.. studies in the fields of anthropology, economics, political science, psychology, and sociology). Possible intervention strategies are also assessed. Problems covered include: health and well being; social and interpersonal violence; conformity and deviance; social and economic inequality associated with poverty, minority status, aging, and sex roles; institutional change; and future issues and trends. A general education core course. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SSCI 104 World Economic Geography (A,W,SP,SU) 5-0-5
An interdisciplinary course that provides a geographical examination of the world economy. Students research the factors affecting a country's socioeconomic development and present findings from a policy maker's perspective. Factors to be covered include: location; demographic trends; resource availability and use patterns; industrialization; political and cultural forces; and global interdependence. A general education core course. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SSCI 290 Capstone Experience in Social Sciences (On Demand) 2-2-3
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing in a baccalaureate degree program in the social sciences. Course requirements include the completion and presentation of a research project that relates in the students' academic interest after reviewing research methodologies and findings in social science; assembly of a portfolio that covers their academic career at Columbus State Community College, and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00. Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree.

SSCI 293 Independent Study in the Social Sciences (On Demand) **1-5**
An individual, student-structured course that examines a selected topic in the social sciences through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab fee: $5.00. Prerequisite: Permission of the instructor and the Chairperson.

SSCI 299 Special Topics in the Social Sciences (On Demand) **1-5**
A detailed examination of selected topics of interest in the social sciences. Lab fee: $5.00. Prerequisites vary.

Sociology (SOC)

SOC 101 Introduction to Sociology (A,W,SP,SU) **5-0-5**
This course introduces the basic concepts, methods, and findings of sociology as a scientific discipline. The sociological perspective, emphasizing social interaction and structure, is used to explore the following topics: culture; socialization; social groups, including organizations; deviance; various types of social inequality; major social institutions; collective behavior, social movement and social change. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SOC 210 Sociology of Deviance (A,W,SP,SU) **5-0-5**
This course explores the major sociological perspectives and theories of deviance. This introductory course includes the study of the definition, identification, treatment, and management of types of deviance, such as crime, mental illness. alcoholism, and other pathologies. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SOC 230 Marriage and Family Relations (A,W,SP,SU) 5-0-5
This course examines the impact of modem society upon the family as it relates to courtship, size of family, member relationships, economic problems, and marital stability. This course compares alternative life styles, and marriage and family relations throughout the life span. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SOC 280 American Race and Ethnic Relations (On Demand) 5-0-5
This introductory course explores racial and ethnic relations in the United States. The current and past experiences of selected American racial and ethnic groups are examined with respect to theories and patterns of intergroup relations and issues of prejudice and discrimination (both individual and institutional). Possible future trends in American intergroup relationships arc addressed. Lab fee: $6.00. Prerequisite: Placement into ENGL 101.

SOC 290 Capstone Experience in Sociology (On Demand) 2-2-3
This course is for students completing the two-year Associate of Arts or Associate of Science degree who have a special interest in continuing in a baccalaureate degree program in sociology. Course requirements include the completion and presentation of a research project that relates to the students' academic interest after reviewing research methodologies and findings in sociology; assembly of a portfolio that covers their academic career at Columbus State Community College, and participation in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $10.00. Prerequisite: Completion of AA/AS core requirements and at least 75 hours toward the degree with five credit hours in sociology.

SOC 293 Independent Study in Sociology (On Demand) **1-5**
An individual, student-structured course that examines a selected topic in sociology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Lab fee: $5.00. Prerequisite: Permission of the Instructor and the Chairperson.

SOC 299 Special Topics in Sociology (On Demand) **1-5**
A detailed examination of selected topics of interest in sociology. Lab fee: $5.00. Prerequisites vary.

Spanish (SPAN)

SPAN 101 Elementary Spanish I (A,W,SP,SU - DL) 5-0-5
Introduction to the fundamentals of the Spanish language with practice in listening, reading, speaking, and writing. Includes selected studies in Hispanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisite: Placement into ENGL 101.

SPN1 101 Elementary Spanish I, Module 1 (A,W,SP,SU) 2.5-0-2.5
SPN1 101 is the first module of Spanish 10 1. Combined with the subsequent module, SPN2 101, it is the equivalent of Spanish 101. In this module, students learn the basic rules for pronunciation and spelling, the number system in Spanish, how to tell time, and how to talk about their schedules. They master the basic grammar structures normally taught in Spanish 101 (agreement of nouns, articles, and adjectives; present tense of regular and irregular verbs; uses of "ser", "estar", and "hay": common prepositions; asking questions; infinitive complements; reflexive verbs). Prerequisite: Placement into ENGL 101. Lab fee: $3.00.

SPN2 101 Elementary Spanish I, Module 2 (A,W,SP,SU) 2.5-0-2.5
SPN2 101 is the second module of Spanish 101. Combined with the previous module. SPN1 101, it is the equivalent of Spanish 101. The content of this module is basic survival Spanish for traveling in a Spanish-speaking country. The lesson sequence follows a story line based on the experience of an American businessman travelling in Venezuela. Grammar is taught and reinforced inductively in this module: Lab fee: $3.00. PREREQUISITE: Completion of SPN1 101.

SPAN 102 Elementary Spanish II (A,W,SP,SU - DL) 5-0-5
Continuation of SPAN 101 with further development of listening, reading, speaking, and writing skills and further study of Hispanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisite: SPAN 101 with a grade of "C" or better or by placement exam.

SPN1 102 Elementary Spanish II, Module 1 (A,W,SP,SU) 2.5-0-2.5
SPN1 102 is the first module of Spanish 102. Combined with the subsequent module, SPN2 102, it is the equivalent of Spanish 102. The content of this module is basic survival Spanish for traveling in a Spanish-speaking country. The lesson sequence follows a story line based on the experience of an American businessman travelling in Venezuela. Grammar is taught and reinforced inductively in this module. Lab fee: $3.00. PREREQUISITES: SPN1 101 must be completed before taking this class. It is recommended, as well, that a student complete SPN2 101 before taking this course. However, it is possible to take SPN2 101 and SPN1 102 simultaneously.

SPN2 102 Elementary Spanish II, Module 2 (A,W,SP,SU) 2.5-0-2.5
SPN2 102 is the second module of Spanish 102. Combined with the previous module, SPN1 102, it is the equivalent of Spanish 102. In this module, the student "looks back" at the material studied in the previous two modules in order to learn to talk about what has gone on in those sequences. Basically, this means learning to make shifts from: 1 direct discourse to indirect discourse, 2. present tense to past tense, 3. direct commands to past or present subjunctive. Students will also learn how to make shortcuts using pronouns. Lab fee: $3.00. PREREQUISITES: SPN2 101 and SPN1 102 must be completed before taking this course.

SPAN 103 Intermediate Spanish I (A,W,SP,SU - DL) 5-0-5
Continued study of the Spanish language and development of listening, reading, speaking, and writing skills. Readings from contemporary Hispanic culture and literature. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisite: SPAN 102 with a grade of "C" or better or by placement exam.

SPAN 104 Intermediate Spanish II (A,W,SP,SU - DL) 5-0-5
Reading and discussion of Spanish and Latin American short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Hispanic culture. Meets elective requirements in the Associate of Arts and Associate of Science degree programs and transfer requirements in foreign languages and literature. Lab fee: $6.00. (Telecourse fee: $29.00.) Prerequisite: SPAN 103 with a grade of "C" or better or by placement exam.

SPAN 290 Capstone Experience in Spanish (On Demand) 2-2-3
A capstone course focusing on Spanish. Paradigms and their underlying assumptions will be explored. Students will work on developing research techniques and methodologies. Students will apply these techniques to a project of their own design, complete a personal portfolio covering their studies at Columbus State, and participate in summative testing of their academic skills. Open only to Associate of Arts or Associate of Science students preparing to graduate within two academic quarters. Lab fee: $5.00.

SPAN 299 Special Topics in Spanish (On Demand) **1-5**
Detailed examination of special topics in Spanish. Lab fee: $2.00. Prerequisites vary.

Sports & Fitness Management (SFMT)

SFMT 100 Personal Fitness Concepts (A, W, SP, SU) 3-0-3
This course of study focuses on fitness issues which affect Americans today and in the future. Emphasis is placed on establishing a basis for positive fitness through consideration of the various factors which influence fitness. Personal fitness concepts will focus attention on the need for each person to arrive at informed conclusions about how to take responsibility for his or her personal fitness. Lab fee: $10.00.

SFMT 101 Introduction to Sport & Fitness Management (W, SU) 3-0-3
A survey of the health and fitness arena both private and public, to include the study of facilities, recreational options for the client, client profiles, daily operations, legal aspects, personnel issues, and program administration. Lab fee: $2.00. Prerequisite: Acceptance into the program.

SFMT 113 Aquatics Management (SP) **1-2-2**
A survey of the recreational aquatics environment. Hands on training in the filtration systems and their general operation, an understanding of Federal and State guidelines for licensure for pool operation and maintenance. Legal aspects of the aquatics area. Staffing requirements and training of aquatics personnel for indoor and outdoor facilities. Lab fee: $15.00. Prerequisite: SFMT 101 or permission of instructor.

SFMT 114 Introduction to Dance Exercise (A,W,SP,SU) **1-2-2**
Introduction into the methods of teaching participation in the activity, to include a thorough understanding of the fundamental techniques of the sport. The history and the value of dance for the client, the basic movements of dance, and the interpretation of music and language for dance. Lab fee: $10.00. Prerequisites: SFMT 100.

SFMT 115 Introduction to Weight Training (W,SP) **1-2-2**
Analysis of the weight training field to include types of equipment used, training methods for the client, proper lifting techniques for the various equipment, assessment of the beginning client for appropriate weight program. Risk management aspects of the weight area and proper care and maintenance of equipment. Lab fee: $20.00. Prerequisite: SFMT 101 and permission of instructor.

SFMT 116 Golf Management (A,SP,SU) **1-2-2**
An in-depth analysis of the game of golf. To include the historical study of the game, the rules which apply to the playing of the gam, and a perspective of the growth and increasing significance of the game inside and out of our industry. A study of the management of the golf facility, turf and environmental issues, employment options and

SFMT 117 Introduction to Tae Kwon Do (A,W,SP,SU) **1-2-2**
Introduction in the coaching and participating in the activity, to include a thorough understanding of the rules and sport strategy. History of the art form, self defense strategies, and concepts of tournament sparring and tournament implementation.

SFMT 213 Aquatic Programming for Individuals with Disabilities
(On Demand) 2-2-3
The adaptive aquatic course content will provide utilization of specialized instructional technology to maximize learning and participation of individuals with disabilities in aquatic activities. The inclusive or community setting will be emphasized since acquisition of skills and water safety knowledge should occur in as normalized a manner as possible. Practicum opportunities with diverse populations will highlight the learning experiences. Prerequisites: none or if Adapted Aquatics Certification is needed a Water Safety Instruction Certification is necessary prior to course.

SFMT 214 Advanced Dance Exercise (On Demand) **1-2-2**
Instruction in the methods of teaching and participation in group fitness activities to include a thorough understanding of the skills and the fundamental techniques of fitness instruction. The value of dance exercise and variations for the client, the movements and techniques of dance exercise, and the principles and legalities that guide fitness instructors. Prerequisite: SFMT 114.

SFMT 215 Advanced Weight Training (SP) 2-2-3
This class will be a continued study of systems of physical conditioning. Including discussion of progressive resistance exercise through super sets, pyramiding, split routines, plyometrics and isokinetics. Program development including interval, continuous, and circuit training. Nontraditional training including partner resistance training. Other topics will include discussion of advantages and disadvantages of commercial exercise equipment in developing cardiorespiratory fitness and muscular strength. Musculoskeletal risk factor identification and programming for post injury rehabilitate fitness will also be included.

SFMT 222 Court Sports I (Tennis) (SU) **1-2-2**
Instruction in the coaching and participation in the activity, to include a thorough understanding of the rules and sport strategy. History of the sport and coaching techniques for the client, tournament set up and implementation for the facility. Lab fee: $20.00. Prerequisite: SFMT 101 and permission of instructor.

SFMT 224 Sport Management Foundations (W,SU) 5-0-5
An advanced study of the facilities required for the recreational environment. An analysis of indoor and outdoor designs and utilization. An overview of the personnel process, staffing requirements, and staff development procedures. A study of activity programming for the club environment, to include class structure, tournament procedures, proper selection of activities, and equipment needed as well as proper care and storage. Lab fee: $10.00. Prerequisite: SFMT 101.

SFMT 225 Athlete Intervention (On Demand) 3-0-3
This course will be a video based instructional program facilitated by a faculty member. It is designed to train sport managers to help athletes avoid or deal with the challenges of alcohol, drugs, and illegal drug use. The program allows sport managers to develop rules and expectations about drug and alcohol use, communication with parents and guardians, and behavior monitoring skills. Lessons on development of policies related to athlete usage and consequence and/or infraction guidelines. Prerequisite: permission of instructor.

SFMT 226 Care and Prevention of Athletic Injuries (W,SU) **2-2-3**
Recognition, treatment, management, and prevention of basic injuries sustained while participating in athletic activities. Basic taping and treatment procedures to be introduced and applied in the athletic environment. Lab

SFMT 230 Fitness Concepts for Special Populations (A,SP) **1-0-1**
A survey of the response of children, seniors, and physically challenged persons to exercise. Emphasis to be placed on choosing appropriate and challenging activities that will result in a positive physiological response while accommodating the social, developmental and physical needs of the potential clients. Lab fee: $3.00. Prerequisite: SFMT 101. Concurrent: SFMT 23 1.

SFMT 231 Exercise Physiology (A,SP) 3-4-5
Instruction in the testing processes used for the individual evaluation to include proper techniques used for body fat, analysis, aerobic and anaerobic capabilities, muscle mass, flexibility, and program development for the athlete. Lab fee: $15.00. Prerequisites: BIO 121 and SFMT 115. Concurrent: SFMT 230.

SFMT 232 Court Sports II Racquetball, Squash, Walleyball (W) **1-2-2**
Instruction in the coaching and participation in the three activities, to include a thorough understanding of the rules and sport strategy, history of the sport and coaching techniques for the clients, tournament set up and implementation for the facility. Lab fee: $20.00. Prerequisite: SFMT 101.

SFMT 233 Outdoor Community Recreation (A,W,SP,SU) 2-2-3
A survey of the outdoor recreational market and it's application through corporate America. Review outdoor recreational opportunities, basic activities, skills, and necessary equipment. Present safety, liability, and associated programming issues. Examine the business, career, and recreational applications. Lab fee: $50.00. Prerequisites: SFMT 101.

SFMT 234 Sport Marketing (A,SP) **5-0-5**
An advanced study of sports marketing strategies for the club both internal and external. Promotional guidelines and discussion of concepts of promotional activity. Study of the budgetary process, differentiation of budget styles, and implementation of the budgetary process in both the private or public sector. Lab fee: $3.00. Prerequisite: SFMT 224.

SFMT 235 Sport Law (A,W,SP,SU) **3-0-3**
Survey of the legal framework of the athletic environment. The nature of the legal system and the law pertaining to sports, to include tort law, contractual agreements, and civil law. Lab fee: $2.00. Prerequisite: SFMT 101.

SFMT 236 Medical Ethics for Massage Therapists (A,SP) 3-0-3
An introduction to the professional practice of health care including the role of the practitioner, relationships with other health care providers, privacy and confidentiality, the concepts of liability, malpractice and negligence.

SFMT 241 Kinesiology (On Demand) 3-4-5
Introduction to the fundamentals of kinesiology and biomechanics with discussion of both anatomical and mechanical principles. These concepts will be applied in the analysis of a wide variety of basic motor skills, exercise, and sport activities. Prerequisite: SFMT 231.

SFMT 261 Message Technique I (A,SP) *3-6-6*
Introduction to the professional practice of message therapy including hygiene, touch, stroking, friction, kneading, vibration, and percussion. Prerequisite: Acceptance into program. Concurrent: SFMT 271.

SFMT 262 Massage Technique II (W, SU) 3-6-6
Introduction to the professional practice of message therapy including the effects, indications, and contraindications of massage upon various body systems. Prerequisite: SFMT 261.

SFMT 271 Massage Anatomy & Physiology I (A, SP) 3-4-5
Investigation of the various human body systems, their structure and function as required by the Ohio State Medical Board for licensure as a Massage Therapist. Prerequisite: Acceptance into program. Concurrent: SFMT 261.

SFMT 272 Massage Anatomy & Physiology II (W, SU) 3-4-5
Investigation of the various human body systems, their structure and function as required by the Ohio State Medical Board for licensure as a Massage Therapist. Prerequisite: SFMT 271.

SFMT 273 Massage Anatomy & Physiology III (AU, SP) 3-4-5
Investigation of the various human body systems. their structure and function as required by the Ohio State Medical Board for licensure as a Massage Therapist. Prerequisite: SFMT 272.

SFMT 292 Practicum I (A, SP) **1-14-3**
Practical training in general operation of a fitness club to include activity preparation, personnel evaluation, and budget analysis. This course also includes an on campus Seminar to discuss issues relating to the profession. Summative assessment will include a combination of objective tests, performance checklists, and evaluation by the on-site Supervisor, Lab fee: $3.00. Prerequisite: SFMT 224 and permission of instructor.

SFMT 294 Practicum II (W,SU) **1-14-3**
Continuation of SFMT 292. Working in conjunction with a current fitness manager to gain insight on program and facility operation, budgetary implementation, and assist in the daily operation of a fitness facility. This course also includes an on campus seminar to discuss issues relating to the profession. Summative assessment will include a combination of objective tests, performance checklists, and evaluations by the on-site supervisor. Prerequisite: SFMT 292 and permission of instructor.

SFMT 298 Special Topics in Sports (SU) 3-0-3
This course serves to bring together concepts discussed in previous program courses. Topics of discussion will revolve around exercise prescription for special populations including some disease states. Development and modification of institutional programming based on individual and group needs. Resources, content and delivery of health promotion programs will also be discussed.

Surgical Technology (SURG)

SURG 110 Surgical Technology I (A,SP) 3-6-6
This course will provide an in-depth introduction of the role and responsibilities of the Surgical Technologist and Surgical Nurse as an important professional in the delivery of surgical services. Introduction to the Surgical Environment will include professional responsibilities, legal and ethical considerations, interpersonal relationships, communication skills, and basic surgical workplace safety. Introduction to the Principles of Aseptic Technique to include surgical asepsis, scrubbing, gowning, gloving, sterilization, disinfection, and operations room sanitation are explored. Patient Care Peri Operative interventions to include positioning, prepping, draping techniques, and related procedures. The surgical use of instrumentation, sutures, needles, sponges, syringes, and hypodermic needles are investigated while exploring the Division of Duties for the Surgical Technologist and Surgical Nurse. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units. Lab fee: $50.00. Prerequisite: Admission to Surgical Technology.

SURG 120 Surgical Technology II (W,SU) *3-6-6*
This course continues to build upon Principles of Aseptic Technique while further defining the duties of the Surgical Technologist and Surgical Nurse. Introduction to Diagnostic procedures and Introduction to Surgical procedures general to a variety of surgical speciality areas am researched. Anesthesia and Pharmacologic considerations for patient surgical cam are investigated. Surgical Wound Healing considerations are researched with an ongoing investigation into the use of instrumentation, sutures, needles, dressings, packings, and drainage tubes/systems. Patient Care Peri Operative interventions on positioning, prepping, and draping techniques continue to be explored. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units. $50.00. Prerequisite: SURG 110.

SURG 130 Surgical Technology III (SP,A) **4-16-7**
The Principles of Asepsis and the Patient Care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of General (GEN), Gastrointestinal (GI), Obstetrics (OB), Gynecological (GYN), and Genitourinary (GU) surgical services. The role and responsibilities of the Surgical Technologist as the "scrub" member and the Surgical Nurse as the "circulator" member of the surgical team will focus on maintaining the integrity, safety, and efficiency of the sterile and non-sterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes/ systems will continue with a focus on endoscopy use and selected auto stapling devices for use in GEN, GI, OB, GYN, and GU surgical services. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units. Lab fee: $50.00. Prerequisites: SURG 120

SURG 210 Surgical Technology IV (SU,W) **4-16-7**
The Principles of Asepsis and the Patient Care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of Orthopaedic (Ortho) and Neurosurgery (Neuro) surgical services. The role of the Surgical Technologist as the "scrub" member and the Surgical Nurse as the "circulator" member of the surgical team continues to focus on maintaining the integrity, safety, and efficiency of the sterile and non-sterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes/systems will continue with a focus on selected internal and external fracture stabilization devices, cast immobilization, spinal fixation implants, and neurosurgical shunts. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units. Lab fee: $50.0. Prerequisites: SURG 130.

SURG 220 Surgical Technology V (A,SP) 4-20-8
The Principles of Asepsis and the Patient Care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of Plastic and Reconstructive, Otorhinolaryngology and Throat (EENT), and Ophthalmic surgical services. The role of the Surgical Technologist as the "scrub" member and the Surgical Nurse as the "circulator" member of the surgical team continues to be explored throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubeslsysterns will continue with a focus on ocular implants, microscopic use, skin grafting techniques, liposuction use, mammoplasty implants, inner ear shunts, and tracheotomy tubes. Students-will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based and ambulatory surgery centers. Lab fee: $50.00. Prerequisite: SURG 210.

SURG 230 Surgical Technology VI (W,SU) 4-20-8
The Principles of Asepsis and the Patient Care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of Thoracic, Peripheral Vascular (PV), and Cardiovascular (CV) surgical services. The role of the Surgical Technologist as the "scrub" member and the Surgical Nurse as the "circulator" member of the surgical team continues to be explored throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes /systems will continue with a focus on endoscopy use, chest tubes, cardiopulmonary bypass, vascular autografts and allografts, intra aortic balloon pumps, and vascular shunts. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based and ambulatory surgery units. Lab fee: $50.00. Prerequisite: SURG 220.

SURG 239 Advanced Surgical Special Topics (A,SP) **1-2-2**
This course will provide the Surgical Technology student with an in-depth analysis, recognition, and medical/surgical treatment for a variety of Advanced Surgical specialty areas. These areas include: Orthopedic Total Joint Replacement, Laser Therapy, Endoscopy, Ophthalmic, Oncology, Obstetrics, Cardiovascular, Ambulatory Surgery, and Organ Procurement. Additional surgical specialty areas of interest will be investigated and offered to students, alumni, and surgical health care professionals as they become available. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based and ambulatory surgery units. Prerequisite: SURG 210.

Surveying (SURV)

SURV 141 Basic Surveying (A,SP,SU) 2-6-4
A comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurements by traditional methods and by total station for the purpose of traversing and location of property comers, topographic mapping and construction staking. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method and cut/till calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. Lab fee: $15.00. Prerequisites MATH 104 or MATH 112.

SURV 241 Route Surveying (A,SP,SU) 2-6-4
A comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Lab fee: $15.00. Prerequisites: MATH 104 and CMGT 123. Concurrent or prerequisite: SURV 141.

SURV 243 Heavy Construction Standards (W,SU) 3-2-4
Elements of route location, construction materials, methods and procedures. Relation of design standards to topography and prospective traffic, earthwork measurement, physical design standards, and financing. Lab fee: $15.00. Prerequisites: SURV 241, CMGT 121 and CMGT 105.

SURV 245 Survey Law (W,SU) 2-3-3
A study of statute and common law as pertains to land surveying and real property rights and the methods to describe real property. Lab fee: $15.00. Prerequisite: SURV 141.

SURV 247 Townsite/Urban Development (ASP) **1-5-3**
Analysis of data and related inventory methods needed to logically plan development of all land use types. Study the forces and actions by public agencies and private interests that create the urban form. Review methods of resolving conflicts and understanding the applicable land use regulations or standards that govem area development. Lab fee: $15.00. Prerequisites: ARCH 112, SURV 141 and SURV 241.

SURV 248 Advanced Surveying Systems (SP) 2-6-4
Planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Position Systems) and photogrammetric (aerial mapping) systems. Lab fee: $15.00 Prerequisites: ARCH 112 or CIVL 112, MATH 148, SURV 141, SURV 245 and SURV 249 or concurrent.

SURV 249 Land Subdivision Systems (ASP) 2-3-3
Advanced surveying including section and subdivision lines and residential property lines. Reestablishment of property boundaries and legal considerations for boundary descriptions, including local municipal records searching. Lab fee: $15.00. Prerequisites: SURV 241, ARCH 112, SURV 141 and SURV 245.

Technical Communication (TCO)

TCO 101 Careers in Technical Communication (ASP) **1-3-2**
In this course, students are required to interview with Technical Communication professionals, research the field of Technical Communication, and deliver an oral presentation of the findings. Discussions of career goals, including the preparation of an initial resume and employment data file will also be required. The requirements of this course must be met within the first two quarters of entering the Technical Communication degree program. Lab fee: $20.00.

TCO 203 Introduction to Technical Communication (W,SU) 2-3-3
In this course, students learn the project documentation cycle used by technical communicators in business, industry, and government by selecting an authentic problem-solving project from their technical cognate fields, and writing and formatting a series of reports in support of that project. Students learn the principles of modern technical communication and time/project management and practice them individually and in small groups throughout the documentation cycle. Lab fee: $5.00. Prerequisites: CPT 101 and ENGL, 102 with a grade of "C" or higher.

TCO 204 Introduction to Technical Editing (ASP) 2-3-3
In this course, students will practice editorial skills needed for revising scientific/technical writing by checking grammar, sentence structure, clarity and style in personal, peer, and professional writings. Students will practice hard copy and online editing and proofreading and analyze editorial style books and other technical resource materials. Various editorial approaches and the editor/author relationship will be covered. Lab fee: $5.00. Prerequisite: ENGL 102 with a grade of "C" or higher and OADM 101.

TCO 214 Document Design & Delivery Methods (W,SU) 2-3-3
This course will introduce students to learning theory as applied to the design and delivery of technical documents. It will integrate current technical communication theory in document design and delivery with the capabilities of various software packages and delivery methods. Students will develop skills in applying design theory to technical documents and in selecting appropriate delivery methods for technical documents. Lab fee: $8.00. Prerequisite: TCO 203.

TCO 215 Online Documentation (ASP) 2-3-3
This course will introduce students to all aspects of creating online documentation. Students will learn about the five phases involved in creating online documentation: planning online documentation, designing or modifying information for online presentation, testing and redesigning online documentation. Students will develop actual online documentation for a software package during the course. Lab fee: $8.00. Prerequisites: TCO 203 and TCO 214.

TCO 221 Proposal Development (ASP) 2-3-3
Students will learn how to develop proposals which offer to solve problems for a reader or groups of readers by providing specified services at a specified cost. The units involved in the learning process will include understanding the bidding process, defining the request for a proposal, planning and developing a proposal document and practicing the methods of formatting, writing, editing and presenting a formal business proposal. Lab fee: $5.00. Prerequisites: TCO 203, MCT 106, and CPT 101.

TCO 222 Developing Software Documentation (W,SU) 2-3-3
In this course students are prepared as software documentation specialists to work with software users and developers. Students will prepare software documentation, conduct document usability testing, and perform documentation development tasks, such as preparing user specifications, task lists, style guides, project schedules, instruction sets, and problem reports, as well as conducting interviews, reviews, and walk throughs. Lab fee: $5.00. Prerequisites: TCO 203, MCT 106, and CPT 101.

TCO 223 Advanced Technical Communication (W,SU) 2-3-3
In this course, students focus on current research and theory in scientific and technical writing and apply that research to practical situations. Students produce a proposal for funding, a full-length, portfolio quality manual or report, and various other writing assignments. They also lead class discussions on such topics as readability theory, writing style, documentation methods, text processing, manual formatting, and integrating graphics and text. Lab fee: $5.00. Prerequisite: TCO 203.

TCO 224 Advanced Technical Editing (A,SP) 2-3-3
In this course, students are prepared as editors to work with other publications specialists. Students will edit manuscripts, prepare style books or manuals, and perform special editorial tasks such as preparing abstracts, indexes, and bibliographies with line-by-line precision and accuracy. Lab fee: $5.00. Prerequisites: TCO 203 and TCO 204.

TCO 230 Technical Presentations (W,SP) 2-3-3
In this course, students learn to prepare and present various types of information ranging from press releases, annual reports, and statistical analyses to proposals for projects, systematic evaluations, and revisions of existing documents. Various types of audiences will be targeted, and students will be required to use computer graphics, hypermedia, desktop publishing, and multimedia approaches to supplement oral presentations. Lab fee: $5.00. Prerequisite: TCO 223.

TCO 250 Capstone in Technical Communication (A,W,SP,SU) 2-3-3
In this course, students will be required to demonstrate both the overall competency and quality workmanship expected of professionals in the technical communication field. Students will work individually and in collaboration to solve problems of technical writing, editing, and presentations, and on the study and implementation of projects normally assigned to entry-level technical communicators. The course can only be taken during the final quarter, prior to graduation. Lab fee: $5.00. Prerequisite: Permission of instructor.

TCO 260 Career Development (ASP) **1-0-1**
In this course, students prepare a professional portfolio, including a resume developed from the student's previous academic work experience. Students are required to review their portfolios informally and through formal oral presentations. Students will learn how to carry out company research and apply that research to targeted resumes, letters of application, and interview situations, This course must be completed within the final four quarters of the student's program. Lab fee: $5.00. Prerequisite: Permission of instructor.

TCO 290 Industry Internship (A,W,SP,SU) **1-4**
In this course, students are engaged in work specifically related to the Technical Communication field as employees in business or industry. Students are responsible for arranging the internship and must submit a written proposal to the Technical Communication Program Coordinator for approval no later than two quarters prior to becoming an intern. During the internship, the student must keep a written record of job responsibilities and projects. A formal written report must be accompanied by a written evaluation of the student's performance by his/her supervisor. One credit hour is equal to one hundred (100) clock hours on the job. The four credits may be spread over more than one quarter. Lab fee: $5.00. Prerequisites: TCO 101, TCO 203, TCO 204, and permission from the Chairperson of the Technical Communication Department. A GPA of "B" or higher in TCO courses.

TCO 297, 298, 299 Special Topics in Technical Communication (On Demand) **1-5**
Special topics in technical communication designed to meet specific needs. Lab fee: $5.00.

Theater (THEA)

THEA 100 Introduction to the Theater (ASP) **5-0-5**
The course is designed to help students bring critical thinking skills into their experience as theatergoers: Students will be introduced to the theater arts - acting, directing, and design. Students will survey the history of Western theater, focusing on the art as a reflection of society's changing social and cultural values. Plays representing several genres and historical periods will be read and discussed. Writing assignments include critical reviews of plays attended. Lab fee: $5.00. Prerequisites: ENGL 101 or ENGL 111.

THEA 180 Theater Practicum (A,W,SP,SU) 0-9-3
Supervised practical experience in two or more of the following areas - acting, lighting, set, sound, costuming, house management, stage managing, or directing. Enrollment is limited to students who have been cast in a theater production on campus or who have been selected to work on technical areas of the production. With the advanced approval of the instructor, credit can be earned by working on off-campus theater productions. Repeatable to nine credits. Lab fee: $5.00. Prerequisite: THEA 100 (COMM 130) and permission of instructor.

THEA 210 Technical Production Fundamentals: Stage Lighting (SP) 1-4-3
An introduction to the basic principles and functions of stage lighting. Experience in creating a lighting design, hanging and focusing sighting instruments, and executing the design with the Status 24/48 control board. Brief overview of the work of other members of the production staff with whom a lighting designer collaborates. Lab fee: $3.00. Prerequisite: THEA 100 (COMM 130) or permission of instructor.

THEA 231 Literature for the Theater I (W) 3-0-3
A survey of selected world drama from the classical Greek period through the mid-nineteenth century. The focus is on the plays as potential theater. Lab fee: $3.00. Prerequisite: ENGL 101 or 111; Concurrent: ENGL 101 or 111.

THEA 232 Literature for the Theater II (SP) 3-0-3
A survey of selected western drama from the eighteenth century through the mid-nineteenth century The focus is on the plays as potential theater. Lab fee: $3.00. Prerequisites: ENGL 101 or ENGL 111; Concurrent: ENGL 101 or ENGL 111.

THEA 233 Literature for the Theater III (SU) 3-0-3
A survey of selected western drama from the mid-nineteenth century to the present. The focus is on the plays as potential theater. Lab fee: $3.00. Prerequisite: ENGL 101 or ENGL 111, THEA 100 or COMM 130; Concurrent: ENGL 101 or ENGL 111, THEA 100 or COMM 130.

THEA 280 Fundamentals of Acting (W) **1-4-3**
Introduction to the basic principles of stage acting with a focus on practical experience. Areas of emphasis include stage movement, vocal delivery, body language, concentration techniques and basic script analysis and scoring. Lab fee: $3.00. Prerequisite: THEA 100 (COMM 130) or permission of instructor.

THEA Writing Plays (SP) **5-0-5**
(See ENGL 283)

THEA 290 Capstone Experience in Theater (SU) 0-6-3
Fulfills the capstone requirement for Associate of Arts and Associate of Science degree students at Columbus State. Students will carry out and present a major project in theater- in performance, technical theater, or research. Students will complete a personal portfolio covering their studies in theater and related areas. Lab fee: $10.00. Prerequisite: 75 credits toward the Associate of Arts or Associate of Science degree, including at least 12 credits in THEA beyond THEA 100 (COMM 130).

THEA 297-298-299 Special Topics in Theater (On Demand) **1-5**
Special Topics in Theater is designed to meet specific needs. Prerequisites: vary, see instructor

Veterinary Technology (VET)

VET 111 Veterinary Technology (A) 4-2-5
Introduction to the Veterinary Technician Technology including laws and ethics, duties and job opportunities. Medical terminology, nutrition requirements for various animals, management, restraint, sexing basic techniques and common diseases of laboratory animals are discussed. Lab fee: $75.00. Prerequisite: Admission to program.

VET 114 Client Relations (A) 2-0-2
Exploration of the procedures used in veterinary practices, in client and public relations, including standard office procedures and computerized processes. Prerequisites: Admission to program. Concurrent: VET 111.

VET 122 Veterinary Parasitology (W) 2-2-3
An introduction to the common internal and external parasites of domestic animals including scientific nomenclature, life cycles, common methods of identification and the treatment and/or prevention of these parasites. Lab fee: $75.00. Prerequisite: VET 111.

VET 124 Principles of Veterinary Radiology (W,SP) 2-0-2
Study of elementary physics, atomic structure, x-ray physics in the production of x-rays, interaction of x-ray within the body, interaction of x-rays with x-ray film, radiation safety, patient measurement and positioning, preparation of a techniques chart, radiographic, development procedures, special diagnostic radiographic procedures and equipment. Prerequisites: BIO 161 and VET 136.

VET 126 Principles of Veterinary Anesthesia (SP,SU) 3-0-3
Study of systemic and inhalation anesthetic agents, premeditation agents, ventilators, respirators and monitoring equipment, preanesthetic physical, emergency drugs and CPR. Prerequisites: BIO 161, BIO 169 and VET 136. Concurrent: VET 133.

VET 131 Veterinary Anatomy and Physiology (SP) 3-0-3
Presentation and discussion of the comparative anatomy and physiology of the canine, feline, equine and bovine species. The anatomy and physiology of these domestic species will be compared using a systems approach and clinically applied for the veterinary technician. Prerequisites: BIO 161 and BIO 169.

VET 133 Clinical Application I (SP,SU) 0-6-3
Laboratory exercises for VET 138, VET 124 and VET 126. Students practice techniques of surgery, anesthesia, radiology, venipuncture and injection. Lab fee: $70.00. Prerequisites: VET 136 and VET 124. Concurrents: VET 126 and VET 138.

VET 135 Veterinary Hematology (SP,SU) 2-6-5
Students perform procedures required for a complete blood count. Students use hemocytometer, pipet, centrifuge, spectrophotometer, and automated cell counters. Emphasis on the differential white blood cell counts including abnormal and immature red blood cells and white blood cells. Other tests performed in a veterinary hematology clinic are presented. Lab fee: $75.00. Prerequisite: BIO 169 and VET 136.

VET 136 Animal Health and Disease I (W) 3-0-3
A physiological systems approach to the most frequently encountered diseases of dogs and cats including: disease name, definition and history, animals at risk, causes and symptoms, diagnosis, treatment, prevention and vaccination programs. Diseases are discussed which can be potentially transmitted from animal to man as well as emphasizing safety and prevention from them. Prerequisites: VET 111 and VET 114. Concurrents: VET 122 and BIO 169.

VET 138 Veterinary Surgical Techniques (SP,SU) 3-0-3
Fundamentals of routine surgery, including preparation of patient, identification of instruments, preparation of surgical packs, suture materials and patterns. Use of the autoclave and other methods of sterilization. Preanesthetic laboratory tests and postoperative care of the patient are discussed. Prerequisites: VET Ill, VET 136 and BIO 161

VET 254 Clinical Seminar I (SU,A) 2-0-2
Discussion of issues relating to clinical experience including euthanasia, problem solving models and change strategies. Prerequisite: All 100-level VET courses, Concurrent: VET 291.

VET 262 Veterinary Pharmacology (A,W) 3-0-3
Drugs commonly used in veterinary medicine, including brief history, terminology, source, dosage form and drug classification. Methods of administration, factors altering drug response, prescription terminology and metrology. Regulations for controlled substances. Prerequisite: MATH 100 and VET 136.

VET 263 Clinical Application II (A,W,SU) 0-6-3
Practice skills commonly performed in veterinary clinics, such as: record keeping, administration of fluids and medications, pre-anesthetic evaluation, surgical preparation, anesthetic administration, radiology and laboratory procedures. Lab fee: $75.00. Prerequisites: VET 133 and VET 291.

VET 266 Animal Health and Disease II (A,W,SP,SU) 3-0-3
Presentation and discussion of the most common diseases of horses, food animals, and exotics; including vaccination programs, nutrition, breeding and husbandry. Prerequisite: VET 136. Concurrent (day program only): OSU internship.

VET 267 Veterinary Urinalysis and Clinical Chemistry (A,W) 2-6-4
Students perform analysis on urine, such as protein, glucose, ketones, and other diagnostic tests of a routine urinalyses. They learn physical characteristics and tests performed on transudates, exudates, and cerebrospinal fluid. Students perform blood chemistries, including glucose, BUN, creatinine, and enzymes. Prerequisite: VET 135.

VET 269 Veterinary Microbiology (A,W) 2-6-5
Processes necessary to isolate and identify causative agents of bacterial infections. Students perform susceptibility testing to determine the effective chemical or antibiotic agents necessary for treatment. Basic bacteriological procedures include: isolation of colonies on culture plate and gram staining. Serologic procedures include: identification of brucellosis by antigen/antibody detection. Prerequisites: VET 135 and VET 136.

VET 274 Clinical Seminar II (W,SP) 2-0-2
Continuation of VET 254. seminar course, which addresses issues emanating from the students clinical experience. Strategies for job hunting are discussed, and simulation job interviews are practiced. Prerequisite: VET 291. Concurrent: VET **293.**

VET 275 Seminar A (A) **1-0-1**
Discussion relating to clinical experiences and euthanasia and problem solving models. Prerequisites: VET 133; evening program registration. Concurrent: VET 294.

VET 276 Seminar B (W) **1-0-1**
A continuation of discussions relating to clinical experiences, Myers-Briggs evaluation, and problem solving. Prerequisites: VET 275; evening program registration. Concurrent: VET 295.

VET 277 Seminar C (SP) **1-0-1**
A continuation of VET 276 to address issues emanating from clinical experience. Strategies to enhance employment opportunities are investigated. Prerequisites: VET 276; evening program registration. Concurrent: VET 296.

VET 278 Seminar D (SU) **1-0-1**
A continuation of VET 277 to discuss issues concerning clinical experience. Strategies which enhance employment opportunities are continued to be discussed. Prerequisites: VET 277; evening program registration. Concurrent: VET 297.

VET 291 Clinical Experience I (SU,A) 0-30-6
Practical experiences in techniques used in veterinary medicine. Students are assigned to veterinary facilities: the Veterinary Teaching Hospital in the College of Veterinary Medicine at The Ohio State University, and other facilities including research, private practices and the Columbus Zoo. Lab fee: $75.00. Prerequisite: All 100-level VET courses.

VET 293 Clinical Experience II (W,SP) 0-30-6
Continuation of VET 291. Lab fee: $75.00. Prerequisites: All VET courses,

VET 294 Clinical Experience A (A) **0-15-3**
Observation and practical application of techniques used in veterinary medicine. Students will be assigned to various private practitioners for a period of ten weeks or the teaching hospital of the College of Veterinary Medicine for this period. Designed for the evening veterinary technology program. Lab fee: $37.00. Prerequisites: All 100-level VET courses; evening program registration.

VET 295 Clinical Experience B (W) **0-15-3**
A continuation of clinical experience where observation and practical application of techniques used in veterinary medicine will be further performed. Students will be assigned to various private practitioners for a period of ten weeks or the teaching hospital of the College of Veterinary Medicine for this period. Designed for the evening veterinary technology program. Lab fee: $38.00. Prerequisites: VET 294; evening program registration,

VET 296 Clinical Experience C (SP) **0-15-3**
Clinical experience and observation and practical application of techniques used in veterinary medicine will-be further performed. Students will be assigned to various private practitioners for a period of ten weeks or the teaching hospital of the College of Veterinary Medicine for this period in the area of large animal (equine and food animal medicine). Designed for the evening veterinary technology program. Lab fee: $37.00. Prerequisites: VET 295; evening program registration.

VET 297 Clinical Experience D (SU) 0-15-3
Clinical observation and practical application of techniques used in veterinary medicine will be further performed. Students will be assigned to various private practitioners for a period of ten weeks or the teaching hospital of the College of Veterinary Medicine for this period in the area of emergency and intensive care animal medicine. Designed for the evening veterinary technology program. Lab fee: $38.00. Prerequisites: VET 296; evening program registration.

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Accreditation 1999-2000

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Financial Management

Association of Collegiate Business Schools and Programs (ACBSP)
7007 College Boulevard, Suite 420
Oakland Park, KS. 66211
(913) 339-9356

Allied Health

Dental Laboratory Technology

American Dental Association Commission on Dental Accreditation
211 East Chicago Avenue
Chicago, Illinois 60611-2678
(312) 440-2915

Radiography

Joint Review Committee on Accreditation for Radiologic Technology Programs
20 North Wacker Drive, Suite 900
Chicago Illinois 60606-2901
(312) 704-5300

Respiratory Care

Committee on Accreditation for Respiratory Care, (CoARC)
1710 West Euless Boulevard, Suite 300
Euless Texas 76040-6823
(817) 283-2835

Automotive Technology

Automotive Technology and Ford Asset Program

National Institute for Automotive Service Excellence (ASE)
National Automotive Technician Education Foundation
13505 Dulles Technology Drive
Hemdon, Virginia 22071-3415
(703) 713-3800

Business Management/ Office Administration

Business Management
Human Resources Management
Office Administration

Association of Collegiate Business Schools and Programs (ACBSP)
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Overland Park, Kansas 66211
(913) 339-9356

Computer Science

Microcomputing

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Overland Park, Kansas 66211
(913) 339-9356

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Landscape/Design Build

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(703) 736-9666

Engineering Technologies

Aviation Maintenance Technology

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Port Columbus International Airport
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Electronic Engineering Technology

Accreditation Board of Engineering
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Hospitality Management

Chef Apprenticeship
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Dietetic Technician Major

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216 W. Jackson Blvd.
Chicago, Illinois 606006-6995
(800) 877-1600 x-4874

Dietary Manager Certificate

Dietary Managers Association
406 Surrey Woods Drive
St. Charles, Illinois 60174
(800) 323-1908

Human Services

MH/CD/MR

Council for Standards in Human Services
Education (CSHSE) Mary DiGiovanni, President
Northern Essex Community College
Elliott Way
Haverhill, Massachusetts 01830
(508) 374-5889

Justice and Safety Programs

Emergency Medical Technician-Paramedic Program

Committee on Accreditation of Allied Health Education Programs, (CAAHEP).
Joint Review Committee on Educational Programs for EMT/ Paramedic
7108-C South Alton Way Suite 150
Englewood, California 80112-2106
(303) 694-6191

Emergency Medical

Technician-Paramedic Program State of Ohio
EMS Agency
P.O. 182073
Columbus, Ohio 43218
(614) 466-9447

Legal Assisting

American Bar Association
Standing Committee on Legal Assistants
750 North Lake Shore Drive
Chicago, Illinois 60611
(312) 988-5618

Marketing & Graphic Communication

Logistics
Marketing
Retail Management

Association of Collegiate Business Schools and Programs (ACBSP)
7007 College Boulevard, Suite 420
Overland Park, Kansas 66211
(913) 339-9356

Medical and Sports Services

Health Information Management Technology

Committee on Allied Health Education Programs (CAAHEP)
35 East Wacker Drive, Suite 1970
Chicago, Illinois 60601-2208
(312) 253-9355

Medical Laboratory Technology

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
8410 West Bryn Mawr Avenue, Suite 670
Chicago, Illinois 60631
(312) 714-8880

Sports and Fitness Management/Massage Therapy

State Medical Board of Ohio
77 S. High Street
Columbus, Ohio 43266
(614) 466-3934

Veterinary Technology

American Veterinary Medical Association
Committee on Veterinary Technician Education and Activities
1931 North Meacham Road
Schaumburg, Illinois 60173
(847) 925-8070

Nursing and Related Services

Multi-Competency Health (Histotechnology)
Multi-Competency Health (Phlebotomy)

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
8410 West Bryn Mawr Avenue, Suite 670
Chicago, Illinois 60631
(312) 714-8880

Nursing

National League for Nursing Accrediting Commission (NLNAC)
61 Broadway
New York, New York 110006
(216) 363-5555 x -153

Ohio Board of Nursing
77 S. High Street 17th floor
Columbus, Ohio 43266-0316
(614) 466-3947

Nurse Aide Training Program (NATP)

Ohio Department of Health NATCEP Unit
246 North High
P.O. Box 118
Columbus, Ohio 432660-0118
(614) 752-8285

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Academic Calendar

AUTUMN QUARTER 1999

September 22, 1999 - December 11, 1999

Registration begins ..... (M) August 2, 1999
Last day for continuing students to register without late charge (CATS) ..... (M) September 6, 1999
Labor Day - Campus Closed ..... (M) September 6, 1999
Last day to pay fees without penalty (7:30 p.m.) .....(T) September 21, 1999
Full-quarter classes begin ..... (W) September 22, 1999
First-term classes begin ..... (W) September 22, 1999
Last day for 100% refund of first-term fees ..... (S) September 25, 1999
Last day for 100% refund of full-quarter fees.. ..... (W) September 29, 1999
Last day for 50% refund of first-term fees ..... (W) September 29, 1999
Last day to pay fees with penalty (7:30 p.m.) ..... (W) September 29, 1999
Last day for 25% refund of first-term fees ..... (S) October 2, 1999
Last day for 50% refund of full-quarter fees ..... (W) October 6, 1999
Columbus Day Observed - Campus Closed ..... (M) October 11, 1999
Last day for 25% refund of full-quarter fees ..... (W) October 13, 1999
Faculty/Staff In-Service - No Day Classes - Offices Closed (W) October 20, 1999
Last day to withdraw from first-term classes, ... (S) October 23, 1999
First-term classes end ..... (S) October 30, 1999
Last day to pay second-term fees without penalty (12:00 Noon) ..... (S) October 30, 1999
Second-term classes begin ..... (M) November 1, 1999
Winter Quarter 2000 registration begins ..... (M) November 1, 1999
Last day for 100% refund of second-term fees ..... (R) November 4, 1999
Last day to remove incompletes (I) incurred Summer Quarter 1999 . . . . . (F) November 5, 1999
Last day to pay second-term fees with late penalty (7:30 p.m.) ..... (M) November 8, 1999
Last day for 50% refund of second-term fees ..... (M) November 8, 1999
Veterans Day - Campus Closed ..... (R) November 11, 1999
Last day for 25% refund of second-term fees ..... (F) November 12, 1999
Last day to withdraw from full-quarter classes.. ..... (T) November 23, 1999
Last day to withdraw from second-term classes ..... (T) November 23, 1999
Thanksgiving - Campus Closed ..... (R, F, S, U) November 25-28, 1999
Petitions to graduate Winter Quarter 2000 due in Student Records Office ..... (F) December 3, 1999
Graduation ceremony rehearsal ..... (R) December 9, 1999
Graduation ceremony ..... (F) December 10, 1999
Autumn Quarter 1999 ends ..... (S) December 11, 1999
Christmas - Campus Closed ..... (F, S) Dec. 24-25, 1999
New Year's Day - Campus Closed ..... (F, S) Dec. 31, 1999-Jan. 1, 2000

WINTER QUARTER 2000

January 3, 2000 - March 18, 2000

Registration begins . . . . . (M) November 1, 1999
Veterans Day - Campus Closed . . . . . (R) November 11, 1999
Thanksgiving - Campus Closed . . . . . (R, F, S, U) November 25-28, 1999
Last day for continuing students to register with late charge (CATS) ..... (U) December 5, 1999
Christmas - Campus Closed . . . . . (F,S) December 24-25, 1999
New Year's Day - Campus Closed (F, S) Dec. 31, 1999 - Jan. 1, 2000
Last day to pay fees without penalty (7:30 p.m.) . . . . . (M) January 3, 2000
Full-quarter classes begin ..... (M) January 3, 2000
First-term classes begin ..... (M) January 3, 2000
Last day for 100% refund of first-term fees ..... (R) January 6, 2000
Last day for 100% refund of full-quarter fees ..... (M) January 10, 2000
Last day for 50% refund of first-term fees ..... (M) January 10, 2000
Last day to pay fees with penalty ..... (M) January 10, 2000
Last day for 25% refund of first-term fees ..... (R) January 13, 2000
Martin Luther King Day - Campus Closed ..... (M) January 17, 2000
Last day for 50% refund of full-quarter fees ..... (T) January 18, 2000
Last day for 25% refund of full-quarter fee ..... (M) January 24, 2000
Last day to withdraw from first-term classes ..... (R) February 3, 2000
Petitions to graduate Spring Quarter 2000 due in Student Records Office ..... (F) February 4, 2000
Spring Quarter 2000 registration begins ..... (M) February 7, 2000
First-term classes end ..... (W) February 9, 2000
Last day to pay second-term fees without penalty.....(W) February 9, 2000
Second-term classes begin ..... (R) February 10, 2000
Last day to remove incompletes (I) incurred Autumn Quarter 1999 ..... (S) February 12, 2000
Last day for 100% refund of second-term fees ..... (M) February 14, 2000
Last day to pay second-term fees with penalty.. ..... (R) February 17, 2000
Last day for 50% refund of second-term fees ..... (R) February 17, 2000
Last day for 25% refund of second-term fees ..... (M) February 21, 2000
Presidents' Day Observed - Campus Closed .....(F) February 25, 2000
Last day to withdraw from full-quarter classes.. ..... (M) March 6. 2000
Last day to withdraw from second-term classes ..... (M) March 6, 2000
Graduation ceremony rehearsal ..... (R) March 16, 2000
Graduation ceremony ..... (F) March 17, 2000
Winter Quarter 2000 ends ..... (S) March 18, 2000

SPRING QUARTER 2000

March 27, 2000 - June 10, 2000

Registration begins ..... (M) February 7, 2000
Presidents' day Observed - Campus Closed.. ..... (F) February 25, 2000
Last day for continuing students' to register without late charge (CATS) ..... (U) March 12, 2000
Last day to pay fees without penalty (3:00 p.m.) ..... (S) March 25, 2000
Full-quarter classes begin ..... (M) March 27, 2000
First-term classes begin ..... (M) March 27, 2000
Last day for 100% refund of first-term fees ..... (R) March 30, 2000
Last day for 100% refund of full-quarter fees.. ..... (M) April 3, 2000
Last day for 50% refund of first-term fees ..... (M) April 3, 2000
Last day to pay fees with penalty ..... (M) April 3, 2000
Last day for 25% refund of first-term fees ..... (R) April 6. 2000
Last day for 50% refund of full-quarter fees.. ..... (M) April 10, 2000
Last day for 25% refund of full-quarter fees .....(M) April 17, 2000
Easter Sunday - Campus Closed ..... (U) April 23, 2000
Last day to withdraw from first-term classes ..... (R) April 27, 2000
Summer Quarter 2000 registration begins ..... (M) May 1, 2000
First-term classes end ..... (W) May 3, 2000
Last day to pay second-term fees without penalty ..... (W) May 3, 2000
Second-term classes begin ..... (R) May 4, 2000
Faculty/Staff In-Service - No Day Classes - Offices Closed.. ..... (F) May 5, 2000
Last day to remove incompletes (I) incurred Winter Quarter 2000 ..... (S) May 6, 2000
Last day for 100% refund of second-term fees ..... (M) May 8, 2000
Last day to pay second-term fees with penalty.....(R) May 11, 2000
Last day for 50% refund of second-term fees ..... (R) May 11, 2000
Petitions to graduate Summer Quarter 2000 due in Student Records Office ..... (F) May 12, 2000
Last day for 25% refund of second-term fees ..... (M) May 15, 2000
Memorial Day - Campus Closed ..... (M) May 29, 2000
Last day to withdraw from full-quarter classes ..... (T) May 30, 2000
Last day to withdraw from second-term classes . . . . . (T) May 30, 2000
Graduation ceremony rehearsal ..... (R) June 8, 2000
Graduation ceremony . . . . . (F) June 9, 2000
Spring Quarter 2000 ends . . . . . (S) June 10, 2000

SUMMER QUARTER 2000

June 26, 2000 - September 9, 2000

Registration begins. . . . . (M) May 1, 2000
Memorial Day - Campus Closed ..... (M) May 29, 2000
Last day for continuing students to register without a late charge (CATS) ..... (U) June 4, 2000
Last day to day fees without penalty (3:00 p.m.) . . . . . (S) June 24, 2000
Full-quarter classes begin.. . . . . (M) June 26, 2000
First-term classes begin ..... (M) June 26, 2000
First four-week-term classes begin ..... (M) June 26, 2000

(Summer Calendar Continued)

Eight-week-term classes begin ..... (M) June 26, 2000
Last day for 100% refund of first four-week-term fees ..... (W) June 28, 2000
Last day for 100% refund of first-term fees ..... (R) June 29, 2000
Last day for 100% refund of eight-week-term fees ..... (F) June 30, 2000
Last day for 50% refund of first four-week-term fees.. ..... (S) July 1, 2000
Last day for 100% refund of full-quarter fees ..... (M) July 3, 2000
Last day for 50% refund of first-term fees ..... (M) July 3, 2000
Last day to to pay full-quarter fees with penalty ..... (M) July 3, 2000
Last day to to pay first-term fees with penalty..... (M) July 3, 2000
Last day to to pay first four-week-term fees with penalty ..... (M) July 3, 2000
Last day to to pay eight-week-term fees with penalty ..... (M) July 3, 2000
Independence Day - Campus Closed ..... (T) July 4, 2000
Last day for 50% refund of eight-week-term fees ..... (W) July 5, 2000
Last day for 25% refund of first four-week-term fees.. ..... (W) July 5, 2000
Last day for 25% refund of first-term fees ..... (R) July 6, 2000
Last day for 50% refund of full-quarter fees.. ..... (M) July 10, 2000
Last day for 25% refund of eight-week-term fees ..... (M) July 10, 2000
Last day for 25% refund of full-quarter fees ..... (M) July 17, 2000
Last day to withdraw from first four-week-term classes ..... (M) July 17, 2000
First four-week-term classes end ..... (S) July 22, 2000
Last day to pay second four-week-term fees without penalty.. ..... (S) July 22, 2000
Second four-week-term classes begin.. ..... (M) July 24, 2000
Last day for 100% refund of second four-week-term fees ..... (W) July 26, 2000
Last day to withdraw from first-term classes ..... (R) July 27, 2000
Last day for 50% refund of second four-week-term fees ..... (S) July 29, 2000
Autumn Quarter 2000 registration begins ..... (M) July 31, 2000
Last day for 25% refund of second four-week-term fees.....(T) August 1, 2000
First-term classes end .....(W) August 2, 2000
Last day to pay second-term fees without penalty ..... (W) August 2, 2000
Second-term classes begin .....(R) August 3, 2000
Petitions to graduate Autumn Quarter 2000
due in Student Records Office ..... (F) August 4, 2000
Last day to remove incompletes (I)
incurred Spring Quarter 2000 ..... (S) August 5, 2000
Last day for 100% refund of second-term fees ..... (M) August 7, 2000
Last day to pay second-term fees with penalty ..... (R) August 10, 2000
Last day for 50% refund of second-term fees ..... (R) August 10, 2000
Last day for 25% refund of second-term fees ..... (M) August 14, 2000
Last day to withdraw from second four-week-term classes (MI August 14, 2000
Last day to withdraw from eight-week-term classes . . . (M) August 14, 2000
Second four-week-term classes end .....(S) August 19, 2000
Eight-week-term classes end. ..... (S) August 19, 2000
Last day to withdraw from full-quarter classes ..... (M) August 28, 2000
Last day to withdraw from second-term classes ..... (M) August 28, 2000
Labor Day - Campus Closed ..... (M) September 4, 2000
Graduation ceremony rehearsal ..... (R) September 7, 2000
Graduation ceremony .....(F) September 8, 2000
Summer Quarter 2000 ends ..... (S) September 9, 2000

Please refer to the quarterly schedule of classes for a complete list of dates and deadlines.

Vision and Values

We see Columbus State Community College as a dynamic and diverse institution offering accessible, affordable, lifelong learning opportunities to meet the educational, employment, and enrichment needs of our community as it participates in the global economy.

We Value Being . . .

- An integral, respected, trusted partner in our community.
- A dynamic, evolving institution.
- An outstanding learning environment.
- An accessible educational institution.
- A diverse learning community.
- A results-oriented organization.
- Accountable.

Mission Statement

The mission of Columbus State Community College is to provide quality educational programs that meet the life-long learning needs of its community. Through its dynamic curriculum and commitment to diverse learners, the college will serve as a catalyst for creating and fostering linkages among the community, business and educational institutions. The college will proactively respond to the changing needs of our community and its role in the global economy through the use of instructional and emerging technologies.

Institutional Goals

- To recognize, develop, and support excellence in both learning and teaching.
- To provide a learner-centered environment that provides the support services which assure that learners attain their educational goals.
- To provide relevant, thorough, state-of-the-art technical education that prepares students to prosper in the world of work.
- To provide course work leading to an associate degree and/or lower-division preparation for college/university transfer.
- To provide educational, cultural, economic, social, recreational, or aesthetic programs and services to meet the changing needs of individuals in a multicultural community.
- To provide lifelong educational programming for personal and professional growth, cultural and recreational enrichment and international education.
- To foster an environment that values an understanding and appreciation of diversity.
- To develop and strengthen partnerships with industry, primary and secondary education, business, labor, community organizations and government to enhance the economic development of our service community.
- To broaden learning opportunities through the creation of a strong community outreach program.
- To collaborate with our community to understand and satisfy its needs and expectations to provide quality educational services within available resources.
- To encourage management policies that demonstrate institutional integrity and effectiveness.
- To enhance learning opportunities for students, faculty, staff, and administrators through the effective use of technology.

Strategic Planning Goals

- Technology Support
- Access
- Global Perspective
- Community Building
- Workforce Development
- Financial Resources Development
- Marketing and College Image
- Human Capacity Development
- Board Development
- Financial Stewardship