

CMTC

***CENTRAL MAINE
TECHNICAL COLLEGE***



**Catalog
2003-2004**

CMTC

**CENTRAL MAINE
TECHNICAL COLLEGE**



Notice of Non-Discrimination

It is the policy of Central Maine Technical College to comply with all federal and state laws and regulations which prohibit discrimination on the basis of race, color, religion, sex, sexual orientation, national origin or citizen status, age, handicap, marital or veteran's status in admission to, access to, treatment in or employment in its programs and activities. Upon request, the College provides reasonable accommodations to individuals with documented disabilities. Inquiries regarding these policies should be directed to the CMTC affirmative action officer, 1250 Turner Street, Auburn, ME 04210-6498, 207/755-5275. Inquiries concerning the application of nondiscrimination policies may also be referred to the Regional Director, Office for Civil Rights, U.S. Department of Education, J.W. McCormack P.O.C.H., Room 222, Boston, MA 02109-4557.

The College's most recent audited financial statement or a fair summary thereof is available, upon request, in the business office during normal business hours.

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Mission

Central Maine Technical College provides quality, accessible college education and lifelong learning opportunities. Therefore, we provide career and technical education; education for transfer to baccalaureate programs; and services to support economic development and community vitality.

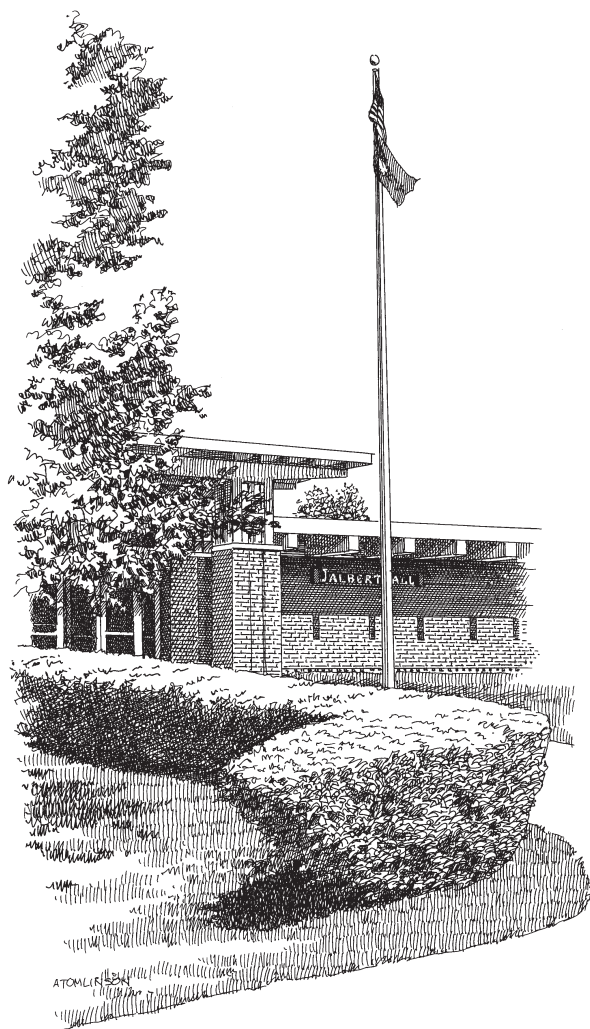
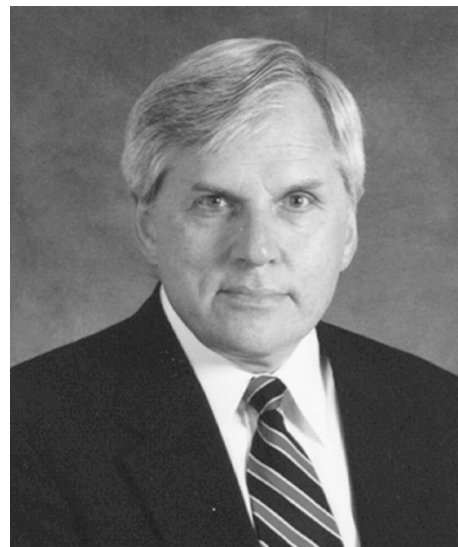
A Message from the President

We appreciate this opportunity to show you Central Maine Technical College. Through the pages in this catalog you can learn more about the programs, courses, and services available to you. While we are proud of the offerings we present to you here, we cannot show you on mere printed pages the human dimension of our College—a caring faculty and a supportive staff.

There are many places you can go to learn, but there are few where you can find people who are as dedicated to serving you as the faculty and staff at this College. Counselors and advisors will help you select a program and register. Teachers will work with you inside and outside of class to develop your full potential. Financial aid specialists will help secure the resources you need to pay for your education. A job placement coordinator will help you find the job that will launch your new career and advisors will help you decide how and where to continue your education. You will find caring and supportive people wherever you turn.

Please accept our personal invitation to visit the College, to walk through our facilities, to see our up-to-date equipment, but most of all to meet the people who will help you open the doors to your future.

Scott E. Knapp
President



Accreditation

Central Maine Technical College is accredited by the New England Association of Schools and Colleges, Inc., a non-governmental, nationally recognized organization, which recognizes public and private colleges and universities throughout New England that meet its standards.

An accredited school or college is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of the quality of every course of program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff of the school or college. Individuals may also contact the Association:

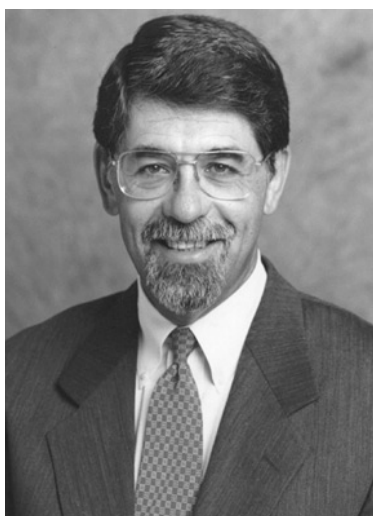
New England Association of Schools and Colleges
209 Burlington Road
Bedford, Massachusetts 01730-1433
Tel: (617) 271-0022
Fax: (617) 271-0950

Executives-in-Residence

The Executive-in-Residence Program, initiated in 1998, is one in which four area business and community leaders each spend a day on campus with students, faculty and staff. The program was designed to give students a chance to be exposed to and learn from people coming from a different perspective and to strengthen the relationship between the College and important organizations in our community. Each of the executives speaks about issues affecting the broader society into which students will be graduating and about matters that students need to face as responsible citizens.



Edward A. Cormier
President
Harriman Associates



Richard Pattenau
President
University of Southern Maine



Barbara Eretzian
Superintendent of Schools
Auburn School Department



Sherwood Moody
President and CEO
Mechanics Savings Bank

About CMTC

Established by the Legislature to provide Associate Degree, Diploma and Certificate programs directed at the educational, occupational and technical needs of the State's citizens and the work-force needs of the State's employers, CMTC is one of seven colleges in Maine's Technical College System. Others are located at Bangor, Calais, Fairfield, Presque Isle, South Portland, and Wells.

Governance

The Maine Technical College System is governed by a Board of Trustees appointed by the Governor. Policies and decisions of the Board are implemented through the President of the System, who has an office in Augusta and serves as the System's chief executive officer.

The President of the College serves as the chief executive officer and official spokesperson for the College.

Mission

Central Maine Technical College provides quality, accessible college education and lifelong learning opportunities. Therefore, we provide career and technical education; education for transfer to baccalaureate programs; and services to support economic development and community vitality.

To achieve the mission, CMTC offers:

- quality career and technical education that prepares graduates for immediate employment and continued education
- quality transfer programs that prepare graduates for continued education at the baccalaureate level
- quality lifelong learning opportunities to area residents to improve their workplace skills, enhance their job and career

prospects, and enrich their lives as members of the community.

- services to support economic development and community vitality
- all of its services with in the twin goals of providing the highest quality and maintaining the broadest accessibility

CMTC Executive Advisory Council

The College's Executive Advisory Council provides a forum for discussing matters that have a broad impact on CMTC. Specific responsibilities of the Executive Advisory Council include reviewing proposals for major changes in policies and programs, participating in the development of long range plans, and assisting with the interpretation of College goals, programs and needs to the general public. Members of the Executive Advisory Council are representative of the constituencies served by the College.

Program Advisory Committees

Each program offered at CMTC has an advisory committee, the members of which are representative of the community and industries that employ graduates of the College. In addition to assisting with program planning and development, advisory committee members provide helpful information about jobs and employment trends and serve as an important communications link with industry, and the community

Central Maine Technical Education Foundation

The Central Maine Technical Education Foundation is a community-based, non-profit corporation that has as its sole mission "support for Central Maine Technical College and its students." The Foundation is governed by a volunteer Board of Directors made up of community and business leaders. The Foundation has

contributed \$265,000 to CMTC's scholarship program as well as \$100,000 for special projects.

Transfer Programs and Agreements

Most CMTC credit courses are accepted for transfer at other colleges and universities, though they may not apply to a specific program of interest. In addition, CMTC has agreements with several other institutions which allow graduates of CMTC Associate Degree programs to transfer with advanced standing in specific baccalaureate programs.

History and Growth of CMTC

Central Maine Technical College traces its origin to 1963 when the 101st Maine Legislature submitted to public referendum the question of establishing a postsecondary vocational training program in Androscoggin County. The voters of Maine gave their consent for such an institution in November, 1963, and in September, 1964, Androscoggin State Vocational Institute opened in the facilities of a former automobile dealership at 385 Main Street, Lewiston. In 1965 the State Board of Education renamed the institution Central Maine Vocational Technical Institute and in January 1966, CMVTI was moved to the present campus on Turner Street in Auburn.

The Legislature changed the name of Central Maine Vocational Technical Institute to Central Maine Technical College in 1989 to more accurately reflect CMTC's role and status as a comprehensive institution of higher education.

During its first year, the institution enrolled 48 students in four programs (Auto Mechanics, Building Construction, Industrial Electricity, and Architectural Drafting) and was staffed by 13 persons, of whom seven were instructors. The first graduating class, consisting of six students, received diplomas in June 1965.

Today there are over 1300 students enrolled in one of CMTC's 29 programs. Another 400 students register for coursework that will enrich their lives or improve their job prospects and performance; an estimated 2,000 area residents participate each year in conferences, courses and programs offered through the Corporate and Community Services Division of the College. They are served by nearly 150 faculty and staff members. Each year over 250 students graduate; most of them receive Associate Degrees, while others earn certificates or diplomas.

The College offers educational opportunities for both transfer to baccalaureate programs and career preparation. Associate in Arts and Associate in Science degrees are designed as the first two years of a more advanced degree. The Associate in Applied Science degree and certificates and diplomas are designed to prepare students for direct entry into the workplace. But all graduates are expected to have a core set of competencies that will enable them to be qualified and productive members of the workforce and to continue their education after they graduate and throughout their lives.

As the College has grown in size, it has also grown in quality. In December 1976, the New England Association of Schools and Colleges, Inc. granted CMTC initial accredited status (effective 10-8-76). Continued accreditation was voted in November 1996. In 1978 the Maine State Board of Education authorized the College to confer Associate in Applied Science degrees beginning in January 1979. In September of 1995 the Maine Technical College System authorized CMTC to grant Associate in Science degrees. In 1998 the Associate in Arts Degree, which mirrors the first two years of many Bachelor's Degree programs, was authorized.

Several programs have received special recognition for their quality. In 1993, the Graphic Arts/Printing Technology program earned national certification by the Printing Industries of America. The Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) granted initial accreditation to the Architectural and Civil Engineering Technology Associate Degree program in 1984. It has been continuously accredited since then. The Automotive Technology program received full Master Certification in all eight specialty areas from the National Institute for Automotive Service Excellence (ASE) in 1986, making it the first program in Maine and the only program in New England to be so recognized. Continued Certification was granted in 1998. In 1995 the Ford ASSET (Automotive Student Service Educational Training) program was granted (ASE) Master Certification for all eight specialty technical areas.

In 1988 the Associate Degree Nursing program was granted accreditation by the National League for Nursing Accrediting Commission (formerly the National League for Nursing). Continued accreditation was granted in 1996. The Business program achieved accredited status from the Association of Collegiate Business Schools and Programs in 1996. The Clinical Laboratory Science Associate Degree program was awarded official accreditation in April, 1997 by the National Accreditation Agency for Clinical Laboratory Science. It was reaccredited in 2002. The Occupational Health and Safety program was accredited by the Applied Science Accreditation Commission (ASAC) of the Accreditation Board for Engineering and Technology (ABET) in 2002. It was the first Associate Degree program in this

discipline to be so accredited in the country.

CMTC seeks and accepts accreditation, certification or recognition of its programs only when those designations are consistent with the policies and plans of the College. The College does not guarantee that those designations will be maintained in the future.

CMTC's physical facilities have been enlarged to keep pace with increased demand for programs and services. In 1967, an addition was completed to the original instructional facility and the first residence hall was constructed. In January 1969, another addition, an extension of the North Wing, was completed and later in the year the entire instructional complex was designated by the State Board of Education as the Louis Jalbert Industrial Center, now Jalbert Hall.

The portion of Jalbert Hall known as the South Wing was constructed in 1972 and expanded in 1979 and 1986. Jalbert Hall now encloses 175,750 sq. ft. (over 4 acres) under a single roof.

In 1975 two apartment style dormitory buildings and the present dining room/kitchen facilities were ready for occupancy; and a building to house the Culinary Arts program was completed in 1989.

In November of 1989 Maine voters authorized capital bonding for the 40,000 sq. ft., Geneva A. Kirk Hall, which houses Nursing, Allied Health and Occupational Health and Safety programs; science laboratories; fitness and recreation facilities, including a gymnasium; and the Corporate and Community Services Division. The building was dedicated for use on May 6, 1993.

Bonding to fund the new Lapoint Center was approved by the voters in 1999. The Center, which opened in Fall 2002, houses state-of-the-art classrooms as well as additional

office facilities, student use areas and library access facilities.

Location

Located in Auburn at 1250 Turner Street just two miles from the center of the city, Central Maine Technical College occupies a picturesque 135-acre site overlooking and bordering Lake Auburn – an ideal setting for learning and recreation. As Maine's second largest urban center, Auburn-Lewiston offers numerous opportunities for social, recreational, cultural and educational activities. Auburn is located in the south central region of Maine and is the Gateway to the Western Mountains. It is midway on the Maine Turnpike between Maine's capital, Augusta and its largest city, Portland – approximately 35 miles from each city.

College Facilities

In addition to the classrooms, lecture halls, library, gymnasium, dining facilities, shops and laboratories and administrative offices in Jalbert and Kirk Halls, the Lapoint Center and the Culinary Arts Center, CMTC offers three residence halls on campus that provide housing for 120 students. In addition to a lounge, resident students have access to a recreation area furnished with games and a study room with instructional equipment and furniture. Snack machines and laundry equipment are also available for residents. Each room is cable-ready and wired for both phone and computer.

Non-residents have access to a lounge, dining facilities and snack machines and recreational areas. The campus also has an athletic field for baseball, softball and soccer games.

Trails through nearby woods offer excellent cross-country running and skiing opportunities, depending on the season. Lake Auburn provides good sailing, boating, and fishing, although swimming is not permitted.

Admissions

Central Maine Technical College welcomes applications from all persons whose academic record and personal qualifications suggest that they may benefit from enrollment in any of the programs offered. Graduation from an approved high school or passing scores on the General Educational Development (GED) Examination offered by the Maine Department of Education or other state department of education is required for admission to the College. Applicants may also be required to meet special admission requirements and prerequisites established for the specific program of interest. CMTC works in active partnership with regional and statewide high schools and adult education centers in order to help students prepare for college requirements. CMTC maintains a rolling admissions policy for most of its programs allowing candidates to apply and be considered for acceptance throughout the year. Prospective students will be considered for the next matriculating class on a first come, first served basis. All programs begin in late August. January admission is possible for most programs and for students who wish to begin with primarily general education courses. Contact the Admissions Office for more details. For best results, individuals who wish to attend CMTC for either semester are urged to submit their applications six months prior to the semester's start date.

Note to Nursing Program Applicants: Students for this program are selected on a competitive basis once per year, to begin each fall semester. Application materials are accepted between September 1st and January 31st, and selection decisions are made in February.

Note to Radiologic Technology Applicants: Students for this program are

selected on a competitive basis once per year, to begin each fall semester. Application materials must be received by CMTC and The Clark F. Miller School of Radiologic Technology at Central Maine Medical Center by December 31st.

Admissions Process

All applications will be evaluated for admission as soon as possible after applicants have submitted the following:

1. A properly completed Application for Admission and non-refundable \$20.00 application fee.
2. An official high school transcript for all years attended, including at least the first marking period of the senior year (for current high school seniors). A final transcript will be needed for all graduating seniors prior to first semester course registration.
or
GED test scores, for non-high school graduates.
3. Documentation of all program prerequisites. Prerequisites may appear on the high school or adult education transcripts, college transcripts, or other documentation. Please carefully read the prerequisites for the preferred program of study. Prospective applicants who do not meet these requirements are strongly encouraged to contact the Admissions Office to discuss alternatives.

Course Registration/ Enrollment

All accepted students will have to submit one or more of the following:

4. Official Scholastic Aptitude Test (SAT I) scores, verbal and math, that are not more than two years old. Applicants are strongly encouraged to take SATs,

especially if their educational goals may include transferring to a four-year institution after CMTC.

or

CMTC Placement Assessment in reading, writing, math and algebra. Please call the Admissions Office to schedule an assessment session.

or

Prior success (grade C or better) in a college level English and math course at a 100 level or above, taken at CMTC or another accredited institution. SAT results, Placement Assessment, and college level course work are used for academic counseling and course placement. Results are analyzed and applicants may be advised to enroll in preparatory courses or receive assistance at an adult education center in the region.

5. If applicable, all college transcripts from previously attended colleges.
6. Letters of recommendation from guidance personnel, teachers, and employers are encouraged (but not mandatory), to confirm an applicant's high degree of motivation and commitment to a CMTC education.

Admissions Prerequisites

All CMTC catalog programs require a high school diploma or GED. The following are prerequisites for admission to these specific programs:

Accounting - Algebra I

Applied Technical Studies - significant occupational training and experience

Architectural & Civil Engineering Technology - A grade of C or better in Algebra I & II, Geometry, Physics, basic computer & keyboard skills

Automotive Technology

Automotive (Ford ASSET) - Algebra I

Automotive Parts & Service Management

Building Construction Technology
- Associate in Applied Science - Algebra I & Geometry

Business Administration & Management

Business Administration & Management - Hospitality concentration

Business & Computer Applications

Clinical Laboratory Science - Algebra I, Chemistry with laboratory, & Biology with laboratory

Computer Technology - Algebra I, basic computer software skills

Culinary Arts

Early Childhood Education - basic computer software skills

Electromechanical Technology - Algebra I; Recommended Algebra II

General Studies

Graphic Arts/Printing Technology
- basic computer skills

Human Services - Algebra I, Algebra II

Liberal Studies - Algebra I, Algebra II

Machine Tool Technology - Algebra I

Mechanical Engineering Technology
- Algebra I & II, Geometry, Physics, basic computer skills

Medical Assistant - Biology with laboratory

Medical Transcription - keyboard skills (50 wpm)

Nursing - Algebra I, Biology with laboratory & Chemistry with laboratory

Occupational Health & Safety (Degree) - Algebra I & Chemistry with laboratory; **(Certificate)** current occupational experience or post-secondary degree or equivalent

Radiologic Technology - A grade of C or better in Algebra I, Chemistry with laboratory, Biology with laboratory and additional college prep mathematics courses (Acceptance to Central Maine Medical Center, School of Radiology, Lewiston, ME)

Telecommunications Technology - Algebra I, Algebra II, Science with laboratory, basic computer skills

Trade & Technical Occupations - Algebra I, current Registered Apprenticeship or journeyman status

Workplace Technology - enrollment in two-year career internship with Maine Career Advantage

Tour & Campus Interviews

All applicants are strongly encouraged to sign up for one of the college's regularly scheduled campus tours or for an individual meeting and tour if preferred. Tour information may be obtained from the Admissions Office. Once all necessary application materials are submitted, the applicant may be invited to an on-campus interview if he/she has not previously visited the college. The primary purpose of the interview is to give the applicant a firsthand look at the college and to have the opportunity to seek additional information about any aspect of the college.

New England Student Regional Program -**Non-Resident Applicants**

CMTC is a participating college in the New England Board of Higher Education's Regional Student Program (RSP). As such, non-resident students are eligible for special tuition rates of 150% of the in-state tuition rate when the RSP participant pursues a degree program not offered by their home state public institutions. To be considered, applicants must clearly indicate on the CMTC application form that they wish to participate in the New England Regional Student Program.

Rules Governing Residence

The College's Director of Finance shall determine at the time a student is admitted whether he/she is a resident or non-resident for tuition purposes, based on information furnished in the student's application and on other relevant considerations. Students, once having registered as a non-resident, can claim resident status only after they have resided in the state for a least one-year prior to registration for the term during which they claim resident status. For College purposes, students do not acquire a bona fide domicile in Maine until they have lived here for at least a year, primarily as a permanent resident and not merely as a student. Resident status implies a probability that a student will remain in Maine after completing college. Members of the Armed Forces and their dependents are normally granted resident tuition rates while on active duty within the state. The domicile of unmarried minors generally follows that of their parents or legally appointed guardian. Students who are married or who have attained their eighteenth birthday are considered adults, and will be classified as Maine residents if they have lived for the past 12 consecutive months in the state. If a non-resident student has a spouse who is a resident of Maine, the student will also be classified as a resident. Students who wish to change their status should complete a "Request for Change of Resident Status" form and submit it to the Business Office. A student may appeal the Director of Finance's decision first to the College President, then to the President of the Maine Technical College System, whose decision in all cases will be final. If the Director of Finance receives information indicating that a student's status should be changed from resident to that of non-resident, the student shall be informed in writing of the proposed change in status and shall be given the opportunity to

argue against it. The student may appeal the Director of Finance's decision as previously outlined. No application for change of status will be considered after September 1 for the fall semester or after January 15 for the spring semester. All changes approved during a semester will be effective at the beginning of the next semester; none will be retroactive.

International Students

Admission procedures for international students are the same as those for applicants from the United States, with the exception of two additional requirements. Because all instruction is given in English, prospective students with a native language other than English will be required to demonstrate proficiency in the English language. The Test of English as a Foreign Language (TOEFL), administered by the Educational Testing Service, will be made part of the applicant's file. For information on dates and locations for the test, write TOEFL, Box 899, Princeton, New Jersey 08540, USA. International students are also reminded that in order to obtain their Certificate of Eligibility, Form I-20, their sponsor(s) must provide the Admissions Office with a valid Affidavit of Support, Form I-134, verifying that funds will be available for all educational expenses while studying in the United States.

Admission Categories

Central Maine Technical College uses the following categories during the admissions process:

Incomplete - Applicant has not yet met all required steps in the admissions process to gain acceptance.

Acceptance - Applicant has met the requirements within the admissions process and has been approved for a program of study.

Conditional Acceptance - Applicant has completed the admissions process and is admitted with an academic condition(s), which must be successfully completed prior to or during the first semester(s) to maintain accepted status.

Deferred* - Applicant has met the requirements within the admissions process and has requested a deferred acceptance to another semester.

*(Due to program capacity limits the college reserves the right to defer qualified applicants to another semester)

Upon Acceptance to the College

Upon acceptance to the college, students will be asked to complete the following:

A confirmation card, confirming acceptance, along with a \$75.00 non-refundable tuition deposit that will be credited to the first semester bill.

A CMTC Health & Immunization Form, documenting emergency information and measles, mumps, and rubella immunizations for any students born after 1956, plus recent tetanus immunization for all students. Students accepted into allied health programs will be required to provide additional health data. Maine State law requires CMTC to collect this immunization information.

If applicable, students with a documented disability must register with the Disabilities Coordinator on campus in order to discuss needed accommodations.

A Residence Hall application, for those students who wish to live on campus, along with a residence hall & meal plan deposit that will be credited toward the first semester bill. Space is assigned on a first deposit, first

assigned basis, with preference given to first year, full-time students.

Financial Aid

Financial Aid award packages will be processed and communicated to students by the CMTC Financial Aid Office upon a student's acceptance to the college. Processing can take 4-6 weeks from the time the student has been accepted. For students beginning in the fall semester, awards will be processed beginning in the late spring. For students beginning in the spring semester, awards will be processed beginning in the fall. For high school seniors, an official final transcript must be submitted to the Admissions Office upon high school graduation. The Registrar's Office will process transcripts from other colleges/universities for transfer credit to CMTC upon a student's acceptance and communicate results directly to students. Information concerning a New Student Orientation and, if applicable, a list of necessary tools, will be mailed to students prior to the start of the semester. Students will be contacted by a member of the college's advising staff prior to the first semester for scheduling. Tech Prep Courses and Program Prerequisites Applied Math I and II courses, designed by the Center for Occupational Research and Development (C.O.R.D.) may substitute for the Algebra I prerequisite. The C.O.R.D. Principles of Technology (units 1 to 14) may substitute for the General Physics prerequisites. Tech Prep and Advanced Standing CMTC has formal, written agreements with a growing list of Maine high schools to award credit for course work, which has been reviewed and approved by both high school and College faculty representatives. Students who qualify for this opportunity must be admitted to a CMTC catalog program and registered for courses before the Tech Prep transfer credit is posted on their transcripts. As this catalog goes to

press, CMTC has advanced credit agreements with the following 30 secondary schools and adult education centers. Each agreement has specific conditions in terms of required competencies, credit hours and effective dates. Interested students should contact the CMTC Admissions Office and/or their high school guidance counselors for complete details.

Tech Prep Courses and Program Prerequisites

Applied Math I and II courses, designed by the Center for Occupational Research and Development (C.O.R.D.) may substitute for the Algebra I prerequisite. The C.O.R.D. Principles of Technology (units 1 to 14) may substitute for the General Physics prerequisites.

Tech Prep and Advanced Standing

CMTC has formal, written agreements with a growing list of Maine high schools to award credit for course work, which has been reviewed and approved by both high school and College faculty representatives.

Students who qualify for this opportunity must be admitted to a CMTC catalog program and registered for courses before the Tech Prep transfer credit is posted on their transcripts. As this catalog goes to press, CMTC has advanced credit agreements with the following 30 secondary schools and adult education centers.

Each agreement has specific conditions in terms of required competencies, credit hours and effective dates. Interested students should contact the CMTC Admissions Office and/or their high school guidance counselors for complete details

AUBURN ADULT EDUCATION
College Writing

BATH REGIONAL VOCATIONAL CENTER

Automotive Technology, Business Administration & Management, Culinary Arts

BIDDEFORD REGIONAL CENTER OF TECHNOLOGY

Automotive Technology

BONNY EAGLE HIGH SCHOOL

Automotive Technology

CAPITAL AREA TECHNICAL CENTER, AUGUSTA

Automotive Technology, Computer Technology, Culinary Arts, Graphic Arts/Printing Technology, Machine Tool Technology

CONY HIGH SCHOOL, AUGUSTA

Accounting, College Writing, Mathematics

DIRIGO HIGH SCHOOL

Mathematics

EDWARD LITTLE HIGH SCHOOL, AUBURN

Automotive Technology, College Writing, Graphic Arts/Printing Technology Operation & Management, Mathematics, Physics

FOSTER APPLIED TECHNOLOGY CENTER, FARMINGTON

Automotive Technology, Business Administration & Management

GARDINER AREA HIGH SCHOOL

College Writing, Computer Technology

HANCOCK COUNTY TECHNICAL CENTER, ELLSWORTH

Automotive Technology, Culinary Arts

HOULTON HIGH SCHOOL

Computer Technology

JAY HIGH SCHOOL

Accounting, College Writing, Mathematics

LAKE REGION VOCATIONAL CENTER, BRIDGTON

Accounting, Automotive Technology, Building Construction Technology, Culinary Arts, Computer Technology

LEAVITT AREA HIGH SCHOOL

College Writing, Computer Technology, Mathematics

LEWISTON REGIONAL TECHNICAL CENTER

Automotive Technology, Business Administration & Management, Computer Technology, Culinary Arts, Early Childhood Education, Machine Tool Technology

LISBON HIGH SCHOOL

Computer Technology

LIVERMORE FALLS HIGH SCHOOL

Computer Technology

MSAD #52 RIVER VALLEY ADULT EDUCATION

College Writing, Mathematics

MSAD #36 JAY ADULT & COMMUNITY EDUCATION

College Writing, Mathematics

MAINE VOCATIONAL REGION #10, BRUNSWICK

Automotive Technology, Culinary Arts

MID COAST SCHOOL OF TECHNOLOGY, MVR #8 ROCKLAND

Automotive Technology, Culinary Arts

MID-MAINE TECHNICAL CENTER, WATERVILLE

Automotive Technology, Culinary Arts, Machine Tool Technology

MOUNT BLUE HIGH SCHOOL, FARMINGTON

Mathematics, College Writing

NARRAGUAGUS HIGH SCHOOL

Physics

OAK HILL HIGH SCHOOL, SABATTUS

College Writing, Mathematics

OXFORD HILLS TECHNICAL SCHOOL

Automotive Technology, College Writing, Computer Technology, Culinary Arts, Graphic Arts/Printing Technology

PORTLAND ARTS & TECHNOLOGY HIGH SCHOOL, PORTLAND

Automotive Technology, Building Construction Technology, Culinary Arts, Electromechanical Technology, Graphic Arts/Printing Technology, Machine Tool Technology

PRESQUE ISLE HIGH SCHOOL

College Mathematics

RIVER BEND CAREER & TECHNICAL CENTER.**BRADFORD, VT**

Culinary Arts

SANFORD REGIONAL VOCATIONAL CENTER

Automotive Technology, Graphic Arts/Printing Technology

SCHOOL OF APPLIED TECHNOLOGY, REGION 9 RUMFORD

Building Construction Technology, Machine Tool Technology

SKOWHEGAN REGIONAL VOCATIONAL CENTER

Automotive Technology

UNITED TECHNOLOGIES CENTER, MVR #4 BANGOR

Automotive Technology, Electromechanical Technology

WALDO REGIONAL VOCATIONAL CENTER, MVR #7 BELFAST

Automotive Technology, Culinary Arts

WESTBROOK REGIONAL VOCATIONAL CENTER

Automotive Technology, Culinary Arts

WINDHAM HIGH SCHOOL

College Writing, Mathematics

WISCASSET HIGH SCHOOL

Accounting, Business Administration & Management, College Writing, Mathematics

Central Maine Tech/Prep Consortium

The following secondary schools also are members of the consortium: Bonny Eagle High School, Bridgton Alternative High School, Buckfield Jr/Sr High School, Dirigo High School, Lake Region High School, Leavitt Area High School, Lewiston High School, Morse High School, Mount Abram Regional High School, Mountain Valley High School, Northern Penobscot Technical Center, Poland Regional High School, Rangeley Lakes Regional School, Richmond Middle-High School, Rockland District High School, St. Dominic High School, Sanford High School, Telstar Adult Education, Telstar Regional High School, Training Resource Center Portland, Tri-County Technical Center and Windham R.E.A.L. School.

Learning Assistance

CMTC is committed to a student's academic success. Some students arrive at college and find they are unprepared for academic work, some have not been to school for many years, others have a poor high school record, and some find balancing work, family, college and other commitments very difficult. Whatever the reason, CMTC has developed programs designed to assist students with time management, study skills and basic academic competence. These programs include Project Success (TRIO), The Success Center and Developmental Studies. Project Success (TRIO) provides a wide variety of resources for under-prepared students including admissions testing, tutoring, placement, advising and individual academic support. Project Success (TRIO) participants must meet certain eligibility guide-

lines before participating in the Program. The Success Center (room J 312) is a quiet study area open to all CMTC students. It offers academic resources like computers, study skills seminars, learning carrels and special programs. The Developmental Studies Program is a series of courses developed to build and enhance basic academic skills. Students interested in finding out more about these programs should contact the Director of Learning Resources.

Tuition & Fees

Estimated Costs, 2003-2004 (Subject to Change Without Notice)

The following table summarizes estimated expenses for CMTC students during the 2003-2004 academic year. Because charges are subject to change, applicants are advised to inquire about charges beyond the 2003-2004 academic year.

Application Fee (non refundable)	\$ 20.00
Tuition:	
Maine Residents	68.00 per credit hour
New England RSP Participants	102.00 per credit hour
Non-Resident	149.00 per credit hour
Room and Board: All Programs	4,590.00 full academic yr.
Other Fees:	
Comprehensive Fee	6.00 per credit hour
Student Services Fee	5.00 per credit hour
Accident Insurance (Required of students carrying 12 or more credit hours)	30.00 per year
Course Fees (Estimate; varies with program of study)	250.00 per semester
Key and Damage Deposit (Required for Resident Students)	100.00
Residential/Communications Fee (Required for Resident Students)	300.00 per year
Tool Deposit (Required of Machine Tool, Automotive and Parts & Services Management majors)	100.00
Liability Insurance (Required for ECE, CLS, HUS, MEA and NUR majors)	15.00
Health & Accident Insurance (Extended Coverage) - Optional	162.00
Books, Tools, Uniforms, etc (Estimate; varies with program of study)	500.00 - 1000.00

Room and board charges are based upon Fall and Spring academic semesters and prorated for summer, extended, and other special schedules.

Books and supplies may be purchased at the Mustang Bookstore in Jalbert Hall. Information about uniforms and special tool requirements is available from Department Heads.

Applicants with questions about financial aid should contact the CMTC Financial Aid Office (755-5269).

Inquiries concerning all other financial matters should be directed to the Business Office (755-5234).

Tuition for coursework is sixty-eight dollars (\$68.00) per credit hour for Maine residents. A Maine resident enrolled for two academic semesters with fifteen credit hours of coursework in each is charged two thousand forty dollars (\$2040) for tuition. However, student course loads and required credit hours vary with each program.

New England Regional Student Program

Tuition for non-resident students admitted to CMTC programs through the New England Regional Student Program is established at 150% of the tuition charged to Maine residents. For 2003-2004, the amount is \$102.00 per credit hour. To be considered, students must clearly indicate on their application form that they wish to participate in the New England Regional Student Program.

Comprehensive Fees

A comprehensive fee of \$6.00 per credit provides for up to 10 transcripts, graduation registration, security orientation, etc.

Student Services Fee

A student services fee of \$5.00 per credit covers student activities, parking and health clinic.

Course Fees

Course fees are charged on a credit-basis. Technical courses at \$13.00 per credit and non-technical courses at \$6.00 per credit.

Costs of Books and Tools

The cost of textbooks and course supplies/tools varies according to the program, but averages about \$500-\$1100 per year. Some departments furnish students with tools. Students using College tools pay a \$100 deposit, which is refunded at the end of the year if the tools are returned in good condition.

Recording Fee for Portfolio Assessment and/or Challenge Examinations

The evaluation of learning acquired outside a sponsored collegiate setting thru portfolio assessment, standardized examinations (e.g., CLEP, etc.) or CMTC course challenge examinations are sometimes utilized in the administration of CMTC Associate Degree programs.

CMTC administered portfolio assessment and/or course challenge examinations usually take significant amounts of administrative time and paperwork. The Recording Fee for prior learning evaluation (e.g. portfolio assessments or course challenge examinations, etc.) is equal to one credit hour tuition charge (\$68.00)

The Recording Fee is non-refundable. However, a refund of pre-paid tuition will be authorized if a course is successfully challenged within the Add/Drop schedule.

Payment of Bills

Matriculating students are billed by semester for tuition, room and board charges, and fees. Bills are payable in full in August for the fall semester and in December for the spring semester. The late payment fee is \$10.00 per month. Failure to pay a bill within the prescribed period may keep a student from receiving grades, degrees, diplomas and transcripts

and/or completing registration or being included on official class lists. CMTC offers an interest free payment plan for which the fee is \$35.00 and \$50.00 if the account is delinquent.

The College does not otherwise carry open student accounts. Students may not attend classes unless they have paid all bills or have made payment plan arrangements with the Business Office for deferred payments.

Non-matriculating part-time students must make full payment of tuition and fees at the time of course registration. A purchase order or letter authorizing sponsorship must be submitted to the Business Office in order to defer payment.

Refund Policy - Matriculated Students

The Board of Trustees of the Maine Technical College System has established the following schedule as policy (No. 402) for refunding tuition and room and board payments to full and part-time matriculated students who withdraw from the College in accordance with the schedule and provision set forth below.

Tuition and Room Deposits are refundable for a period up to 120 days prior to the start of a semester.

Tuition and Room and Board Refunds

Official withdrawal from College within 10 class days of semester	80% refund
Official withdrawal from College within 11-20 class days	50% refund
Official withdrawal from College after 20 class days	NO refund
Course canceled by College	100% refund

Note: For purposes of calculating refunds, the attendance period begins on the first day of the academic

semester and ends on the date the student notifies the Registrar's Office in writing of her/his withdrawal.

Resident students who must move out of the residence halls to participate in a field experience internship to meet a curriculum requirement may be eligible for a refund of the unused portion of room and board expenses.

Refund Policy - Non -Matriculated Students

Non-matriculated students who officially withdraw (drop) from a course within the first ten class days of the semester or term will be entitled to a full refund of tuition and course fees. Official "Drop" forms may be obtained from the Registrar's Office. Properly completed and dated "Drop" forms must be in the Registrar's Office prior to the end of the "refund period" above for the applicable course(s). The Registrar's Office will notify the Business Office of all approved course withdrawals. Refunds usually require two to four weeks for processing.

Notes:

Refund levels may vary for special or short-term courses depending upon the circumstances. No refunds are given for terminations resulting from academic, disciplinary or financial dismissal. Students who believe that individual circumstances warrant exceptions from the published policy may appeal to the College President or his/her designee.

CMTC reserves the right to withhold grades, transcripts, Certificates, Diplomas or Degrees from students who have not met all financial obligations to the College.

Financial Aid

While students and their parents share the primary responsibility for financing a post-secondary education, a number of federal, state and institutional financial aid programs are available to supplement the family contribution where need exists. Within the limits of its resources, CMTC awards financial assistance to students with need in the form of federal grants, state, institutional, and privately funded scholarships, federal work-study and loans. To receive financial assistance, a student must be admitted to the College and, in most instances, must be enrolled for at least six credit hours.

All CMTC aid is awarded on the basis of financial need. Students apply for financial aid by submitting the Free Application for Federal Student Aid (FAFSA) by May 1. Students are encouraged to file the FAFSA electronically through the web site @ www.fafsa.ed.gov. A CMTC Confidential Aid Application and required copies of federal tax returns and/or documentation of untaxed income may also be required of some students. Students will be offered financial aid subject to the availability of funds. Review of student aid applications begins in early spring. THE IMPORTANCE OF FILING THE FAFSA CANNOT BE OVEREMPHASIZED. THE FAFSA SERVES AS THE BASIS FOR ALL FINANCIAL AID DECISIONS MADE AT CMTC.

Satisfactory Academic Progress

In order to receive financial aid under Title IV of the Higher Education Act (HEA) as amended, a student must maintain satisfactory academic progress in her or his course of study according to the standards and practices of the College described in the Academic Information and Policies section of this catalog. Students must

meet these standards in order to remain eligible for federal assistance.

Students who are on academic probation will be placed on financial aid probation for one semester. Students who fail to regain satisfactory academic status for a subsequent semester will lose their eligibility for financial aid.

The maximum time for full time matriculated students to complete a program and receive financial aid falls into one of the following categories:

Certificate (12 - 36 credit hours)
3 semesters

Diploma or Associate Degree
(37 - 72 credit hours) 6 semesters

Part-time students will receive aid prorated for their enrollment category as follows:

6-8 credits	1/2 time
9-11 credits	3/4 time
12+ credits	full time

Students failing to meet CMTC's satisfactory academic standards do have the right to appeal based on mitigating circumstances such as a death in the family, an injury or illness to the student, or other special circumstances. *The Financial Aid Office reserves the right to accept or reject any appeal for continued financial aid assistance.*

Types of Aid Available

Federal Pell Grants *

The Federal Pell Grant program is designed to provide financial assistance to high need students attending post secondary educational institutions. Federal Pell Grants do not have to be repaid. Awards range from \$400 to \$4000 as determined by the cost of education, need and credit hours enrolled.

Federal Supplemental Education Opportunity Grants (SEOG) *

This is a federally funded program to assist needy students. SEOG grants do not have to be repaid. Grants vary between \$100 and \$400 per academic year.

Federal Work-Study Employment (FWS) *

The Federal Work-Study program provides jobs for students who wish to earn a portion of their educational expenses. While most students work on campus, a percentage of FWS funds must be allocated to support community service activities.

Maine State Grant Program

The Maine Student Incentive Scholarship Program is designed to provide financial assistance to undergraduate Maine students. Eligible students will receive up to \$1,000 for the 2002-2003 academic year. All Maine students should apply annually by submitting the Free Application for Federal Student Aid (FAFSA) prior to the May 1 deadline.

CMTC Foundation Scholarships

CMTC is able to offer scholarships and emergency loans made possible through the fund raising efforts of the community-based Central Maine Technical Education Foundation, a private, non-profit corporation organized for the purpose of supporting CMTC programs and students. Foundation scholarships and emergency loans are available to CMTC students through the College Financial Aid Office.

Bernard Osher Foundation Scholarships

Scholarship awards ranging from \$500 to \$1,000 for eligible students enrolled full time in the General Studies and Liberal Studies Associate in Arts degree programs.

The Osher Scholarship for Associate in Arts Students

Scholarship awards for students who have been out of high school or college for at least one year and are enrolled in the Associate in Arts program.

Technical Scholarships

The Board of Trustees of the Maine Technical College System allocates scholarship funds from biennial

legislative appropriations to each Technical College. During the 2002-2003 academic year, eligible students received awards in amounts ranging from \$100 to \$500.

Native American Program

CMTC will waive tuition, and room and board charges for qualified Native Americans residing in Maine. An applicant must meet the academic qualifications of the program and must establish proof of tribal eligibility. Eligible applicants include (1) persons whose names appear on the current tribal census of the Passamaquoddy or Penobscot tribes and (2) persons who have resided in Maine for at least one year and at least one of whose parents or grandparents either was included on the census of a North American tribe or held a band number of the Maliseet or Micmac tribes.

Children of Law Enforcement Officials and Fire Fighters Killed in the Line of Duty

CMTC will waive tuition, fees and room and board charges for qualifying students.

Canada Student Loan Program

CMTC has been approved for designation as a specified institution under the Canada Student Loans Program.

Veteran's Administration Assistance Program

CMTC is an approved institution for the training of veterans and their dependents. Under the various veterans educational assistance acts (more commonly known as the GI Bill), eligible individuals qualify for financial assistance according to their form of military service.

Anyone requesting veterans educational assistance is required to have all previous post-secondary educational experience evaluated for possible transfer credit in order to be eligible for benefits.

To receive additional information, a prospective student should contact the

Veterans Administration Center, Togus, Maine 04330, (1-800-827-1000) or the Veterans Certification Officer at CMTC or call 1-888-442-4551 (1-888-GI-BILL-1) or visit their web site at www.VA.GOV/EDUCATION.

Veteran's Dependents and Survivors

Education benefits for up to 45 months may be paid to a student whose parent was permanently disabled or died from service connected disabilities. These benefits are also extended to the wives, widows, or widowers of such veterans. Similar allowances are granted to dependents of veterans with non-service connected disabilities. For additional information, students should contact the Veterans Administration Center, Togus, Maine 04330 (1-800-827-1000).

FEDERAL FAMILY EDUCATION LOAN (FFEL) PROGRAMS*

Federal Stafford Loan Program

Through a loan, students are in effect, investing their future earnings in their education. Loan eligibility is determined when the student files the FAFSA and submits a loan application to the College Financial Aid Office.

The U.S. Government will pay the interest during a student's enrollment and deferment periods. Repayment of the principal and interest begins 6 months after the student graduates. Students may borrow up to a maximum of \$2,625 in their first year of study and up to \$3,500 in their second year.

An Unsubsidized Federal Stafford Loan is available with the same terms and conditions as Stafford Loans, except that the borrower is responsible for interest that accrues while he/she is in school.

Students should apply for a Federal Stafford Loan at least 60 days before the funds are needed. Applications are available at banks or credit unions

and once completed, are submitted to the financial aid office.

Federal Parent Loans (PLUS) *

This program allows parent(s) to secure relatively low-cost loans. Contact your local bank, credit union, or savings and loan institution for more information.

*** TITLE IV FUNDS**

Title IV Financial Aid Refund Procedures

Students who receive Title IV funding are subject to mandated federal refund procedures upon withdrawal from school. A portion of Title IV grant or loan funds (not including Federal Work Study) must be returned to the Title IV programs for a student who officially withdraws before the 60 percent point in the payment period or period of enrollment. Up through the 60 percent point in time, the percentage of Title IV aid earned is equal to the percentage of the period of enrollment for which it was awarded and that was completed as of the day the student withdrew. If the student withdrawal occurs after the 60 percent point in the period of enrollment, then they have earned 100 percent of their Title IV aid assistance. The date the student withdraws (as determined by the school), is the date that the student returns a completed withdrawal form to the Registrar's office or otherwise provides official notification to the institution of his or her intent to withdraw. If the student does not notify the institution of the intent to withdraw, then the official withdrawal date will be considered to be the midpoint of the enrollment period.

Offers of financial aid are conditional upon receipt of funds from all funding sources. The Financial Aid Director reserves the right to revise offers of financial aid at any time during the year based on availability of funds and/or changes in regulation or procedures mandated by the College, State, or Federal authorities.

Student Services

Realizing that education consists of more than what occurs in classrooms and laboratories, CMTC administrators and faculty members make an effort to know each student as an individual and to respond to non-academic problems, needs and interests. They regard student services as an integral part of the educational process.

As fully participating members of the CMTC community, students are asked to attend promptly to all obligations, to use the College's facilities with care and respect, to obey local, state and federal laws, and to comply with the policies of the College.

These policies are more fully described in the Student Handbook that each student receives. Students are encouraged to become familiar with the Handbook and with other publications issued periodically, and to stay abreast of any changes in policy.

Orientation for New Students

To acquaint new students with CMTC and each other, an orientation program is held before the start of each fall and spring semester. At that time, students confirm their fall schedule of classes, have the opportunity to meet instructors, secure a student I.D. and parking sticker, and receive information on other matters related to the CMTC college experience. At Orientation, new students will participate in a program that includes a review of selected College policies and procedures, an overview of specific department policies and program requirements, and social activities.

Course Registration

The official registration process for catalog programs and courses is conducted by the Registrar's Office in cooperation with Department Chairpersons, the Division of Academic

Affairs, the Division of Student Services and the Business Office. It includes selection of courses, completion of proper forms, and payment of College charges. The Division of Student Services provides newly admitted (matriculated) students with registration details.

The Division of Academic Affairs, with the assistance of Department Chairpersons and advisors from the Learning Resource Center, coordinates academic advising and initiates the registration procedure by approving course schedules prior to processing by the Registrar and the Business Office. Matriculated students may pre-register near the end of each semester for the following semester.

New and returning matriculated students must obtain Advisor approval prior to registration. Non-matriculating students pursuing credit courses must meet published pre-requisites prior to registration and may register only during the open registration period through the Registrar's Office. A student may not register for more than eighteen credits in one semester without the permission of the Academic Advisor and the Dean of Academic Affairs. A student registration is not complete unless all related financial obligations to the College are satisfied.

Bookstore

The bookstore sells required textbooks, course tools and supplies, and novelty items. The bookstore, located in Jalbert Hall, has posted hours of operation. Within two weeks after the beginning of a course, clean, unmarked books are returnable with a receipt for a full refund. After two weeks, books are considered used.

Housing

Three residence halls provide on-campus accommodations for CMTC students. Fortin Hall contains dormitory rooms for double or triple occupancy; the other two halls contain

apartment units, each consisting of four bedrooms, a common living room, and a bathroom. All rooms are furnished with single beds, a closet, a chest of drawers, a desk and a chair. Students provide additional furnishings as desired. Students living in residence halls furnish their own sheets, blankets, towels and pillows. Coin-operated laundry equipment is available.

Rooms are assigned to full-time CMTC students, with preference given to first-year students, and selected second year students on a space-available basis.

A Residence Hall Council, consisting of Resident Assistants and interested resident students, plans activities throughout the year. A Director of Housing and Resident Director live on-campus and are available to assist student residents.

Food Service

The CMTC dining hall serves commuting students as well as those who reside on campus. Nutritionally balanced meals as well as short order service and snacks are available. The dining hall is open Monday through Friday for commuting students, and seven days a week for those who live on campus.

Student Health Services

A clinic, staffed by qualified health care professionals, is located off campus and is available to resident students. In addition to diagnosing and treating minor medical problems, the clinic provides counseling to students on health related matters. Resident student requiring healthcare services, must set up an appointment through the Dean of Students Office. Transportation to and from the clinic can be made available through the Student Services office.

When the clinic is not open, students have access to medical care through either of the two excellent hospitals

located in Lewiston, minutes away from CMTC.

Disability Services

CMTC is committed to providing the means to enable students with disabilities to develop their potential. A student requests and receives services on a voluntary basis. A student with physical and/or learning disabilities or other disabling condition should contact the Dean of Students, Admissions Office or the CMTC Disabilities Coordinator, prior to or during the application process or prior to a course registration filed with the College.

The Disabilities Coordinator will review the request and documentation and may initiate an assessment to validate the disability and, if warranted, recommend reasonable accommodations to the Academic Affairs and Student Services Divisions of the College. The Disabilities Coordinator will facilitate the implementation of approved recommendations and support services that the student, faculty or staff may need to make reasonable accommodations.

Insurance

Two plans of insurance are available to CMTC students. Plan I covers students for medical costs incurred as a result of accidents during the school year. All full time students are enrolled due to the intensive shop, laboratory, and field activities that are inherent to the training programs offered at CMTC. A nominal fee is charged. Plan II extends the coverage of Plan I to 12 months, and reimburses actual medical expenses according to schedules for illnesses covered. It is optional.

Students majoring in Early Childhood Education, Clinical Laboratory Science, Human Services, Medical Assistant and Nursing, are required to purchase professional liability insurance through CMTC, which provides coverage during their clinical

experience. Students in the Associate Degree Nursing Program (who are LPNs) are required to provide their own professional liability insurance as LPNs, as well as purchase liability insurance through CMTC as RN students.

SPECIAL NOTE: With regard to the school insurance extended coverage policy be advised that: pregnancy or childbirth, false pregnancy, termination of pregnancy, related medical conditions and recovery therefrom, shall be payable as any other sickness. Questions concerning the above should be directed to the Director of Finance or Dean of Students.

Student Activities

Many major activities and events on campus are initiated by CMTC's Student Senate, made up each year of student representatives from each college major. Student activities are varied and are intended to appeal to the educational, recreational, athletic and social interests of students. Financed by Student Activity Fees, the activity program includes both campus-based activities and the use of community recreational facilities. The Kirk Hall Gymnasium has posted hours for recreational activities. With support from the Dean of Students Office, commuting and residential students at CMTC may organize activities and events. Scheduled events are announced on CMTC's electronic bulletin board, which can be found in most campus buildings. The College maintains close relations with the YMCA and students may participate regularly in the activities of that facility.

In arranging student activities, the Student Senate takes full advantage of the rich recreational and entertainment possibilities in Auburn/Lewiston, Maine's second largest urban area. Funds allocated to the Student Senate budget are used to offset the cost of such outings.

Other student clubs and organizations that have been available from year to year for students include: CMTv, a video club with an on-campus TV studio. Lakeside Players, CMTC's own Drama Club. Women in Technology, American Society of Safety Engineers, Intramural activities, an International Student Club, and Mixed Nuts - a publication of creative works by and for students.

Phi Theta Kappa

Alpha Phi Xi is the CMTC Chapter of the Phi Theta Kappa Society, an international honor society serving two-year colleges offering associate degree programs. CMTC students who are enrolled in an associate degree program, who have completed 12 credit hours and who have established a cumulative grade point average of 3.6, are eligible for membership.

Athletics

All students have the opportunity to participate in intramural sports such as volleyball, softball, basketball, and a variety of student initiated gym games. Full time matriculated students may also try out for our intercollegiate teams. Presently we offer baseball and soccer in the fall for men, and men's and women's basketball in the winter. All teams participate in the United States Collegiate Athletic Association. We also participate in a New England and Maine league for selected teams. Students have the opportunity to petition the athletic department to form other teams. We offer open gym whenever the teams aren't in season. Students must meet athletic and academic eligibility requirements to participate in intercollegiate sports.

Motor Vehicles

Students wishing to use a motor vehicle on campus must register the vehicle with the Student Services Office and obtain a parking decal. Vehicles and all other personal property on

campus are the sole responsibility of their owners. Off-road vehicles are not permitted on campus.

Student Counseling

Student counseling is available during the week with office hours by appointment in the Student Services Center. Personal issues and concerns can be discussed confidentially in order for students to deal with issues that may hinder their ability to fully attend to their studies.

Department heads, faculty, and Student Services personnel offer academic counseling. The Vice President/Dean of Academic Affairs is also available to assist students with academic issues.

Career Planning, Counseling and Placement Services

The Director of Career and Support Services provides career counseling in areas of career exploration, career planning, and choice of major. A variety of personal assessment instruments are offered along with computerized career guidance software to provide additional career exploration assistance. The career library in Student Services may also be helpful for students.

Central Maine Technical College takes pride in the excellent placement record of its graduates. The Director of Placement Services provides formal job placement services for students and works closely with business and industry to develop opportunities for positions throughout the State. Day and evening hours are available by appointment and all of the above mentioned services can be accessed through the Student Services Offices in Jalbert Hall.

Many department heads and faculty have close working relationships with community businesses, and they assist and advise students regarding placement in occupations relating to students' training. Part-time and

summer positions are also available to students who want to work while attending college. For the latest job listings, visit the Student Services Center or the college web site, www.cmtec.net.

Gender Equity Coordination

CMTC supports its students by providing a part-time coordinator for gender equity issues and programs. The Gender Equity Coordinator is instrumental in recruiting and retention efforts especially for the college's female and male students who pursue non-traditional majors. The coordinator acts as advisor to the student-run Women in Technology club, organizes the Central Maine Coalition for Women in Trades and Technology, and provides for many exploratory opportunities for men and women in technical education and careers.

Changing Major Programs of Study

A matriculated student may change from one major program of study to another by filing a completed "Change of Major" form with the Registrar's Office. The student's Academic Advisor, the Department Chairperson of the program the student is leaving, and the Department Chairperson of the program in which the student wants to enroll should all sign and date the form. Forms are available from the Registrar's Office.

Change of Award

When catalog programs lead to more than one award (Associate in Arts, Associate in Science, Associate in Applied Science, Diploma, or Certificate), students may change their goal from one award to another through the Add/Drop period of their final semester with the permission of their Academic Advisor and the Registrar. As program requirements vary among awards, students should consult the College catalog in effect in the semester of their admission to the

program. Academic achievement, motivation, and commitment to the desired program will be used as criteria for granting a change of award. Change of Award forms are available from the Registrar's Office. Legitimate medical or personal emergencies as determined by the Dean of Academic Affairs may justify waiver of this policy.

Transcript of the Permanent Academic Record

The permanent academic record is maintained by the Office of the Registrar for all students of the College. While the grade report is the official notification to the student and the faculty advisor of the student's academic achievements for a given semester, the only true and valid documentation of academic work and student status is an official transcript of the academic record, stamped with the Registrar's signature and embossed with the seal of the College. The transcript is available only with the permission and signature of the student and will be released to that student or a designee only if there are no outstanding charges against his or her account with the Business Office. Transcript applications are available from the Registrar's Office. The first 10 requests are free.

Confidentiality Policy and Release of Student Information

The College complies fully with the Family Rights and Privacy Act of 1974. (The Buckley Amendment). According to the Family Educational Rights and Privacy Act of 1974, a student has the right to inspect and review any of his/her official records, files, and dates directly related to him/her that are in the possession of the College. Only with written consent of a student is such information released to someone other than an official of CMTC. CMTC considers the following information to be directory information which is available to the general public unless a student

notifies the Registrar's Office that he/she wishes the information to be withheld: name, address, telephone number, major, dates of attendance, date of graduation, and other non-academic information. If a student wishes to withhold this information, he/she may indicate so by checking the directory exclusion box on the CMTC application form or notifying the Registrars office in writing.

Transfer of Credit from CMTC

Because the New England Association of Schools and Colleges, Inc. accredits CMTC, course credits are eligible for transfer to other colleges and universities. However, it is important to note that the receiving institution always reserves the right to determine whether or not credits will transfer. For specific information, the student should contact the institution to which he/she wishes to transfer (see Academic Affairs section of the catalog for more transfer information).

Students Called to Military Service

A number of students at the College are active military members. Central Maine Technical College recognizes that the educational rights and responsibilities of these students must be protected in the event that the students are called to service as a result of international or national crises. A Special Withdrawal form is available from the Registrar's Office.

In the event that a matriculated service member is called to active service, the following will apply.

Financial

1. Tuition and Fees: When students return, they will be entitled to free tuition and fees equal to the number of credits they were carrying at the time of departure.
2. Room and Board: Students will be entitled to a prorated refund of room and board charges.

Re-Admission/Registration

1. The student's file will be kept active for 12 months. Upon request, this status may be extended if military service exceeds 12 months.
2. The College will guarantee a slot in the student's original program of study provided that the student notifies the institution on a timely basis of intent to return to the College.

Withdrawal from the College

To officially withdraw from the College, a student must obtain and complete a form from the Registrar's Office. If a student officially withdraws from the College during the first ten class days of a semester (five days during the summer session), there will be no grades recorded. Students who do not officially withdraw from the College (fail to complete the withdrawal form) are subject to grades of 'F'. Students receiving financial aid may owe a refund of federal funds disbursed based upon the approved federal refund policy. Withdrawal forms are available from the Registrar's Office.

Policies and Procedures

Matriculation Policy

Matriculation is the formal registration of a student into a program leading to a Certificate, Diploma or Associate Degree. A matriculated student is one who has met prescribed admission requirements and has been officially admitted to a catalog program and has registered for a course in the curriculum.

Matriculated students (admitted to catalog programs) maintain their status for ten calendar years from the first semester of course registration at the College. A minimum of three credit hours of appropriate CMTC course work must be successfully completed each calendar year or an application for re-admission must be filed with the Admissions Office.

CMTC is accredited through the New England Association of Schools and Colleges, Inc. In addition, many programs are accredited at the national level. Along with other colleges and universities in New England and throughout the country, we have adopted a commitment to the improvement of student learning. In order to gauge our progress in this area, the College conducts periodic assessment activities during the course of the year. Therefore, students will be asked to complete surveys and/or be asked to participate in standardized testing, providing necessary information pertaining to the learning process. Students can be assured that participation in these activities will in no way effect the grading process. Participation however, is required for graduation. Questions may be addressed to the Office of Academic Affairs.

Graduation Requirements

Central Maine Technical College offers the Associate in Arts, Associate

in Science, and the Associate in Applied Science degrees as well as a variety of diplomas and certificates. To be eligible to receive an associate degree, diploma or certificate, students must complete all the requirements of the college-designated and Maine Technical College System approved program of study in addition to:

- 1) Satisfactory completion of all courses required in the program.
- 2) Completion of the total number of credit hours with a minimum cumulative grade point average (GPA) of 2.0.
- 3) Participation in College-wide or Program specific assessment activities.
- 4) Meet the minimum residency requirements as outlined below.
- 5) Fulfillment of all financial obligations to the College.

Minimum Residency Requirement

All programs (AA, AAS, AS, Diploma and Certificate) require that a minimum of twenty five percent (25%) of their program course requirements be completed at CMTC.

Graduation Procedure:

- 1) Any student who believes that he/she has or will meet the degree requirements for graduation by the end of the spring or summer semester, must complete an application to graduate form no later than the last Friday in March. The forms are available from the Registrar's office. Requests received after the last Friday in March will be considered only under special circumstances and may result in the late delivery of the award.
- 2) All degree requirements, including transfer credit must be completed and accepted by the College prior to the last semester

of enrollment. The only exception are the courses in which the student is currently enrolled. Note: Any delay in the acceptance of transfer credit will result in delay of awarding the degree.

- 3) Students who are no more than 3 credits short of completing degree requirements and wish to participate in the graduation ceremony may do so, if the student is enrolled for the required credits during the next term that the course or courses are available. In this case, the degree or certificate will be awarded at the end of the term when the required credits have been earned.

Effective Catalog for Graduation Requirements

A new student must satisfy the graduation requirements set out in the catalog in effect for the first semester of her/his attendance as a matriculated (admitted) student. A student whose matriculation has expired forfeits the right to pursue an award according to the provisions of the original catalog and is bound instead by the catalog in effect for the first semester of attendance as a re-admitted student.

Multiple Degrees

CMTC students may earn multiple degrees by completing all courses required for additional degrees which were not successfully completed when meeting the requirements of the first degree. Only one degree and major may be pursued at a time. Details are available from the Registrar's Office.

Academic Credit for Prior Learning

CMTC recognizes several procedures for the assessment of learning acquired outside a sponsored collegiate setting. Students are encouraged to explore all of the credit options available to them. It is possible to earn significant credit

based on standardized examinations (e.g., CLEP), CMTC course challenge examinations, or credit for college level learning gained through paid or unpaid employment, self-directed study, or through vocational talent and skills. For further details regarding the following prior learning options, students should contact their Academic Advisor or the Office of Academic Affairs.

Students who seek credit for prior learning must be formally admitted (matriculated) into a CMTC program in order to earn credit through these procedures. In addition, students who are admitted to CMTC programs must earn a minimum of 25% of their program course requirements from CMTC in order to be awarded a degree of the College. Students should also realize that college credit earned through any of these options will count toward Degree/Diploma/Certificate requirements, but that the credit will not be included in computing the grade point average. Students should also know that upon admission (matriculation), all collegiate courses taken more than ten years in the past are subject to review. In some cases, course content may be outdated and, therefore, not acceptable for transfer or other credit.

Prior Learning Options

Articulation Agreements with High Schools

CMTC has established articulation agreements with some Maine high schools and vocational/technical centers for the purpose of awarding academic credit for prior learning which is equivalent to selected CMTC course work. Additional details are found in the Tech Prep section of this catalog.

DANTES (Defense Activity For Non-Traditional Education Support)

The DANTES College Credit Examination Program is a testing service

conducted by the Educational Testing Service (ETS) for DANTES, an agency for the Department of Defense. Originally designed for military personnel, the DANTES Credit by Examination program is now available to all American colleges and universities, giving them the opportunity to offer college credit to qualified students. The DANTES Subject Standardized Tests are a series of tests in a wide range of introductory college-level academic, vocational/technical and business subjects. To initiate consideration for this option, students should arrange for scores earned through DANTES to be sent to CMTC's Registrar's Office.

Challenge Examinations

CMTC provides matriculated students with the opportunity to challenge some catalog courses of the College for which they believe they are well qualified. Credit by challenge examination will not be offered for courses in which a CLEP examination exists. Requests for course challenge examinations are approved by Department Chairpersons or the Academic Dean in consultation with appropriate faculty. If a student obtains a "C" or better, the credit earned will be awarded toward the student's degree. This credit will not be included in computing the grade point average.

Students may apply for Credit by Examination by completing the appropriate form available at the Registrar's Office. The fee for a course Challenge Examination is equal to the cost of one credit hour and, if applicable, the cost of laboratory supplies and materials. Payment to the Business Office is required before the examination is administered. Unless otherwise approved, by department chairs, challenge exams will be administered only during the add/drop period of the semester.

Enrollment in the class is not necessary to challenge the class.

Before applying for a Course Challenge Examination, the student should meet with her/his Academic Advisor. Challenge Examinations will be limited to one attempt per course in a calendar year.

CLEP Examination (College Level Examination Program)

Students can earn credits toward a degree by passing CLEP exams in a wide variety of subject areas such as English, Math, Biology, Chemistry, Psychology, Sociology, Economics, Accounting, Marketing, Business Law, etc. To apply, contact the CMTC Registrar for information about CLEP exams. The student must make their own arrangements to take the exam(s) and have the scores sent directly to CMTC. These standardized exams are conducted several times throughout the year at college and university locations in Maine and across the country.

Military Service Experience

College credit based on the American Council on Education's Guide to the Evaluation of Education Experiences in the Armed Services is the basis of this option. A DD214 form, a DD295, and/or other appropriate documentation must be provided by the student to the Registrar.

ACE Credit Evaluation Service

Matriculants who have participated in programs and courses (e.g., National Joint Apprenticeship and Training Committee for the Electrical Industry, I.B.E.W. and NECA) offered by non collegiate organizations may qualify for credit evaluations through the Ace Credit Evaluation Service. Details are available from the Registrar or Office of Academic Affairs.

Portfolio Assessment

Credit for Portfolio Assessment offers matriculated students the opportunity to demonstrate learning gained through relevant life experiences and apply this learning toward a Degree. In this procedure, students develop an extensive portfolio which is assessed under the direction of the Office of Academic Affairs, appropriate faculty members and, in some cases, outside resource persons from business and industry. Applicable academic credit will be assigned to the student's degree program.

Successful completion of courses in College Writing and Technical Writing must be completed before students are permitted to initiate this option. If a student wishes to pursue the Portfolio Assessment procedure, he/she should meet with his/her Academic Advisor and the Dean of Academic Affairs. The Portfolio includes several major sections including an amplified resume; a narrative summary of relevant work and learning experiences; a listing of the skills, knowledges and competencies for which CMTC credit is requested, and all appropriate and official supporting documentation that is available. The student will be encouraged to successfully complete ENG 296, Portfolio Preparation Seminar (1 cr) before presenting her/his portfolio for evaluation.

Once the Portfolio has been produced, a meeting with an appropriate evaluation team will be arranged by the Dean to review the Portfolio and how it reflects the outcomes of one or more catalog courses. The final step involves a review of the Evaluation Team's recommendations by the Dean. If credit for the Portfolio is granted, the courses that correspond to the credit will be waived. The transcript will note a "P" and the appropriate academic credit.

SOC (Servicemembers Opportunity Colleges)

As a member of SOC, CMTC is committed to providing educational opportunities for all military personnel who can profit from our courses and programs. Servicemembers Opportunity Colleges is a consortium of over 1100 colleges and universities who have pledged to assist servicemembers and veterans who are in pursuit of college degrees. Additional details are available from military training and education officers or the CMTC Admissions Office.

Transfer Credit from Colleges and Universities

Students may transfer credits from other regionally accredited colleges into a CMTC catalog program provided they earn a grade of "C" (not C-) or better, and that the credits are relevant to the CMTC degree program. To apply, students must contact other colleges they have attended and arrange for official transcripts and course descriptions to be sent to CMTC's Director of Registration and Records. Students who are transferring courses within CMTC may transfer any course applicable to the new major program of study along with all the grades they previously earned. The student's Academic Advisor, Program Chairperson and the Registrar will work with the student to insure an appropriate transition. The Director of Registration and Records will decide which courses will be transferable and will consult faculty members when appropriate. Transfer credit application forms are available from the Registrar's Office.

Note: Students requesting Veteran's Educational Assistance are required to have all previous post-secondary educational experience evaluated for possible transfer credit in order to be eligible for benefits.

Academic Ethics

Honesty in all academic work is expected at CMTC. Any student who is suspected of academic dishonesty will face investigation and possible disciplinary action, which may include dismissal from the College. Academic dishonesty includes, but is not limited to: using unauthorized aids, copying another person's work on exams, quizzes, and assignments, and taking language, information or ideas from another person or source without noting the appropriate reference. A teacher who suspects or discovers an incident of academic dishonesty may deal with the situation directly with a fair and appropriate sanction, postpone action until consultation with other College officials takes place, or refer the incident to the College Disciplinary Officer for review and action.

Academic Amnesty

Students who have had a break in enrollment from the College for at least two calendar years may, upon application for admission, file a written petition for academic amnesty. The Dean of Academic Affairs in consultation with the Department Chair and faculty of the program to which application is being made, will make the final determination. When students are granted academic amnesty, all grades from CMTC credit course work completed at an earlier date are eliminated from computation of the grade point average and will not be applied to a Certificate, Diploma or Degree program at CMTC. Previous credit coursework at CMTC will not be removed from the student's scholastic records and transcripts. However, these records will clearly indicate that academic amnesty has been granted and the date that amnesty was approved.

Auditing Courses

An auditor is a student who meets course pre-requisites and attends a class to acquire knowledge, but not to

earn credit or a grade. Audited courses do not count toward completing Certificate, Diploma or Degree requirements. An auditor may not change his/her status after the second class meeting. Auditors must attend classes regularly, do assigned reading, and participate in discussions, but they are excused from examinations.

Auditors are admitted to a course on a space available basis, contingent upon the approval of the instructor. Students who audit courses pay regular tuition and related fees.

CMTC Course Numbering

001-009 Developmental courses (credit may not be applied towards a Certificate, Diploma, or Degree credential);

010-099 Limited to Certificate and Diploma credit;

100-299 Certificate, Diploma and Associate Degree credit.

Note: Students pursuing an Associate Degree should not register for courses with numbers less than 100 unless meeting pre-requisite or specific major program requirements.

Attendance Policy

Students are expected to attend all classes. Punctuality is expected. If an absence is necessary due to illness or emergency, the student is responsible for contacting the instructor to make up any missed work. In cases of excessive absenteeism, the instructor can recommend to the Department Head and the Dean of Academic Affairs that the student be dismissed from the course or the program.

Athletes must notify their instructors one week prior to any absence. Excused absences are given for participating in varsity athletic contests only. Athletes are responsible for all work missed. The instructor and athlete will make every reasonable effort to establish an acceptable make-up procedure. If no reasonable

alternative for make-up is possible, academic standing should have priority over athletic participation. Sponsored students (V.A., T.R.A., etc.) will be responsible for getting course attendance verification from instructors.

Course work at other Institutions

Matriculated students at CMTC are expected to secure written approval from their Academic advisors prior to taking course work at other accredited institutions. Approved credit courses taken at other institutions will count towards total degree credit hours required but will not be figured in the student's cumulative grade point average. See the Registrar for details.

Add/Drop Policies (for Catalog Courses)

Adding a course:

Courses may be added only during the first 10 class days of a semester.

Dropping a course:

During the first 10 class days of a semester: (First 5 days during the summer session) Courses may be dropped. Tuition is refunded. No grade will appear on transcript.

After the first 10 class days, but before mid-semester: Courses may be dropped. No refund. A "W" will appear on the transcript and will not be figured into the grade point average.

After mid-semester: Courses may be Dropped, but a grade of "F" will be recorded by the Registrar. This grade will be figured into the grade point average. In extraordinary circumstances (e.g. health, personal hardship) the Academic Dean may authorize an Administrative With-

drawal ("AW") which will not affect the grade point average.

The date that properly completed Add/Drop forms are received and date-stamped by the Registrar's Office will be considered the official date of record. Students who do not officially Drop courses within the Add/Drop period (the first 10 class days of a semester) assume all financial obligation for tuition and fees.

If a matriculated student drops all classes, then the Board of Trustee refund policies shall apply (see pg 15)

Please Note: CMTC reserves the right without notice to extend the Add/Drop period of 10 class days because of weather related cancellations or other extraordinary circumstances. Student Add/Drop requests for courses scheduled to meet for less than a full academic semester will be considered on an individual, case by case basis by the Registrar.

Students who find their names missing from the instructor's official class list (after the Add/Drop period) should work with the Registrar's Office to make necessary corrections in the registration records.

Add/Drop Procedures

For Degree, Diploma and Certificate Students

To Add a Course:

1. Discuss your plans with your Academic Advisor, complete the Add form and obtain his/her signature and date on the form;
2. Contact the course instructor or Department Chair and obtain her/his signature with the date on the Add form;
3. Submit the completed and dated Add form to the Registrar's Office (room J-6) as quickly as possible.

To Drop a Course:

1. Discuss your plans with your Academic Advisor, complete the Drop form and obtain his/her signature and date on the form;
2. If possible, notify the instructor of the course or the appropriate Department Chair;
3. Submit the completed and dated Drop form to the Registrar's Office as soon as possible.

For Non- matriculants (Not Enrolled in a Catalog Program)**To Add a Course:**

Discuss your plans with a Counselor in Student Services or the personnel in the Academic Affairs Division Office and complete the appropriate form(s).

To Drop a Course:

1. Discuss your plans with a Counselor in Student Services or the personnel in the Academic Affairs Division Office, complete the Drop form and obtain her/his signature and date on the form;
2. If possible, notify the instructor of the course or the appropriate Department Chair;
3. Submit the completed and dated Drop form to the Registrar's Office as soon as possible.

Repeated Courses

When a student repeats a course and earns a grade of A, B, C, D, F, or P, the initial grade remains on the transcript but only the highest grade is used in computing the grade point average. No course in which one of the above grades has been earned may be repeated more than once without written permission of the Dean of Academic Affairs or designee.

TABLE 1**Explanation of Grades, Symbols and Codes**

The quality of performance in any academic course is reported by a letter grade. The letters are translated to grade points for the purpose of calculating semester and cumulative averages. These grades denote the character of work and are assigned grade points as follows:

<i>Letter Grade</i>	<i>Description</i>	<i>Grade Points</i>
A	Excellent Achievement -	4.00
A-		3.67
B+		3.33
B	Good -	3.00
B-		2.67
C+		2.33
C	Satisfactory -	2.00
C-		1.67
D+		1.33
D	Poor/Low level achievement -	1.00
F	Failure to meet the minimum level of course objectives	0.00
I	Incomplete -No credit. The "I" grade is used for verifiable and unavoidable reasons. Since the "incomplete" extends enrollment in the course, requirements for satisfactory completion must be established through student/faculty agreement and approved by the Department Chair, Dean of Academic Affairs or designee. Courses for which the grade of "I" (incomplete) has been posted must be completed by the end of the subsequent semester (excluding summer) or the "I" will be converted to an "F."	
P	Pass; used to designate satisfactory performance in certain courses open to the Pass - Fail option. Also used to indicate that a student has successfully challenged (tested out of) a course. Academic credit is awarded, but grade points are not calculated when a "P" is issued. Requests for this grade option are approved by the Office of Academic Affairs in consultation with the appropriate department chairperson or faculty.	
T	No grade points; grades for courses that have been accepted by CMTC as transfer (T) credit from other institutions are not computed in the grade point average.	
L	Stopped attending a course without officially "Dropping." The grade of L will be computed as an F.	
AU	Audit -No credit (permission of the instructor is required to audit a class). Student attended the course on a non-credit basis.	

Repeated Courses -When a student repeats a course and earns a grade of A, B, C, D, F, or P, the initial grade remains on the transcript but only the highest grade is used in computing the grade point average. No course in which one of the above grades has been earned may be repeated more than once without written permission of the Dean of Academic Affairs or designee.

- | | |
|----|---|
| AW | Administratively Withdrawn. Authorized by the Dean of Academic Affairs, usually for compelling personal and/or confidential circumstances. |
| W | No grade points. A "W" is assigned to students who withdraw from a course or the College after the "Add/Drop" period thru the date of the mid-semester or term. |

**No grade reported. The student should contact the instructor to resolve the matter.*

- | | |
|---|---|
| M | Grade omitted from the student's official record because Academic Amnesty has been granted. |
|---|---|

Academic Progress Reports

Notices are issued when deemed appropriate during the semester by faculty to students whose performance is unsatisfactory. The notice is in the form of a written report which describes deficiencies and suggests appropriate remedial action. Students who receive such notices should meet with their instructor(s) to discuss the problem(s) in more detail. Progress reports calling attention to outstanding, or satisfactory achievement are also issued by faculty.

Academic Conflict Resolution/Grievance Procedures

Whenever an academic question or difference arises between an instructor and a student, the following procedure will be followed:

1. The student will discuss the issues with the instructor; if unresolved,
2. The matter may be discussed with the Department Chair, or Program Advisor; if still unresolved,
3. The matter may be referred to the Dean of Academic Affairs; if further action is needed,
4. The matter may be appealed to the Academic Standards Committee.

If the issue in question relates to the teaching process, and is not resolved at the Academic Dean's level, students may request a review by the Academic Standards Committee which may serve as an appeals board in such matters. Such requests, in writing, should be addressed to the Committee Chairperson and must state the nature of the problem. In hearing appeals the Committee will follow a procedure similar to that which is outlined in Section VI, H of the Student Code of Conduct.

Appeal procedures have also been developed for resolving conflicts

TABLE 2

Grade Point Average

Academic standing is reported at the end of each semester by using the grade point average, which is determined by multiplying the grade point value (0.00 to 4.00) for each letter grade by the number of credits earned in the course, totaling the grade points, and dividing the sum by the total number of credits attempted for the semester. For example:

<i>Course Points</i>	<i>Credit Hrs. Attempted</i>	<i>Letter Grade</i>	<i>Grade Pt. Value</i>	<i>Credit Awarded</i>	<i>Grade</i>
GAT 104 Copy Preparation Theory	1	F	0.00	0	0.00
GAT 105 Copy Preparation Operations	2	A	4.00	2	8.00
GAT 111 Offset Preparation	3	B-	2.67	3	8.01
GAT 121 Copy Center Management	1	L	0.00	0	0.00
GAT 131 Duplicator & Finishing Ops	3	A	4.00	3	12.00
MAT 101 Business Mathematics	3	C	2.00	3	6.00
ENG 101 College Writing	NA	T	0.00	3	0.00
	13			14	34.01

Computation of Grade Point Average 34.01 13 = 2.616

TABLE 3

Academic Standards

Minimum cumulative grade point averages for all catalog programs of the College are as follows

<i>For Students Pursuing The Award of</i>	<i>For Probationary Standing</i>	<i>For Good Standing</i>
<i>a Certificate</i>		
0 - 15 credit hours attempted	1.500 - 1.799	1.800 or higher
16 - 36 credit hours attempted	1.800 - 1.999	2.000 or higher
<i>a Diploma</i>		
0 - 36 credit hours attempted	1.500 - 1.799	1.800 or higher
37 - 72 credit hours attempted	1.800 - 1.999	2.000 or higher
<i>an Associate Degree</i>		
0 - 36 credit hours attempted	1.500 - 1.799	1.800 or higher
37 - 72 credit hours attempted	1.800 - 1.999	2.000 or higher

relating to affirmative action and discipline matters. These procedures are described in the Affirmative Action Plan and the Student Code of Conduct. Additional details are available from the Division of Student Services.

Grade Reports

Grade reports are mailed to all students at their home address of record approximately two weeks after the end of each semester. Final grades cannot be secured in advance from

the Registrar. Failure to pay a bill for fees and charges within the prescribed period may keep a student from receiving grades. For an explanation of Grades, Symbols and Codes, see Table 1. For an explanation of GPA, see Table 2.

Academic Record Changes

Considerable care is taken to ensure that course registration and grades entered on a student's permanent record are accurate. Any student who suspects an error has been made

should take the matter up immediately with the Registrar's Office. Records are assumed to be correct if a student does not report to the Registrar's Office within one year of the completion of the course. At that time, the record becomes permanent and cannot be changed.

Academic Honors

At the end of each semester an Honors List is published for the purpose of recognizing the achievement of matriculated students who have carried a minimum of 6 credit hours and earned a minimum semester grade point average (GPA) of 3.300. No course grade within the term may be below a "C" and no "P" grades may be counted toward the minimum 6 credit hours carried. Any term with an "I" grade will be ineligible for Honors recognition. The 3 categories of Academic Honors are: Honors - 3.300 to 3.599; High Honors - 3.600 to 3.899; President's Honors - 3.900 to 4.000.

Academic Probation

At the end of each semester, students must achieve the cumulative grade point average listed in Table 3 in order to remain in good academic standing. Students with grade point averages lower than those listed will be placed on academic probation, suspension or dismissed from the College. A semester grade point average falling below 1.500 will, at a minimum, place the student on academic probation.

Any student on probation must achieve a semester grade point average of at least 2.000 or risk academic suspension or dismissal.

Academic Suspension

Students who have two consecutive semesters of probationary standing may be suspended at the discretion of the Dean of Academic Affairs. In addition, a student may be suspended by the Dean if the semester grade

point average falls below 1.500 or if the cumulative grade point average falls below probationary standing as listed in the Academic Standards Table 3. While under suspension students may not take course work, either at Central Maine Technical College or at other institutions, to be applied for credit at CMTC without permission of the Dean. Academic suspensions are imposed for a length of one academic semester. Other conditions of suspension are outlined in the letter to the student from the Dean. For details concerning disciplinary suspension and dismissal, consult the Student Code of Conduct in the Student Handbook.

Re-enrollment after Academic Suspension

Students who have been matriculated in catalog programs are eligible for re-enrollment at the College in accordance with the conditions outlined in their letters of suspension. Unless noted otherwise in the letter of suspension, the student may request reinstatement after one academic semester.

Unsatisfactory Progress

A student who is a matriculant in a catalog program is expected to complete and pass the courses for which he or she is registered during a given semester. A student who fails or withdraws from more than two courses during a semester may be placed on academic probation or suspended by the Dean of Academic Affairs in consultation with the Academic Advisor and appropriate Department Chair.

Academic Dismissal

Students faced with academic suspension for a second time are dismissed from the College. In rare cases, students may be readmitted after being dismissed if they can provide evidence of significant academic improvement to the Dean of Academic Affairs. Such evidence

would normally include high quality academic course work at another institution. For details of disciplinary dismissal, consult the Student Code of Conduct.

Academic Appeal

Students wishing to appeal an Academic Suspension or Dismissal must make the appeal, in writing, through the Dean of Academic Affairs. The appeal will be presented to the Academic Standards Committee and, if the appeal is granted, the student will be placed on Academic Probation for the semester identified in the request. If the appeal is not granted, the student may apply for reinstatement to the College after meeting the terms of the suspension or dismissal.

Withdrawal from the College

To officially withdraw from the College, a student must obtain and complete a Student Withdrawal Record form from the Registrar's office. If a student withdraws from the College during the first ten class days of a semester, there will be no grades recorded.

Non-Matriculated Students

Non-matriculated students (not formally admitted to a catalog program) may register on a space available basis for scheduled catalog courses providing the student meets the prerequisites for the course. Such registration should be completed through the Registration Office.

Academic Services

Academic Advising

All students (full or part-time) who have been admitted (matriculated) into catalog programs are assigned an Advisor. The primary role of the Academic Advisor is to guide the student (advisee) toward the accomplishment of her/his academic goal (Associate Degree, Diploma or Certificate).

The primary functions of the Academic Advisor are to: meet with the student periodically to review her/his academic status and progress; review and approve registrations for official enrollment with the Registrar; review and provide advice on student plans for "Adding or Dropping" previously approved courses; maintain "matriculation worksheets" (paper or electronic) based upon the CMTC program catalog requirements in effect in the first semester of the student's enrollment as a matriculant; and refer advisees to appropriate College personnel when necessary.

Students are assigned to Academic Advisors by Department Chairpersons or the Dean of Academic Affairs. Advisor assignments are made after the student is admitted to a program. Changes of Advisors are approved by Department Chairs or the Dean of Academic Affairs and written notification made to the Registrar.

Learning Resources

The Learning Resources Department is responsible for providing academic support services to CMTC students. It supports student learning by providing a wide variety of assistance activities including Testing Services, TRIO, the Success Center (Jalbert Hall, room J 415) specialty courses and Developmental Studies course work.

Testing Services

Applicants who have SAT scores more than two years old or have not completed college level course work in English and Mathematics with a grade of C or better are required to complete placement tests in reading, writing, math, and basic algebra.

CMTC uses two kinds of tests to evaluate basic academic skills. The first test is The College Board's Accuplacer® and it evaluates reading, arithmetic and elementary algebra skills using a series of standardized examinations. Accuplacer® is com-

puterized, un-timed and its results are reported using "percentile scores". The second test is a timed writing sample that evaluates basic writing skills by asking that a short essay be written on a specific topic. Using a scale from one to twelve, the writing sample is holistically scored by two CMTC readers.

Scores from the various tests are used to assess a student's basic academic skills and assist with academic advis-

CMTC uses the following guidelines for academic advisement and placement:

<i>Test</i>	<i>Score</i>	<i>Placement Recommendation</i>
Reading	40th percentile or better	Standard college courses
Reading	39th through 27th percentile	ENG 050 Intro to Academic Reading
Reading	26th through 11th percentile	ENG 030 Reading Workshop
Reading	10th percentile or less	Basic Reading/Literacy -Adult Education
Writing	6 or better	ENG 101
Writing	5 or less	ENG 021
Mathematics	4 or less	Basic Mathematics - Adult Education
Mathematics	5 or better	Placement guidelines are located in the Course Description section of this catalog

ing and placement in appropriate courses or services.

TRIO

TRIO provides a wide variety of resources for students who are under prepared for college. These services include placement or assessment testing, evaluation, tutoring, placement advising and individual academic support. TRIO participants must meet certain eligibility guidelines before participating in the Program. Students interested in finding out more about TRIO should contact the Director of TRIO at (207) 755-5206 or visit the TRIO Office in Jalbert Hall, room J-415.

Success Center

The Success Center located in J-415 is a quiet study area open to all CMTC students. It offers academic resources such as computers, learning carrels, adaptive equipment, tutoring and special programs.

Developmental Studies

Developmental Studies is formal course work designed to improve study and learning habits, reading skills, writing competence, and mathematics abilities. Basic skills are expected to be developed to satisfactory levels within two academic semesters. Developmental courses (ENG 010, ENG 021, ENG 030, ENG 050, MAT 030 and LER 010, LER 015, LER 025) are listed in the

Course Descriptions section of this catalog.

Library

The Library supports the mission and curriculum of the College and works in partnership with the faculty, staff and students to create lifelong learners and experienced information users. Recognizing the vital role the Library plays in the educational development of the student, the Librarians acquire, store, disseminate, and interpret information in multiple formats to support the academic goals of the college.

Distance Learning

Central Maine Technical College offers some courses for academic credit via the Internet. Students communicate with their instructors through electronic mail and receive their assignments through course materials posted on the World Wide

Web. Some courses may require a textbook and/or a CD-rom disc.

The College currently offers the Occupational Health and Safety curriculum over the Internet. To the extent possible, students enrolled in this program observe the same policies and procedures as other registered students.

Writing Center

The Writing Center provides, at no additional charge, non-credit, individualized instruction to students working on writing assignments for any CMTC course, as well as resumes and cover letters, essays for scholarships and college admission. The Writing Center is staffed by professional writers and experienced writing instructors. Students are encouraged to make appointments, but drop-in service is also available. The Writing Center is a program of the Humanities Department.

Transfer Agreements (from CMTC to Other Colleges and Universities)

Because CMTC is accredited by the New England Association of Schools & Colleges, Inc., most academic credits will transfer to other colleges and universities. Liberal Arts (general education) courses usually transfer more easily than technical courses. It is important to note that the receiving school has the right to determine whether or not academic credit will transfer.

CMTC has direct transfer agreements with the University of Southern Maine, Lewiston-Auburn College of the University of Southern Maine, the University of Maine (in Orono), University of Maine at Augusta, Husson College, Franklin University, other Maine Technical Colleges. These agreements facilitate transfer of graduates from CMTC to the senior institutions and assures that students will be accepted with advanced standing and that their

CMTC degree course work will apply toward the Baccalaureate Degree. For specific information regarding transfer of credit, the student should consult the Office of Career and Placement Services and with representatives at the institution to which he/she wishes to transfer. Existing direct transfer agreements are described below.

CMTC and the University of Southern Maine (including Lewiston-Auburn College)

This Agreement is designed to assist students who wish to use their two year degrees as a basis for continuing their career ladder through a baccalaureate degree program. It provides an umbrella for collaboration between the two institutions in helping students move between numerous programs offered at either institution that fit together in academic sequences. USM guarantees college credits for all CMTC students transferring to specific USM programs, as long as they enter a bachelors degree program at USM within six years of admission and enrollment at CMTC.

This agreement builds on and encompasses some previous, focused agreements between CMTC and specific USM programs in the School of Nursing, School of Applied Science and at USM's Lewiston-Auburn College that have allowed students with Associate Degrees in Health Professions, Industrial Technology, Business and other programs to continue into baccalaureate programs. Additional details and assistance are available from the Office of Career and Placement Services.

CMTC and the University of Maine (in Orono)

A formal agreement has been established that provides a career ladder for qualified students in CMTC's Architectural and Civil Engineering Technology program. These students will be accepted as degree candidates

with advanced standing in the University's baccalaureate program, Construction Management Technology, in the School of Engineering Technology. Students must have earned a 2.500 cumulative grade point average to be admitted into this program. Interested students should contact the Office of Career and Placement Services for details and assistance.

Corporate and Community Services Division

Corporate & Community Services at Central Maine Technical College provides a broad range of educational and training services tailored to meet specific business and community training needs. The Division offers seminars, workshops and specialized education and training programs that can be delivered at businesses or other off-campus locations as well as at the College. Corporate and Community Services offers organizations and residents of Androscoggin, Oxford, Franklin and Lincoln counties a broad range of traditional and non-traditional courses, programs and workshops to prepare them for the workplace of the future through customized training.

As a member of the National of Advanced Technology Centers, the Division offers a commitment of people and resources in an effort to reach, enhance and add value to business. Our Advanced Technology Center operation brings together the resources of the College in order to meet the training needs of area employers. Corporate Training Coordinators also aid employers with locating potential sources of public support for customized training.

Programs of Study

Central Maine Technical College offers numerous programs of study that lead to the Associate Degree, Diploma or Certificate award. Beginning in the fall of 2002, the College adopted a minimum General Education Core Curriculum that is applicable to all Associate Degree programs. Therefore, all Associate Degree programs of study, require courses in the disciplines that comprise 'general education'. The goal of General Education at CMTC is to foster development of common competencies among all Associate Degree students. This will enable them as graduates, to be successful and productive individuals, be it in the workplace, in upper division programs of study, or in any other personal or professional endeavor they pursue.

Students undertake General Education studies which comprise the disciplines of the Humanities, Social Sciences, Mathematics and Sciences. These courses provide students with the opportunity to develop competencies deemed necessary by faculty, employees and students.

The competencies developed in General Education, as defined by the College, are:

- Competency in Critical Thinking and the Scientific Method of Reasoning
- Competency in Communication
- Competency in Social responsibility
- Competency in Lifelong Learning and Self Growth Skills
- Competency in Information Literacy

General Education Core Curriculum

ENG 101 College Writing	3 credits
Communication Elective or Program Specific	3 credits
Social Science Elective or Program Specific	3 credits
Humanities Elective or Program Specific	3 credits
Mathematics or Science Elective or Program Specific	6-7 credits
General Education Elective or Program Specific	3 credits
Total Core Requirements	21 - 22 credits

Graduates of the Associate Degree Programs will meet the General Education Outcomes through the sum of their individual experiences at the College.

General Education Elective Courses by Abbreviation

- Humanities Electives - ART, ASL, COM, ENG, ESL HUM, INS, LER, MUS, PHI, SPA, SPE
- Social Science Electives - ECO, GEO, HIS, POS, PSY, SOC, SSC
- Math/Science Electives- AST, BIO, CHY, GEY, MAT, PHY

Please Note: Not all programs can be completed in the evenings. Curricula may be modified without notice as adjustments are made in response to business/industry/occupational needs, Advisory Committee recommendations as well as compliance with the MTCS policies and accreditation standards. Some programs have a selective admissions policy. Please contact the Admissions office for information.

A program of study may be discontinued if it fails to meet the standards established by the Maine Technical College System Board of Trustees, or if the College has insufficient funds to sustain it. In the event that a program of study is to be discontinued, the College will make reasonable effort to ensure that students matriculated in that program have the opportunity to complete the program. To that end, the College will offer the courses needed for graduation in the sequence and semester outlined in this catalog; or the College will accept credits for the courses needed from another accredited institution of higher education provided the student has earned a grade of "C" (not "C-") or better, and when necessary, will waive residency requirements.

Program and Course Abbreviations and Titles

AA	=	Associate in Art	HUM	=	Humanities
AAS	=	Associate in Applied Science	HUS	=	Human Services
AS	=	Associate in Science	INS	=	Independent Study
ACC	=	Accounting	LER	=	Learning Resources
ACET	=	Architectural & Civil Engineering Technology	LS	=	Liberal Studies
ART	=	Art	MAT	=	Mathematics
ASL	=	American Sign Language	MCA	=	Maine Career Advantage
AST	=	Astronomy	MEA	=	Medical Assistant
ATS	=	Applied Technical Studies	MECT	=	Mechanical Engineering Technology
AUT	=	Automotive Technology	MET	=	Medical Transcription
BCA	=	Business and Computer Applications	MTT	=	Machine Tool Technology
BCT	=	Building Construction Technology	NUR	=	Nursing
BIO	=	Biology	OHS	=	Occupational Health & Safety
BUS	=	Business (Administration and Management)	PHI	=	Philosophy
CAD	=	Computer Aided Drafting/Design	PHY	=	Physics
CHY	=	Chemistry	POS	=	Political Science
CLS	=	Clinical Laboratory Science	PSM	=	Parts & Service Management (Automotive)
CPT	=	Computer Technology	PSY	=	Psychology
CUA	=	Culinary Arts	RAT	=	Radiologic Technology
ECE	=	Early Childhood Education	REE	=	Real Estate
ECO	=	Economics	SCI	=	Science
ELT	=	Electromechanical Technology	SOC	=	Sociology
EMC	=	Emergency Medical Care	SPA	=	Spanish
ENG	=	English	SSC	=	Social Science
ESL	=	English as a Second Language	SPE	=	Speech
FOA	=	Ford ASSET (Automotive Technology)	TET	=	Telecommunications Technology
GAT	=	Graphic Arts/Printing Technology	TTO	=	Trade & Technical Occupations
GEO	=	Geology	TTV	=	Telecommunications Technology (Verizon)
GS	=	General Studies	WOT	=	Workplace Technology
HIS	=	History			

Accounting (ACC)

Program Description

The Accounting program provides individuals with broad exposure to general business activities and practices, and an in-depth understanding of accounting procedures and supporting computerized applications.

Specifically, the Associate in Science in Accounting program is designed to prepare students for entry level positions or to advance in accounting related career fields. In addition, students who complete the program will have a knowledge and academic base equivalent to the first two years of many four year degree programs in accounting.

Students may enroll on a full or part-time basis and may take courses in the day, evening, or both, depending upon availability. Full time students who begin their studies in the fall semester can expect to complete the degree requirements in four semesters. Students not starting in the fall may need more than two years to complete the program. Part-time students may need several years to complete the program requirements. Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and Business Communication (ENG 220) in order to meet the degree requirements of this program.

Career Opportunities

Graduates of the program will be qualified for accounting related occupations such as bookkeeping, accounting and auditing clerks, accountants and auditors, adjustment clerks and tax preparers. Additional experience and/or education can lead to supervisory and administrative positions.

Program Educational Outcomes:

Upon completion of the Associate in Science Degree in the Accounting Program, the graduate is prepared to:

1. Evaluate business transactions and record journal entries that demonstrate knowledge of Generally Accepted Accounting Procedures (GAAP).
2. Demonstrate knowledge of current accounting practices.
3. Demonstrate oral and written presentation skills unique to the financial community.
4. Utilize technology to assess, evaluate, and apply information.
5. Employ analytical and problem solving skills, quantitative reasoning, and ethical standards to the work setting.
6. Demonstrate proficiency in the preparation of, the analysis of, and use of financial statements and other financial reporting tools.
7. Demonstrate skills in reading, writing, communication, critical thinking, reasoning, as well as knowledge and use of terminology of an accounting professional who would deal with various businesses and non-business constituencies.
8. Utilize knowledge of the practice of transferring accounting theory into actual practice.

Associate in Science Degree Requirements

Semester I			Credit Hours
BUS 100	Understanding Business		3
BUS 210	Principles of Accounting I		3
ENG 101*	College Writing**		3
MAT 101*	Business Mathematics		3
— —	Elective: BCA - Advisor approved		3

**Course placement determined by assessment test scores and/or prior college course work.*

Semester II			Credit Hours
BUS 110	Principles of Supervision		3
BUS 212	Principles of Accounting II		3
MAT 122	College Algebra		3
PSY 101	Introduction to Psychology		3
SPE 101	Speech and Oral Communication		3

Semester III			Credit Hours
BUS 240	Intermediate Accounting I		3
BUS 244	Computerized Accounting		3
ENG 220	Business Communication**		3
MAT 135	Statistics		3
— —	Elective: Humanities -Advisor approved		3

Semester IV			Credit Hours
BUS 242	Intermediate Accounting II		3
BUS 246	Tax Accounting (Individual)		3
ECO 200	Principles of Economics		3
PHI 101	Critical Thinking		3
— —	Elective - Mathematics/Science - Advisor approved		3-4

Total Credit Hour Requirements 60 - 61

***Note: Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and Business Communication (ENG 220) in order to meet the Associate Degree requirements of this program.*

9. Demonstrate commitment to the concept of life-long learning to keep current with practices and technology in the field and/or join professional associations and/or enroll for BS Degree.

Distribution of A.S. Credit Hour Requirements

Humanities and Social Sciences - 21 (35%)

ENG 101, SPE 101, PSY 101, ENG 220, PHI 101, ECO 200 and one Humanities elective.

Mathematics and/or Science - 12 (20%)

MAT 101, MAT 122, MAT 135 and one Math/Science elective.

Concentration -27 (45%)

BUS 100, 110, 210, 212, 240, 242, 244, 246 and one BCA elective.

Applied Technical Studies (ATS)

Program Description

The purpose of this Associate in Applied Science degree program is to provide a flexible curriculum for students who have unique career goals that cannot be met by other programs of the college. Appropriate students will have significant occupational or educational experience which exhibits both breadth and depth. This experience will be documented in a portfolio which may potentially award students up to 24 credits upon assessment by a portfolio review committee. The remaining curriculum will be determined by the student and their advisor. All courses selected should be relevant to the student's career focus which will be determined at the time of enrollment.

Career Opportunities

Employment and occupational outlook studies reflect the value of post-secondary education to a person's career opportunities and earning potential. Many employers look upon the associate degree as a minimum requirement for skilled occupations.

In addition, the associate degree can serve as a platform of accomplishment for pursuing additional educational and career goals.

Program Outcomes

Upon completion of the Applied Technical Studies Program, the graduate is prepared to:

1. Communicate clearly using written and verbal means.
2. Work with others to solve problems that could effect the outcomes of specific projects in the workplace.
3. Continue to gain knowledge/skills through formal or informal means.
4. Realistically analyze career opportunities vs. individual strengths and make sound career path decisions.

Associate in Applied Science Degree Requirements

Concentration		Credit Hours
ATS 199	Prior Learning - Portfolio Assessment: Advisor approved	24
ENG 101*	College Writing	3
ENG 201	Technical Writing	3
ENG 296	Portfolio Development Seminar	1
— —	Elective: Communication - Select one of the following: SPE 101 Speech & Oral Communication SPE 111 Interpersonal Communication	3
— —	Elective: Humanities - Advisor approved	3
— —	* Electives: Mathematics (100 or >) - Advisor approved	6
— —	Elective: Science - Advisor approved	3-4
— —	Elective: Social Science - Advisor approved	3
— —	Elective: General Education - Advisor approved	3
*Course placement determined by assessment test scores and/or prior college course work.		
Related Courses		
— —	Elective: BCA Advisor approved	3
— —	Elective: OHS Advisor approved	3
— —	Electives: Selected from catalog courses provided that prerequisites are met and Advisor approval is obtained.	9
Total Credit Hour Requirements		67-68

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences — 12 (17%)

ENG 101, 201; SPE 101 or 111 and two electives.

Mathematics and/or Science and/or Business — 9 (13%)

MAT 100, 101, 105 or 122; BCA & one OHS elective.

Concentration — 48 (70%)

ATS 199 and 18 cr. hrs. of electives.

Architectural & Civil Engineering Technology (ACET)

Program Description

The Architectural and Civil Engineering Technology program graduates can translate the innovative concepts of the professional designer or engineer into functioning systems and structures using the language of codes, working drawings, specifications, and construction. Graduates are familiar with materials, the basic concepts of structural design, mechanical systems for buildings, cost estimating and surveying. Graduates are also proficient in the application of computers to the design field. Graduates can function effectively on teams and can advance their careers through training, education and participation in professional societies in the field.

The Architectural and Civil Engineering Technology program provides students with the opportunity to earn an Associate in Applied Science Degree. The Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) granted initial accreditation to the Architectural and Civil Engineering Technology Associate Degree program in 1984. It has been continuously accredited since then.

Career Opportunities

Graduates of this program typically accept positions with architectural firms, engineering offices, structural or fabrication departments in industrial plants, contractors, land surveyors, building materials supply firms, and municipal or state engineering offices. Graduates are often afforded advanced standing when electing to further their education at other colleges or universities.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in Architectural & Civil Engineering Technology Program, the graduate is prepared to:

1. Integrate knowledge, skills and tools with a commitment to quality, timeliness & continued improvement
2. Apply current knowledge & adapt to emerging applications of mathematics, science, engineering & technology
3. Conduct, analyze & interpret experiments & apply experimental results to improve processes
4. Apply creativity in the design of systems, components or processes appropriate to program objectives
5. Function effectively on teams
6. Identify, analyze & solve technical problems
7. Communicate effectively
8. Recognize the need for lifelong learning
9. Understand professional, ethical & social responsibilities
10. Respect diversity through a knowledge of current professional, societal & global issues

Associate in Applied Science Degree Requirements

Semester I		Credit Hours
ACET 113	Architecture & Design	3
ACET 121	Structures I	3
ACET 115	Building and Site Pre-design	3
ENG 101*	College Writing	3
MAT 122*	College Algebra	3
—	Elective: Humanities - Advisor approved	3
<i>*Course placement determined by assessment test scores and/or prior college coursework.</i>		
Semester II		
ACET 114	Construction & Materials	4
ACET 122	Structures II	3
ACET 131	Surveying I	3
MAT 132	Pre-Calculus	3
PHY 142	Physics I (Lec.)	3
PHY 143	Physics I (Lab)	1
Semester III		
ACET 132	Surveying II	3
ACET 204	Building Systems	3
ACET 261	Civil Technology	3
CAD 284	Architectural Computer Assisted Drafting	3
PHY 242	Physics II	3
—	Elective: Social Science - Advisor approved	3
Semester IV		
ACET 234	Legal Aspects of Surveying	3
ACET 242	Independent Project	1
ACET 262	Soils and Foundations	1
ACET 274	Project Management	3
ENG 201	Technical Writing	3
MAT 280	Calculus	3
—	Elective - Advisor approved	3
Total Credit Hour Requirements		70

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (17%)

ENG 101, 201, and one Humanities elective and one Social Science elective

Mathematics and/or Science - 16 (23%)

MAT 122, 132, 280, PHY 142, 143, 242

Concentration and Technical - 39 (56%)

ACET 113, 114, 115, 121, 122, 131, 132, 204, 234, 242, 261, 262, 274; CAD 284.

Elective - 3 (4%)

Automotive Technology (AUT)

Program Description

The Automotive program is designed to prepare highly skilled technicians for an ever expanding and challenging automotive industry. The program is organized and taught in a manner that meets the standards of the National Institute for Automotive Service Excellence (ASE). In 1986 the Automotive Technology program was awarded full Master Certification in all eight specialty areas from ASE. Continued Certification was awarded in 1998. Students work in the classroom, laboratories, and do practical job service. Emphasis is placed on developing competencies with electronic and other test equipment, and the completion of work in accordance with industry standards. Qualified students can elect to participate in a paid, on-the-job summer experience at a sponsoring factoring dealership or major independent repair facility.

Students have the opportunity to earn an Associate in Applied Science Degree and may enroll on a full or part-time basis and may take courses in the day, evening, or both, depending upon availability. Students enrolled for full-time course work usually need two academic years to complete the Associate Degree. Part-time students may need several years to complete the program requirements.

Career Opportunities

Upon graduation, students accept positions as general technicians, or as specialists in areas such as front-end alignment, brakes, or automatic transmissions. Automotive dealerships, service stations, companies with large vehicle fleets, and automotive parts supply stores are typical employers of program graduates.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in the Automotive Technology Program, the graduate is prepared to:

1. Perform all NATEF (P-1) tasks to diagnose and repair systems associated with automotive chassis components.
2. Perform all NATEF (P-1) tasks to diagnose and repair all assemblies associated with automotive engine and power transmission systems.
3. Perform all NATEF (P-1) tasks to diagnose and repair all components associated with any electrical and electronic control systems.
4. Perform all NATEF (P-1) tasks to diagnose and repair all components associated with any accessory and ergonomic systems.
5. Communicate clearly using written, verbal, and electronic means.
6. Apply safety standards related to the Automotive Industry.
7. Solve mathematical problems related to the Automotive field.

Associate in Applied Science Degree Requirements

Semester I			Credit Hours
AUT	100	Introduction to Automotive Technology	1
AUT	110	Brakes	2
AUT	120	Suspension & Alignment	2
AUT	150	Electrical Systems I	3
AUT	170	Engine Performance I	3
ENG	101*	College Writing	3
MAT	100*	Intermediate Algebra	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>			
Semester II			
AUT	130	Engine Repair I	1
AUT	131	Engine Repair Lab	3
AUT	155	Electrical Systems II	1
AUT	156	Auto Electric Lab II	4
AUT	160	Air Conditioning	1
AUT	175	Alternate Fuels I	1
MAT	105	Geometry and Trigonometry	3
—	—	Elective: Advisor approved	3
Semester III			
AUT	200	State Inspection	1
AUT	240	Automatic Transmission	6
AUT	270	Engine Performance II	4
ENG	201	Technical Writing	3
PHY	121	Technical Physics I (Lec.)	3
PHY	122	Technical Physics I (Lab)	1
Semester IV			
AUT	245	Manual Drive Train/Axles	4
AUT	275	Engine Performance III	3
AUT	290	Advanced Chassis Systems (Theory)	1
AUT	291*	Advanced Chassis Systems (Lab)	3
—	—	Elective: Humanities - Advisor approved	3
—	—	Elective: Social Science - Advisor approved	3
<i>*equivalent credit allowed from AUT 190</i>			
Total Credit Hour Requirements			69

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (17.3%)

ENG 101, 201, one Humanities elective and one Social Science elective

Mathematics, Science - 10 (14.4%)

MAT 100, 105, PHY 121, 122.

Concentration - 44 (64%)

AUT 100, 110, 120, 130, 131, 150, 155, 156, 160, 170, 175, 220, 240, 245, 270, 275, 290, 291.

Elective - 3 (4.3)

Automotive Technology - Ford ASSET (FOA)

Program Description

The ASSET (Automotive Student Service Educational Training) major is a state of the art two-year program alternating classroom and laboratory training with paid, on-the-job experience, leading to an Associate Degree in Automotive Technology. ASSET is a joint effort of Ford Motor Company, Ford and Lincoln/Mercury dealers, and Central Maine Technical College. Graduates of this program are awarded the Associate in Applied Science degree.

Today, an automotive service technician must have the skills of a mechanic and the knowledge to deal with computer controlled engine systems, computer-managed diagnostics, microelectronics, complex pneumatic systems, composite materials, and hydraulics. In 1995 the ASSET major was awarded full Master Certification from the National Institute for Automotive Service Excellence (ASE) in all eight specialty areas.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in the Automotive Technology Program - Ford ASSET (FOA), the graduate is prepared to:

1. Perform all NATEF (P-1) tasks to diagnose and repair systems associated with automotive chassis components.
2. Perform all NATEF (P-1) tasks to diagnose and repair all assemblies associated with automotive engine and power transmission systems.
3. Perform all NATEF (P-1) tasks to diagnose and repair all components associated with any electrical and electronic control systems.
4. Perform all NATEF (P-1) tasks to diagnose and repair all components associated with any accessory and ergonomic systems.
5. Communicate clearly using written, verbal, and electronic means.
6. Apply safety standards related to the Automotive Industry.
7. Solve mathematical problems related to the Automotive field.

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 15 (21%)

ENG 101, 201, two Humanities electives and one Social Science elective.

Mathematics and/or Science - 10 (14%)

MAT 100, 105, PHY 121, 122.

Concentration - 45 (64.2%)

FOA 106, 107, 126, 127, 201, 203, 221, 222, 231, 232, BCA 120

Associate in Applied Science Degree Requirements

Semester I		Credit Hours
BCA	120 Introduction to Computer Applications	3
FOA	106 Auto Service/Auto Electrical/Electronics	5
FOA	107 Field Experience	4
—	— Elective: Select one of the following:	3
	SPE 101 Speech and Oral Communication or	
	SPE 111 Interpersonal Communication or	
	PHI 101 Critical Thinking	
Semester II		
ENG	101* College Writing	3
FOA	126 Brakes, Steering & Suspension, Manual Transmission & Driveline	5
FOA	127 Field Experience	4
MAT	100* Intermediate Algebra	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>		
Summer Session		
ENG	201 Technical Writing	3
FOA	201 Gasoline Engine Repair/Climate Control	4
FOA	203 Field Experience	2
—	— Elective: Social Science - Advisor approved	3
Semester III		
FOA	221 Computer Controlled Systems, Engine Performance, Fuels & Emissions	5
FOA	222 Field Experience	4
MAT	105 Geometry & Trigonometry	3
—	— Elective: Select one of the following:	3
	SPE 101 Speech and Oral Communication or	
	SPE 111 Interpersonal Communication or	
	PHI 101 Critical Thinking	
Semester IV		
FOA	231 Automatic Transmission	5
FOA	232 Field Experience	4
PHY	121 Technical Physics I (Lec.)	3
PHY	122 Technical Physics I (Lab)	1
Total Credit Hour Requirements		70

Automotive Technology - Parts and Service Management (PSM)

Program Description

This program is designed to prepare men and woman for successful careers in automotive parts and service management. Graduates of the program will have the basic technical skills in automotive technology, competencies in business management, and a broad general education in verbal and written communication, computation and problem solving. Students in the program will acquire skills and knowledge in general operations, customer relations and sales, vehicle systems, vehicle identification, component location, cataloging, inventory management, and merchandising.

Students have the opportunity to earn a Certificate or an Associate in Applied Science degree and may enroll on a full or part-time basis and may take courses in the day, evening, or both, depending upon availability. Students enrolled for full-time course work usually need two academic years to complete the associate degree. Part time students may need several years to complete the program requirements.

Pre-registration Requirements

In addition to meeting the admission requirements of the College, applicants to this program must have the following:

- ♦ The motivation and aptitude to succeed in the program.
- ♦ A mastery of basic academic skills in reading, writing and arithmetic
- ♦ Fundamental skills in using a personal computer

Preparatory courses, prior to admission, are available at CMTC and at local Adult Education Centers.

Career Opportunities

Upon graduation, students accept positions as shop foreman, service advisor, service manager, parts and service management (service director) or in automobile sales. Other opportunities include parts counter salesperson, parts manager, manufacturer representative, warranty clerk. Job experience within the parts and service field could eventually lead to after-market parts assistant or store manager and automobile dealership general manager owner.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science in Automotive Technology - Parts & Service Management Program, the graduate is prepared to:

1. Perform all NATEF (P-1) tasks to diagnose and repair systems associated with automotive chassis components.
2. Locate and identify all assemblies and components associated with automotive engine, power transmission, and electrical/electronic controls of all accessory and ergonomics systems.
3. Communicate clearly using written, verbal, and electronic means.

Associate in Applied Science Degree Requirements

Suggested Sequence of Courses

Semester I		Credit Hours
AUT 100	Introduction to Automotive	1
AUT 110	Brakes I	2
AUT 120	Suspension & Alignment I	2
AUT 150	Electrical Systems I	3
AUT 170	Engine Performance I	3
BCA 120	Introduction to Computer Applications	3
MAT 101*	Business Mathematics	3
Semester II		
AUT 130	Engine Repair I	1
AUT 155	Electrical Systems II	1
BUS 110	Principles of Supervision	3
ENG 101*	College Writing	3
PSM 100	Parts/Service Management	
	Field Experience I	3
PSM 131	Engine Lab (for AUT 130)	1
PSM 156	Electrical Lab II (for AUT 155)	1
— —	Elective: BUS - select one of the following:	3
	BUS 100 Understanding Business	
	BUS 101 Small Business Mgmt	
— —	Elective: Mathematics - Advisor approved	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>		
Semester III		
ENG 220	Business Communication	3
PSM 200	Parts/Service Management	
	Field Experience II	2
PSM 240	Automatic Transmission	1
PSM 270	Engine Performance II	1
— —	Elective - Mathematics/Science - Advisor approved	3-4
— —	Elective: Communications - select one of the following:	3
	SPE 101 Speech & Oral Communication	
	SPE 111 Interpersonal Communication	
— —	Elective: Social Science - Advisor approved	3
Semester IV		
BUS 122	Business Law	3
BUS 155	Retail/Merchandising	3
BUS 210	Accounting I	3
PSM 205	Parts/Service Management	3
	Field Experience III	
PSM 245	Manual Drive Train and Axles	1
PSM 260	Air Conditioning/Alternative Fuels	1
— —	Elective: Humanities - Advisor approved	3
Total Credit Hour Requirements		69-70

Automotive Technology - Parts and Service Management (PSM)

(Continued from previous page)

4. Apply safety standards related to the Automotive Industry.
5. Utilize management and supervisory skills needed while working in the business environment.
6. Utilize technology to analyze business problems and construct appropriate solutions.
7. Diagnose marketing and management related issues and plan future actions.
8. Utilize appropriate technology and critical thinking skills to assess, evaluate, and apply information.

Distribution of A.A.S. Degree Credit Hour Requirements

Humanities and Social Sciences - 15 (22%)

ENG 101, 220, SPE 101 or 111, one Humanities elective, one Social Science elective.

Mathematics and/or Science - 9-10 (13%)

MAT 101, one MAT elective and one MAT/SCI elective

Concentration - 45 (65%)

AUT 100, 110, 120, 130, 150, 155, 170; BUS 100 or 101, 110, 122, 210, 155 PSM 100, 131, 156, 200, 205, 240, 245, 260, 270, BCA 120

Certificate Requirements

Suggested Sequence of Courses

Semester I			Credit Hours
AUT	100	Introduction to Automotive	1
AUT	110	Brakes I	2
AUT	120	Suspension & Alignment I	2
AUT	150	Electrical Systems I	3
AUT	170	Engine Performance I	3
BCA	120	Introduction to Computer Applications	3
MAT	101*	Business Mathematics	3
Semester II			
AUT	130	Engine Repair I	1
AUT	155	Electrical Systems II	1
BUS	110	Principles of Supervision	3
ENG	101*	College Writing	3
PSM	100	Parts/Service Management	3
		Field Experience I	
PSM	131	Engine Lab (for AUT 130)	1
PSM	156	Electrical Lab II (for AUT 155)	1
—	—	Elective: BUS Select one of the following:	3
		BUS 100 Understanding Business	
		BUS 101 Small Business Management	

**Course placement determined by assessment test scores and/or prior college course work.*

Total Credit Hour Requirements

33

Building Construction Technology (BCT)

Program Description

With a focus on residential dwellings and light commercial structures, the Building Construction Technology Program provides comprehensive training in the development of carpentry and related skills. Through a combination of classroom study and assigned shop activities, students obtain practical experience and become broadly familiar with methods and standards commonly associated with the construction industry. In addition to the emphasis on trade skills, students receive instruction in computer aided drafting, surveying, and cost estimating. Safety and health standards as they relate to the tools, materials, supplies and equipment of the building construction industry are included in all course instruction.

The Building Construction Technology program offers students the opportunity to earn a Certificate or an Associate in Applied Science degree. Students are accepted into the program annually, in the odd years students can complete the program in 2 years. In the even years the students complete the program in 3 years. Many students prefer the 3-year cycle because it allows them more time for employment while attending college.

Career Opportunities

Graduates of this program typically accept employment with contractors in light, commercial, institutional and heavy construction; building materials suppliers; manufacturers of prefabricated modular units; and in cabinet shops. With additional experience, graduates also become self-employed as contractors. Building inspection and code enforcement are also career possibilities.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in the Building Technology Program, the graduate is prepared to:

1. Construct a site plan through lot and building layout.
2. Design a complete set of working drawings for a residential structure.
3. Estimate costs of projects from a set of working drawings.
4. Construct and remodel residential structures within safety and building code guidelines.
5. Design supports by determining strengths of materials through standard architectural procedures.
6. Communicate with manufacturers and suppliers via oral, written, and electronic methods.
7. Assemble masonry chimneys, walls, and hearths.
8. Build a complete residential structure from start to finish.

Associate in Applied Science Degree Requirements

Semester I			Credit Hours
BCA	120	Introduction to Computer Applications	3
BCT	101	Introduction to Hand & Power Tool Safety	1
BCT	106	Concrete Forms	2
BCT	107	Floor Framing	2
BCT	108	Wall Framing	2
BCT	122	CAD, Site Design & Construction Site Surveying	3
MAT	100*	Intermediate Algebra	3
Semester II			
BCT	124	Basic Strength of Materials & CAD	3
BCT	135	Roof Framing	2
BCT	136	Exterior Roof Trim	2
BCT	137	Roofing and Siding	2
BCT	138	Doors and Windows	2
ENG	101*	College Writing	3
MAT	105	Geometry and Trigonometry	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>			
Semester III			
BCT	202	Construction Estimating	3
BCT	203	Interior Trim	2
BCT	240	Construction Drafting	3
OHS	115	Basic Principles of Construction Safety & Health	3
—	—	Elective: General Education - Advisor approved	3
—	—	Elective: Mathematics/Science - Advisor approved	3-4
Semester IV			
BCT	235	Cabinets	2
BCT	236	Finished Stairs	2
BCT	237	Masonry	2
ENG	201	Technical Writing	3
—	—	Elective: Humanities - Advisor approved	3
—	—	Elective: Social Science -Advisor approved	3
Total Credit Hour Requirements			65-66

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Science - 12 (19%)

ENG 101, 201 and two electives.

Mathematics and/or Science - 9 - 10 (14 %)

MAT 100, 105 and one Math/Science elective

Concentration - 40 (62%)

BCT 101, 106, 107, 108, 122, 124, 135, 136, 137, 138, 202, 203, 235, 236, 237, 239, BCA 120, OHS 115

Elective - 3 (5%)

Building Construction Technology (BCT)

Certificate Requirements

Semester I			Credit Hours
BCA	120	Introduction to Computer Applications	3
BCT	101	Introduction to Hand & Power Tool Safety	1
BCT	106	Concrete Forms	2
BCT	107	Floor Framing	2
BCT	108	Wall Framing	2
BCT	122	CAD Site Design & Construction Site Surveying	3
MAT	100*	Intermediate Algebra	3
Semester II			
BCT	124	Basic Strength of Materials & CAD	3
BCT	135	Roof Framing	2
BCT	136	Exterior Roof Trim	2
BCT	137	Roofing and Siding	2
BCT	138	Doors and Windows	2
ENG	101*	College Writing	3
MAT	105	Geometry and Trigonometry	3
*Course placement determined by assessment test scores and/or prior college course work.			
Total Credit Hour Requirements			33

Business Administration and Management (BUS)

Program Description

The Business Administration and Management program offers full or part time students the opportunity to earn a Certificate or an Associate in Applied Science degree by taking day and/or evening courses. The program of study includes activities found in a modern business or industrial organization including accounting, marketing, customer relations and strategic planning. Areas of specializations are offered in Business Administration, Supervision & Management, Sales Administration & Management, and Sports Management. Additionally, the Business Administration and Management Department offers a concentration in Culinary Arts Hospitality. Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and Business Communication (ENG 220) in order to meet Certificate or Associate Degree requirements of this program.

The program is designed to prepare individuals with a wide variety of management and supervisory skills while providing broad exposure to general business practices. Sales

personnel, office administrators, managers and professionals require this mix of general knowledge and specific expertise to successfully compete in the world of business.

The program is also designed to provide a strong foundation of skills and advanced technical capability while allowing students to keep their current jobs. The program is accredited by the Association of Collegiate Business Schools and Programs (ACBSP).

Career Opportunities

Graduates will be prepared to work in an array of commercial, retail and professional office situations. Examples of these positions include first line supervisors, general managers, food service and lodging managers, professional sales representatives, bookkeeping and accounting clerks and related administrative, industrial and professional positions. Graduates of this program will be prepared for these occupations with skills and knowledge for careers tailored to meet current job requirements and future career growth.

Associate in Applied Science Degree

Suggested Sequence of Courses

Semester I				Semester II			
Credit Hours				Credit Hours			
BCA	120	Intro to Computer Applications	3	BUS	150	Effective Customer Relations	3
BUS	100	Understanding Business	3	MAT	101*	Business Mathematics	3
BUS	110	Principles of Supervision	3	SPE	101	Speech and Oral Communication	3
—	—	Elective: Business-select one of the following:	3	—	—	Elective: BCA - Advisor approved	3
		BUS 120 Employment Law		—	—	Elective: Humanities - Advisor approved	3
		BUS 122 Business Law					
ENG	101*	College Writing**	3				
Semester III				Semester IV			
BUS	210	Principles of Accounting I***	3	BUS	212	Principles of Accounting II	3
BUS	215	Principles of Marketing	3	BUS	260	Finance	3
ENG	220	Business Communications**	3	ECO	200	Principles of Economics	3
MAT	122	College Algebra	3	PSY	101	Introduction to Psychology	3
—	—	Elective: OHS - Advisor approved	3	—	—	Elective: Mathematics/Science - Advisor approved	3-4

**Course placement determined by assessment test scores and/or prior college course work.*

Alternate areas of Specialization (approved by Advisor)

Supervision & Management				Sports Management			
Credit Hours				Credit Hours			
BUS	115	Leadership & Interpersonal Relationship	3	BUS	140	Intro to Sports Management	3
BUS	208	Financial Accounting	3	BUS	145	Facilities Management	3
BUS	220	Managing People & Organizations	3	BUS	230	Internship (see advisor) (fulfills one of the BUS electives listed above)	3
Sales Administration & Management				See Advisor for course specialization sequence.			
BUS	155	Retail Merchandising Mgmt	3	*** Sports Mgmt. students will take BUS 208 Financial Accounting in place of BUS 210			
BUS	160	Intro to Sales & Sales Mgmt	3				
BUS	208	Financial Accounting	3				

****Note:** Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and, if applicable, Business Communication (ENG 220) in order to meet Certificate or Associate Degree requirements of this program.

Business Administration and Management (BUS)

(Continued from previous page)

Graduates are also encouraged to continue their education and pursue a Baccalaureate Degree and/or seek paths toward specialization in one of the many functional areas of business (i.e. personnel, training, purchasing, etc.).

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in the Business Administration Program, the graduate is prepared to:

1. Utilize effective management and supervisory skills needed for working in a business environment.
2. Organize teams, groups, and individuals in business situations.
3. Demonstrate oral and written presentation skills unique to the business community.
4. Utilize technology to analyze business problems and construct appropriate solutions.
5. Use analytical and problem solving skills, quantitative reasoning, and ethical standards in a business environment.
6. Diagnose marketing and management related issues and plan future actions.
7. Incorporate appropriate business terminology into effective communication (reading, writing, and graphics).
8. Utilize appropriate technology and critical thinking skills to assess, evaluate, and apply information.
9. Demonstrate commitment to the concept of life-long learning to keep current with practices and technology in the field and/or join professional associations and/or enroll for BS Degree.

Distribution of A.A.S. Degree Credit Hour Requirements

Humanities and Social Science - 18 (30%)

ENG 101, ENG 220, PSY 101, SPE 101, ECO 200 and one Humanities elective.

Mathematics and/or Science - 9-10 (15%)

MAT 101, 122 and one Math/Science elective

Specialty/Concentration - 33 (55%)

BUS 100, 110, 150, 210, 212, 215, 260 and one BUS elective; BCA 120 and one BCA elective; one OHS elective.

Certificate Requirements

Suggested Sequence of Courses

Semester I			Credit Hours
BCA	120	Intro to Computer Applications	3
BUS	100	Understanding Business	3
BUS	110	Principles of Supervision	3
ENG	101*	College Writing**	3
—	—	Elective: BUS - select one of the following: BUS 120 Employment Law BUS 122 Business Law	3

Semester II			Credit Hours
BUS	115	Leadership & Interpersonal Relations	3
BUS	125	Total Quality Control	3
BUS	180	Managing Office Procedures	3
MAT	101*	Business Mathematics	3

Total Credit Hour Requirements **27**

**Course placement determined by assessment test scores and/or prior college course work.*

***Note: Students must earn a grade of C (not C-) or better in College Writing (ENG 101) in order to meet certificate requirements of this program.*

Business Administration and Management (BUS)

Hospitality Management Concentration

The Hospitality Management concentration is designed for those who have an interest in pursuing a career in the hospitality industry. Graduates will be prepared for managerial, supervisory or ownership positions which require skills in culinary arts and business practices. This program focuses on food service and lodging management. Full time students should be able to complete the program in four semesters.

Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and Business Communication (ENG 220) in order to meet the Degree requirements of this program.

Program Educational Outcomes:

Upon completion of the Concentration in Culinary Arts/Hospitality Management, the graduate is prepared to:

1. Develop or implement inventory and sanitary procedures for a food service enterprise.
2. Plan food service events, given time and cost constraints.
3. Evaluate customer service, marketing, and operational procedures of a small to medium size food service/lodging enterprise.
4. Understand the related food service/lodging legal and regulated environment.
5. Diagnose financial performance of a small to medium size food service/lodging enterprise.

Distribution of A.A.S. Degree Credit Hour Requirements

Humanities and Social Sciences - 15 (23%)

ENG 101, 220, SPE 101, one Humanities and one Social Science elective

Mathematics and/or Science - 9-10 (14%)

MAT 101, MAT 122 and one Math/Science elective

Specialty/Concentration - 40 (63%)

BCA 120, BUS 110, 208, 150, 270, CUA 101, 111, 121, 151, 161, 171, 181.

Associate in Applied Science Degree Requirements

Suggested Sequence of Courses

Semester I	Credit Hours
CUA 101 Principles of Cooking	4
CUA 111 Introduction to Baking	4
CUA 121 Food Preparation	3
ENG 101* College Writing**	3
— — Elective: Humanities - Advisor approved	3

Semester II	Credit Hours
CUA 151 Quantity Food Production	4
CUA 161 Desserts and Pastries	4
CUA 171 Nutrition and Food Quality	3
CUA 181 Food Purchasing	3
MAT 101* Business Mathematics	3

**Course placement determined by assessment test scores and/or prior college course work.*

Semester III	Credit Hours
BCA 120 Introduction to Computer Applications	3
BUS 110 Principles of Supervision	3
BUS 208 Financial Accounting	3
MAT 122 College Algebra	3
SPE 101 Speech and Oral Communications	3

Semester IV	Credit Hours
BUS 150 Effective Customer Relations	3
BUS 270 Hospitality Management	3
ENG 220 Business Communication**	3
— — Elective: Mathematics/Science - Advisor approved	3-4
— — Elective: Social Science - Advisor approved	3

Total Credit Hour Requirements 64-65

***Note: Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and Business Communication (ENG 220) in order to meet Associate Degree requirements of this program.*

Business and Computer Applications (BCA)

Program Description

The Business and Computer Applications program provides students with a choice of educational goals. The Certificate curriculum offers the opportunity to acquire skills in integrating and managing information, document management and Internet research. The purpose of the Associate in Applied Science degree program is to prepare individuals to organize and supervise a contemporary business, industrial or professional office. Instructors use the latest in software and hardware.

Students may enroll on a full or part-time basis and may take courses in the day, evening or both depending upon availability. Students enrolled for full-time course work usually need one academic year to complete the requirements of a certificate and two academic years for completion of the associate degree. Part-time students may need several years to complete program requirements. Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and, if applicable, Business Communication (ENG 220) in order to meet certificate or degree requirements of this program.

Career Opportunities

Graduates of the Certificate program will be prepared to accept positions such as application support specialists or office information specialists in business, industry and government. Graduates of the Associate Degree program will be prepared to accept positions such as data analysts, office managers or in software sales in business, industry and government. Additional education and experience can lead the graduate to advanced administrative and supervisory positions.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in Business and Computer Applications Program, the graduate is prepared to:

1. Demonstrate speed and accuracy in keyboarding and computer application skills that will meet current industry standards.
2. Generate complex and integrated documents using current word processing, spreadsheet, database, and presentation graphic software appropriate for the office environment.
3. Demonstrate the ability to read, understand, and prepare standard types of business communications.
4. Evaluate how business processes change with the use of the Internet.
5. Evaluate data and information as applied to Business and Office Administration.
6. Manage various automated office systems.

Associate in Applied Science Degree Requirements

Suggested Sequence of Courses

Semester I		Credit Hours
BCA	120 Introduction to Computer Applications	3
BUS	100 Understanding Business	3
BUS	110 Principles of Supervision	3
ENG	101* College Writing**	3
MAT	101* Business Mathematics	3

**Course placement determined by assessment test scores and/or prior college course work.*

Semester II		Credit Hours
BCA	121 Word Processing	3
BCA	125 Navigating the Net	3
BUS	150 Effective Customer Relations	3
MAT	122 College Algebra	3
SPE	101 Speech and Oral Communication	3

Semester III		Credit Hours
BCA	241 Spreadsheet	3
BUS	208 Financial Accounting	3
BUS	255 E Commerce	3
CPT	130 Introduction to Visual Basic	3
ENG	220 Business Communication**	3

Semester IV		Credit Hours
BCA	246 Database Management	3
BUS	180 Managing Office Procedures	3
—	Elective: Humanities - Advisor approved	3
—	Elective: Mathematics/Science - Advisor approved	3-4
—	Elective: Social Science - Advisor approved	3

Total Credit Hour Requirements **60-61**

***Note: Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and, if applicable Business Communication (ENG 220) in order to meet certificate or degree requirements of this program.*

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 15 (25%)

ENG 101, 220, SPE 101, one Humanities elective and one Social Science elective

Mathematics and/or Science - 9 - 10 (15%)

MAT 101, MAT 122 and one Math/Science elective

Concentration - 36 (60%)

BCA 120, 121, 125, 241, 246, BUS 100, 110, 150, 180, 208, 255 and CPT 130.

Business and Computer Applications (BCA)

(Continued from previous page)

7. Demonstrate commitment to the concept of life-long learning to keep current with practices and technology in the field and/or join professional associations and/or enroll for BS Degree.

Special Admission Requirements

In addition to meeting the general admission requirements of the College, applicants to this program must have average or better skills in mathematics and English. CMTC will be pleased to help underprepared applicants develop a plan to meet admission requirements.

Certificate Requirements

Suggested Sequence of Courses

Semester I			Credit Hours
BCA	120	Introduction to Computer Applications	3
BCA	121	Word Processing	3
BCA	125	Navigating the Net	3
BUS	100	Understanding Business	3
BUS	150	Effective Customer Relations	3

Semester II

BUS	180	Managing Office Procedures	3
BUS	208	Financial Accounting	3
ENG	101*	College Writing**	3
MAT	101*	Business Mathematics	3
—	—	Elective: BCA - select one of the following: BCA 241 Spreadsheet BCA 246 Database Management	3

**Course placement determined by assessment test scores and/or prior college course work.*

Total Credit Hour Requirements **30**

***Note: Students must earn a grade of C (not C-) or better in College Writing (ENG 101) and, if applicable, Business Communication (ENG 220) in order to meet Certificate or Associate Degree requirements of this program.*

Clinical Laboratory Science (CLS)

Program Description

Clinical Laboratory Science (CLS) is an associate degree program designed to prepare the graduate for employment as a Clinical Laboratory Technician (CLT). The CLT performs analytical procedures under the supervision of a clinical laboratory scientist or physician. Procedures include the collection and analysis of blood and other body fluids in such areas as hematology, chemistry, immunology, therapeutic drug monitoring, microbiology, blood banking, urinalysis, and coagulation.

In addition to entry level preparation, this program provides an opportunity for individuals already employed in medical laboratories to upgrade their academic skills and enhance career mobility.

Students may enroll on a full or part-time basis and may take some courses in the day, evening or both, depending upon availability. Students enrolled for full-time course work usually need two academic years to complete the associate degree. Part-time students may need several years to complete the program requirements. Graduates of this program are awarded the Associate in Applied Science degree.

This Program is accredited by NAACLS, the National Accrediting Agency for Clinical Laboratory Sciences, which is located on 8410 West Bryn Mawr Avenue, Suite 670 in Chicago, Illinois, 60631. The telephone number is (773) 714-8880.

Career Opportunities

Graduates of the program will be prepared to accept positions in a variety of laboratory settings. In addition to hospitals, clinics and doctors' offices, opportunities also exist in biotechnology, such as commercial or pharmaceutical industries, scientific research and infection control both in the private and public sector. Upon successful completion of the program, graduates will be eligible to take national certifying examinations, i.e., ASCP, NCA.

Program Educational Outcomes

Upon completion of the Clinical Laboratory Science Program, the graduate is prepared to:

1. Collect, process, and perform analytical tests on biological specimens and other substances.
2. Recognize factors that affect procedures and results; and take appropriate actions within predetermined limits when corrections are indicated.
3. Perform and monitor quality control within predetermined limits.
4. Practice preventative and corrective maintenance on equipment and instruments or referring to appropriate sources for repairs.
5. Apply principles of safety.
6. Assume professional conduct and utilize interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public.
7. Recognize the responsibilities of other laboratory and health care personnel and interacting with them with respect for their jobs and patient care.
8. Apply basic scientific principles in learning new techniques and procedures.
9. Relate laboratory findings to common disease processes.
10. Establish and maintain continuing education as a function of growth and maintenance of professional competence.

Admission Requirements

In addition to the general admissions requirements of the College, applicants to this program must have had the following:

One year of high school level or one semester of college level Algebra, Chemistry with lab, and Biology with lab.

Pre-Registration Requirements:

Prior to enrollment in the CLS courses students must have the following:

- Demonstration of proficiency in verbal and math skills through CMTC assessment and placement or Scholastic Aptitude Tests.
 - CPR (Cardiopulmonary Resuscitation) certification prior to the start of the first CLS course; certification must be maintained throughout the program.
 - Compliance with special health/precautionary requirements of CMTC students majoring in health career programs:
1. Submit medical history and physical exam results prior to the start of the first CLS course.
 2. Because health care workers are at high risk for certain illnesses, the applicant must submit proof of the following immunizations prior to the start of taking the first CLS course. (Students not in compliance must withdraw from the course):

MMR: Measles, Mumps, and Rubella 2 doses

Students born before 1957 are exempt from this requirement. An official record of an immune titer for each disease may be accepted.

HBV: Hepatitis B 3 doses

An official record of an immune titer may be accepted.

TD: Adult Tetanus within the past 10 years.

Clinical Laboratory Science (CLS)

(Continued from previous page)

PPD: Purified Protein Derivative (TB) annual testing required. If not tested within the past year, initial testing must consist of 2 tests not more than three weeks apart.

Varicella Titer: an official record to demonstrate immunity to Varicella-Zoster.

3. **A Physical Exam by a Qualified Health Care Professional Including:** Height, Weight, Blood Pressure, Hematocrit or Hemoglobin, Urinalysis, Visual Acuity/Color Vision, Family Medical History, Personal Medical History.
4. In addition, other yearly tests and/or immunizations may be required.

It is the applicant's responsibility to submit the required documentation.

- Purchase the college professional liability insurance prior to the start of the first CLS course.
- Health/Accident Insurance: All students are advised to purchase their own health insurance plan. Students are responsible for any medical expenses which might be incurred as a result of accidents, illnesses, or other kinds of emergencies which might occur during clinical rotations. All students at CMTC are covered up to \$1,000 under "Plan I- Academic year-Accident Only Insurance." There is a nominal fee for this insurance. Students also have the option of purchasing a second "Plan II," which extends the coverage of Plan I to 12 months, and reimburses actual medical expenses according to schedules for illnesses covered. This information is found in the Student Handbook. Students also receive this information in the Student Accident and Sickness Insurance brochure which is provided when they are billed for courses by the business office.
- Transportation to and from clinical settings.
- Appropriate laboratory coats are provided by the department at the start of CLS courses;

Once an applicant's file is complete, the applicant is invited to an informal meeting with the CLS Program Chairperson for the purpose of reviewing the program and selecting the appropriate course of study. Upon admission to the program, the student is assigned a CLS faculty advisor.

Course Progression

CLS majors must follow the proper course sequence and should note that a minimum grade of "C" in each BIO,

Associate in Applied Science Degree Requirements

Semester I			Credit Hours
BIO	115	Anatomy & Physiology I (Lec.)	3
BIO	116	Anatomy & Physiology I (Lab)	1
CHY	101	Introduction to Chemistry (Lec.)	3
CHY	102	Introduction to Chemistry (Lab)	1
CLS	101	Clinical Laboratory Science I	4
ENG	101*	College Writing	3
—	—	Elective: Mathematics - select one of the following: MAT 100* Intermediate Algebra MAT 122* College Algebra	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>			
Semester II			
BIO	117	Anatomy & Physiology II (Lec.)	3
BIO	118	Anatomy & Physiology II (Lab)	1
CHY	111	Principles of Organic & Biological Chemistry (Lec.)	3
CHY	112	Principles of Organic & Biological Chemistry (Lab)	1
CLS	102	Clinical Laboratory Science II	4
—	—	Elective: Communication - select one of the following: ENG 201 Technical Writing SPE 101 Speech & Oral Communication	3
—	—	Elective: Humanities - Advisor approved	3
Summer Session			
BIO	211	Microbiology (Lec.)	3
BIO	212	Microbiology (Lab)	1
CLS	103	Clinical Laboratory Science III	5
—	—	Elective: Social Science - select one of the following: PSY 101 Introduction to Psychology SOC 101 Introduction to Sociology	3
Semester III			
CLS	201	Clinical Laboratory Science Affiliation I or 12	
CLS	202	Clinical Laboratory Science Affiliation II	
Semester IV			
CLS	202	Clinical Laboratory Science Affiliation II or 12	
CLS	201	Clinical Laboratory Science Affiliation I	
Total Credit Hour Requirements			72

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (17%)

ENG 101, ENG 201 or SPE 101, one Humanities and one Social Science elective.

Mathematics and/or Science - 23 (32%)

MAT 100 or 122; BIO 115, 116, 117, 118, 211, 212; CHY 101, 102, 111, 112

Concentration - 37 (51%)

CLS 101, 102, 103, 201, and 202.

Computer Technology (CPT)

Program Description

The Computer Technology program offers two degree options: Associate in Science or the Associate in Applied Science. The Associate in Science degree is designed to articulate with the final two years of undergraduate study at institutions offering the baccalaureate award while the Associate in Applied Science degree has as its focus, preparation for entry into the workforce. Both programs are designed to provide individuals with knowledge of computing in the PC environment while developing specific diagnostic, repair, installation, network and programming skills. Graduates will be expected to exhibit an in-depth understanding of PCs and demonstrate the ability to install software and hardware, provide maintenance, troubleshoot, evaluate PCs, train new users, and work with networks. In addition, because this work is service oriented, graduates will be expected to demonstrate positive customer relation skills.

This program prepares students for industry certifications such as A+, NET+, MCP, and MCSE.

Students may enroll on a full or part-time basis and may take courses in the day, evening, or both, depending upon availability. Students enrolled for full-time course work usually need two academic years to complete the associate degree. Part-time students may need several years to complete the program requirements. Students must earn a grade of C- or better in College Writing (ENG 101), College Algebra (MAT 122), Interpersonal Communication (SPE 111), and all CPT core courses in order to meet the degree requirements of this program.

Career Opportunities

The program is designed to develop work skills for the computer technology and related computer fields. Possible jobs include: PC Computer Repair Technicians, PC Software Resource Personnel, Network Administrator, PC Computer Trainers, and PC/Network Sales Personnel.

Note: Students must earn a grade of C- or better in College Writing (ENG 101), College Algebra (MAT 122), Interpersonal Communication (SPE 111), and all CPT core courses in order to meet the degree requirements of this program.

Other Department Electives

ELT 111	Electricity I
ELT 153	Digital Logic
ELT 167	Data Telecommunications
GAT 107	Intro to Adobe Acrobat
GAT 176	Photoshop I
GAT 177	Photoshop 2

Associate in Science Degree Requirements

Semester I			Credit Hours
CPT	141	Operating Systems	3
CPT	152	Integrated Software Applications	3
ENG	101*	College Writing	3
MAT	102*	Numbers and Logic	3
MAT	122	College Algebra	3

**Course placement determined by assessment test scores and/or prior college course work*

Semester II			Credit Hours
CPT	130	Introduction to Visual BASIC	3
CPT	146	Introduction to PC Repair	3
ENG	201	Technical Writing	3
LER	150	Information Technology	3
PHI	101	Critical Thinking	3

Semester III			Credit Hours
BCA	246	Data Base Management	3
CPT	225	Advanced PC Repair	3
CPT	235	Networks I	3
HUM	101	Technology and Society	3
MAT	135	Statistics	3

Semester IV			Credit Hours
CPT	266	Networks II	3
SPE	111	Interpersonal Communication	3
—	—	Electives: CPT or other Department	6
—	—	Electives (choose two from list below) - Advisor approved	
—	—	Elective: Mathematics/Science - Advisor approved	3-4
—	—	Elective: Social Science - Advisor approved	3

Total Credit Hours 63-64

Note: Students must earn a grade of C- or better in College Writing (ENG 101), College Algebra (MAT 122), Interpersonal Communication (SPE 111), and all CPT core courses in order to meet the degree requirements of this program.

Computer Technology Electives

CPT	201	Linux
CPT	202	Advanced Linux
CPT	210	Intro to Routing Technologies
CPT	211	Intro to Routers
CPT	212	Advanced Routing
CPT	213	WAN Routing
CPT	230	Field Experience (Internship)
CPT	236	Introduction to TCP/IP
CPT	237	Novell Netware
CPT	238	Network Support & Trouble Shooting
CPT	240	Advanced Visual Basic
CPT	245	Intro. to Java Programming
CPT	248	Intro. to PERL/CGI Programming
CPT	250	Programming in "C"
CPT	253	Advanced Web Development
CPT	267	Windows NT 4.0
CPT	271	Network Security

Computer Technology (CPT)

Program Educational Outcomes:

Upon completion of the Computer Technology program, the graduate of either the Associate in Science or the Associate in Applied Science is prepared to:

1. Demonstrate sufficient understanding of computing technologies and terminology for entry level employment.
2. Communicate clearly using written, verbal, and electronic means.
3. Practice good work habits and attitudes which include responsibility, cooperation, and teamwork.
4. Analyze problems and take corrective action to maintain information technology systems.
5. Continue their education either formally through upper division classes or through other educational opportunities.
6. Realistically analyze career opportunities vs. individual strengths and make sound career path decisions.
7. Define and develop an "area of expertise" within the context of information technology.

Distribution of A.S. Degree Credit Hour Requirements

Humanities and Social Science - 21 (33%)

Eng 101, 201; LER 150, HUM 101, PHI 101, SPE 111 and one Social Science elective.

Mathematics, Science or Business - 12 (19%)

MAT 102, 122, 135 and one elective.

Concentration - 30 (48%)

CPT 130, 141, 146, 152, 225, 235, 266; BCA 246 and two CPT electives

Other Department Electives

BCA 246	Data Base Management
ELT 111	Electricity I
ELT 153	Digital Logic
ELT 167	Data Telecommunications
GAT 107	Intro to Adobe Acrobat
GAT 176	Photoshop I
GAT 177	Photoshop 2
LER 150	Information Technology
PHI 101	Critical Thinking

Associate in Applied Science Degree Requirements

Semester I

CPT	141	Operating Systems	3
CPT	152	Integrated Software	3
ENG	101*	College Writing	3
MAT	102	Numbers & Logic	3
SPE	111	Interpersonal Communication	3

Semester II

CPT	130	Introduction to Visual BASIC	3
CPT	146	Introduction to PC Repair	3
ENG	201	Technical Writing	3
MAT	100*	Intermediate Algebra	3
—	—	Elective: CPT or other Department	3

Elective (choose one from list below) -
Advisor approved

**Course placement determined by assessment
test scores and/or prior college course work*

Semester III

CPT	235	Networks I	3
MAT	122	College Algebra	3
—	—	Elective: Humanities - Advisor approved	3
—	—	Electives: CPT or other Department	6
—	—	Elective (choose two from list below) - Advisor approved	

Semester IV

CPT	252	Web Development	3
CPT	266	Networks II	3
CPT	272	MS Exchange/IIS	3
—	—	Electives: CPT or other Department	6
—	—	Elective (choose two from list below) - Advisor approved	
—	—	Elective: Social Science - Advisor approved	3

Total Credit Hour Requirements

63

Note: Students must earn a grade of C- or better in College Writing (ENG 101), College Algebra (MAT 122), Interpersonal Communication (SPE 111), and all CPT core courses in order to meet the degree requirements of this program.

Computer Technology Electives

CPT	201	Linux
CPT	202	Advanced Linux
CPT	210	Intro to Routing Technologies
CPT	211	Intro to Routers
CPT	212	Advanced Routing
CPT	213	WAN Routing
CPT	225	Advanced PC Repair
CPT	230	Field Experience (Internship)

Culinary Arts (CUA)

Program Description

The Culinary Arts Program is a one year Certificate program that prepares students for employment in the food service and hospitality industry. Through a combination of classroom instruction and assigned experiences in the program's kitchen and dining room facilities, students receive training in nutrition, menu planning, kitchen sanitation, food preparation, food purchase and storage, and meal serving.

Students may enroll on a full or part-time basis and may take some courses in the day, evening, or both, depending upon availability. Students enrolled for full-time course work usually need one academic year to complete the Certificate. Part-time students may need several semesters to complete the program requirements.

Students who successfully complete the Certificate curriculum have the opportunity to earn an Associate in Applied Science Degree in the Business Administration and Management program with a concentration in Hospitality Management. All academic credit earned in the Certificate program will transfer into the Associate Degree program. Students who successfully complete courses in Sanitation and/or Nutrition, and/or Purchasing are eligible to sit for examinations leading to national certification by the American Culinary Federation.

Career Opportunities

Graduates of the program typically obtain employment as cooks, cook's helpers and assistant bakers in restaurants or other institutions where operations include food service, such as schools, hospitals, and nursing homes.

Certificate Requirements

Semester I

BUS	100	Understanding Business	3
CUA	101	Principles of Cooking	4
CUA	111	Introduction to Baking	4
CUA	121	Food Preparation Sanitation	3
ENG	101*	College Writing**	3

Semester II

CUA	151	Quantity Food Production	4
CUA	161	Desserts and Pastries	4
CUA	171	Nutrition and Food Quality	3
CUA	181	Food Purchasing	3
MAT	101*	Business Mathematics**	3

**Course placement determined by assessment test scores and/or prior college course work*

Total Credit Hour Requirements 34

***Note: Students who successfully complete the Certificate requirements may transfer all credit hours into the Business Administration and Management program and earn an Associate in Applied Science Degree with a concentration in Hospitality Management provided that they earn a grade of C (not C-) or better in College Writing (ENG 101) and Business Mathematics (MAT 101).*

Early Childhood Education (ECE)

Program Description

The Early Childhood Education (ECE) program is designed to prepare individuals to be skilled professionals qualified to work in a wide variety of early childhood settings including (but not limited to): child care centers, Head Start, home child care, nursery schools, and programs for children with special needs. The program's curriculum is based upon standards set by the National Association for the Education of Young Children (NAEYC) and it promotes all facets of current best practices in the field.

ECE courses are based on a combination of understanding theory and applying it to practical experiences working directly with young children, ages birth through early school age. Students in degree programs must complete at least 300 hours of supervised work in early childhood settings.

Currently, there are three ECE program options: Certificate, Associate in Science, and Associate in Applied Science (this option is for individuals who are participating in the Maine Registered Apprenticeship Program). Students take a combination of ECE courses and General Education courses to meet the requirements of any of the program options. Students may enroll on a part or full time basis, taking the amount of time they need to complete the program requirements. Students should meet with their Academic Advisor prior to the start of each semester to set up a schedule that realistically meets their time and commitment capabilities.

All applicants should be advised that students are required to complete practicums in licensed facilities. The Department of Human Services has specific requirements for all paid and unpaid staff (including students).

As a result of these requirements, students may be required to have a record of SBI (State Bureau of Identification) on file with the practicum site. Practicum sites retain the right to accept or deny placement of students based on many conditions, one of which is a criminal record. Therefore, any criminal history record could jeopardize an individual's ability to successfully meet all the requirements of the program.

Early Childhood Education majors must obtain a minimum grade of C in each Early Childhood Education course and a minimum GPA of 2.0 or better to graduate.

Program Educational Outcomes:

Upon completion of either the Associate in Science or Associate in Applied Science Early Childhood Education Program, the graduate is prepared to:

1. Recognize and maintain all required health and safety policies and practices in programs for young children.
2. Apply theories of child development to plan inclusive, developmentally appropriate curriculum and environments for children in care who are between 6 weeks - 8 years.
3. Demonstrate positive, supportive interactions with young children that clearly reflect the student's understanding of their social-emotional development and well-being.
4. Describe the benefits of positive, respectful partnerships with diverse families.
5. Understand and demonstrate commitment to NAEYC's code of ethical conduct, and to standards of professional practice with children and adults.
6. Assess young children's ongoing developmental and cultural needs to be able to individualize curriculum and teaching strategies.
7. Articulate a professional philosophy of early childhood education, using appropriate terminology and respect for diversity.
8. Work as part of an early childhood education team, using clear communication and professional skills to plan, manage, and assess ongoing needs and improvements.

Early Childhood Education (ECE)

(Continued from previous page)

Pre-registration Requirements

In addition to meeting the admission requirements of the College, applicants to this program must provide the following:

1. A signed CMTC Student Disclosure and Consent form.
2. Immunization Record (if born after 1956).
3. Current certification in first aid and CPR or a plan to obtain certification.
4. Written references documenting ability, character and suitability to work with children.
5. Annual motor vehicle check if transporting children.
6. Practicum experiences take place in a variety of settings and geographic locations. Early Childhood Education majors must therefore provide their own transportation to and from these settings.
7. Purchase the college professional liability insurance prior to the start of the first ECE Practicum.

Associate in Science Degree Requirements

Semester I

ECE	100	Intro to Early Care and Education	3
ENG	101*	College Writing	3
PSY	114	Child Development	3
SOC	220	Sociology of the Family	3
—	—*	Elective: Mathematics - Advisor approved	3

**Course placement determined by assessment test scores and/or prior college course work*

Semester II

ECE	105	Infant & Toddler Curriculum	3
ECE	107	Infant & Toddler Practicum	1
ECE	150	Language & Literacy for Young Children	3
PSY	101	Introduction to Psychology	3
—	—	Elective: Communication - select one of the following: SPE 101 Speech & Oral Communication SPE 111 Interpersonal Communication	3
—	—	Elective: Mathematics - Advisor approved	3

Semester III

ECE	113	Curriculum & Environments for Young Children	3
ECE	114	Young Children Practicum	2
ECE	205	Education of Children with Special Needs	3
—	—	Elective: Laboratory Science - Advisor approved	4
PSY	210	Behavior Analysis and Management	3

Semester IV

ECE	210	Issues in Early Care and Education	3
ECE	230	Practicum Capstone	6
—	—	Elective: Humanities - Advisor approved	3
—	—	Elective: Mathematics/Science - Advisor approved	3-4
—	—	Elective: Advisor approved	3

Early Childhood Education majors must obtain a minimum grade of C in each Early Childhood Education course and a minimum GPA of 2.0 or better to graduate.

Total Credit Hour Requirements

64-65

Distribution of A.S. Degree Credit Hour Requirements

Humanities and Social Science - 21 (33%)

ENG 101; PSY 101, 114, 210; SOC 220, SPE 111 or 101, one Humanities and one Social Science elective

Mathematics and/or Science - 13-14 (21%)

Mathematics - 2 electives, 1 Lab Based Science, and one Math/Science elective

Concentration - 27 (43%)

ECE 100, 105, 107, 113, 114, 150, 205, 210, 230

Elective - 3 (4%)

Early Childhood Education (ECE)

Associate in Applied Science Degree Requirements

Semester I

BUS	101	Small Business Management	3
ECE	100	Intro to Early Care & Education	3
ENG	101*	College Writing	3
PSY	114	Child Development	3
—	—*	Elective: Mathematics - Advisor approved	3

Semester II

ECE	105	Infant and Toddler Curriculum	3
ECE	107	Infant and Toddler Practicum	1
ECE	150	Language & Literacy for Young Children	3
MAT	101*	Business Mathematics	3
—	—	Elective: Communication - Select one of the following: SPE 101 Speech & Oral Communication SPE 111 Interpersonal Communication	3

**Course placement determined by assessment test scores and/or prior college course work*

Semester III

ECE	113	Curriculum & Environments for Young Children	3
ECE	114	Young Children Practicum	2
ECE	205	Education of Children with Special Needs	3
—	—	Elective: Mathematics/Science - Advisor approved	3-4
—	—	Elective: Social Science - select one of the following: PSY 101 Introduction to Psychology SOC 220 Sociology of the Family	3

Semester IV

ECE	230	Practicum Capstone	6
ECE	199	Apprenticeship (Documented & Evaluated)	12
—	—	Elective: Humanities - Advisor approved	3

Total Credit Hour Requirements **63-64**

Early Childhood Education majors must obtain a minimum grade of C in each Early Childhood Education course and a minimum GPA of 2.0 or better to graduate.

Certificate Requirements

Semester I

ECE	100	Introduction to Early Care & Education	3
ECE	105	Infant and Toddler Curriculum	3
ECE	107	Infant and Toddler Practicum	1
ECE	113	Curriculum & Environments for Young Children	3
ECE	114	Young Children Practicum	2

Semester II

ENG	101*	College Writing	3
MAT	101*	Business Mathematics	3
PSY	114	Child Development	3
—	—	Elective: Social Science - select one of the following: PSY 101 Introduction to Psychology SOC 220 Sociology of the Family	3
—	—	Elective: Communication - select one of the following: SPE 101 Speech and Oral Communication SPE 111 Interpersonal Communication	3
—	—	Elective: Humanities - Advisor approved	3

**Course placement determined by assessment test scores and/or prior college course work*

Total Credit Hour Requirements **30**

Early Childhood Education majors must obtain a minimum grade of C in each Early Childhood Education course and a minimum GPA of 2.0 or better to graduate.

Distribution of A.A.S. Degree Credit Hour Requirements

Humanities and Social Science - 15 (24%)

ENG 101; PSY 101 or SOC 220, PSY 114, SPE 101 or 111, and one Humanities elective

Mathematics and/or Science - 9-10 (14%)

MAT 101; one Math elective and one Math/Science elective

Concentration - 39 (62%)

ECE 100, 105, 107, 113, 114, 150, 199, 205, 230.

Electromechanical Technology (ELT)

Program Description

The Electromechanical Technology program prepares students for careers in electricity and electronic fields that require technicians who are capable of dealing with the challenge of rapid changes in technology. Emphasis is placed on providing a solid theoretical background in electricity and electronics balanced with industrial control technologies.

This program covers five major content areas of study: **(1) Electricity & Industrial Controls:** students learn how to read schematic diagrams and follow National Electrical Code standards in connecting devices and motor controls; **(2) Digital & Analog Electronics:** students become skilled in the use of test instruments, digital and analog circuitry, microprocessors and computers.; **(3) Process Control & Measurement:** students study pressure, temperature, level, analytical and flow measurement concepts that are implemented to produce feedback control loop systems; **(4) Robotics & Automation:** students use personal computers to program and control industrial robotic arms and program intelligent controls such as A-C frequency drives and programmable Controllers; and **(5) Telecommunications:** students study data communication and networking.

Students have the opportunity to earn a Certificate, a Diploma or an Associate in Applied Science degree. The program has been approved by the State of Maine Electricians' Licensing Board to provide courses that meet the requirements of the Master, Journeyman, and Limited licensing law. The award of a Certificate may be earned with program concentrations in Electromechanical Technology, Electrician Licensing, Electronics, Industrial Electricity, Instrumentation and Robotic Technology (see details on the following page)

Upon graduation, students qualify for entry level positions as: electromechanical technicians, electrical/electronic technicians, electricians, engineering assistants, instrument technicians, maintenance technicians, robotic technicians, and computer technicians. The work is widely diverse from maintenance of equipment and systems in the industrial environment to programming intelligent controllers, and electrical installations.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in the Electromechanical Technology Program, the graduate is prepared to:

1. Demonstrate oral and written presentation skills.
2. Practice appropriate electrical safety procedures.
3. Employ entry-level skills in the electrical, electronic, and process control fields.
4. Analyze electrical and electronic prints and specifications.
5. Compute operating voltages and currents for electrical and electronic circuits.

Associate in Applied Science Degree Requirements

Semester I Credit Hours

ELT	111	Electricity I	4
ELT	123	Electrical Controls I	3
ELT	153	Digital Logic	3
MAT	100*	Intermediate Algebra	3
—	—	Elective: Humanities - Advisor approved	3

Semester II

ELT	112	Electricity II	4
ELT	145	Electronic Devices I	3
ENG	101*	College Writing	3
TET	201	Telecommunications I	3
—	—	Elective: (MAT 105 or >) - Advisor approved	3
—	—	Elective: Advisor approved	3

**Course placement determined by assessment test scores and/or prior college course work.*

Semester III

ELT	221	Industrial Controls	3
ELT	231	Process Measurement	3
ELT	245	Electronic Devices II	3
ELT	271	Industrial Robotics	3
—	—	Elective: Mathematics/Science - Advisor approved	3-4

Semester IV

ELT	222	Programmable Controls	3
ELT	232	Process Control	3
ELT	246	Linear Integrated Electronics	3
ELT	275	Robotics & Control Systems	2
ENG	201	Technical Writing	3
—	—	Elective: Social Science - Advisor approved	3

ELT 296 Independent Study (in place of applicable ELT course requirements) is an option available for up to 6 credit hours in the second year, subject to approval by the Department Chairperson and the Faculty Advisor. See Course Description section of this catalog.

Total Credit Hour Requirements 67-68

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (18%)

ENG 101, 201, one Humanities elective and one Social Science elective.

Mathematics and/or Science - 9 (14%)

MAT 100, MAT elective (105 or above), MAT/SCI elective.

Concentration - 43 (64%)

ELT 111, 112, 123, 145, 153, 221, 222, 231, 232, 245, 246, 271, 275 and TET 201.

Elective - 3 (4%)

Electromechanical Technology (ELT)

(continued from previous page)

6. Select and utilize test equipment to measure electrical quantities and troubleshoot circuits.
7. Design and hook up control systems found in Process Control, Programmable Logic Controllers, and Robotics.
8. Employ personal computer skills to operate technical application software and set up networking.
9. Demonstrate a commitment to life-long learning through formal education, on-the-job inservice or through independent participation in other technical/trade resources.

Diploma Requirements

Semester I **Credit Hours**

BCA	120	Introduction to Computer Applications	3
ELT	111	Electricity I	4
ELT	123	Electrical Controls I	3
ELT	153	Digital Logic	3
MAT	100*	Intermediate Algebra	3

Semester II

ELT	112	Electricity II	4
ELT	145	Electronic Devices I	3
ENG	101*	College Writing	3
TET	201	Telecommunications I	3

*Course placement determined by assessment test scores and/or prior college course work.

Semester III

ELT	221	Industrial Controls	3
ELT	231	Process Measurement	3
ELT	245	Electronic Devices II	3
ELT	271	Industrial Robotics	3

Semester IV

ELT	222	Programmable Controls	3
ELT	232	Process Control	3
ELT	246	Linear Integrated Electronics	3
ELT	275	Robotics & Control Systems	2

ELT 296 Independent Study (in place of applicable ELT course requirements) is an option available for up to 6 credit hours in the second year, subject to approval by the Department Chairperson and the Faculty Advisor. See Course Description section of this catalog.

Total Credit Hour Requirements **52**

Electromechanical Technology (ELT)

Certificate Requirements

Core Requirements

120	Introduction to Computer Applications	3
111	Electricity I	4
101*	College Writing	3
100*	Intermediate Algebra	3
		13

**College placement determined by assessment test scores and/or prior college course work*

Certificate Concentrations

Concentrations include Core Requirements above as well as one of the following selections:

Concentration in Electrician Licensing

These courses have been approved by the State of Maine Electricians' Licensing Board to meet the requirements of the Master, Journeyman, and Limited licensing law.

ELT	102	Electric Motor	2
ELT	103	Residential Controls	2
ELT	104	Blueprint Reading & Estimation	2
ELT	105	Commercial Wiring & Transformers	2
ELT	107	Industrial Motor Controls	2
ELT	108	Basic Electronics	2
ELT	109	National Electrical Code I	2
ELT	112	Electricity II	4

Total Credit Hour Requirements (core plus concentration courses) 31

Concentration in Industrial Electricity

ELT	112	Electricity II	4
ELT	123	Electrical Controls I	3
ELT	126	Electrical Controls II	2
ELT	153	Digital Logic	3
ELT	221	Industrial Controls	3
ELT	222	Programmable Controls	3

Total Credit Hour Requirements (core plus concentration courses) 31

Concentration in Electronics

ELT	112	Electricity II	4
ELT	145	Electronic Devices I	3
ELT	153	Digital Logic	3
ELT	245	Electronic Devices I	3
ELT	246	Linear Integrated Circuits	3

Total Credit Hour Requirements (core plus concentration courses) 29

Concentration in Instrumentation

ELT	112	Electricity II	4
ELT	145	Electronic Devices I	3
ELT	153	Digital Logic	3
ELT	231	Process Measurement	3
ELT	232	Process Control	3
ELT	245	Electronic Devices II	3
ELT	246	Linear Integrated Circuits	3

Total Credit Hour Requirements (core plus concentration courses) 35

Concentration in Robotics

CPT	130	Introduction to Visual BASIC	3
ELT	153	Digital Logic	3
ELT	211	Control Systems	3
ELT	271	Industrial Robotics	3
ELT	275	Robotics & Control Systems	2
SCI	151	Hydraulics & Pneumatics Theory	2
SCI	152	Hydraulics & Pneumatics Lab	2

Total Credit Hour Requirements (core plus concentration courses) 31

Concentration in Electromechanical Technology

—	—	Technical Electives: Electromechanical	18
		Advisor approved	

Total Credit Hour Requirements (core plus concentration courses) 31

General Studies (GS)

Program Description

The Associate in Arts in General Studies degree program is designed primarily for individuals who plan to transfer to a four-year college or university in pursuit of a bachelor's degree. A core of courses in the program offers students the opportunity to develop skills in Communication, the Humanities, the Social Sciences, Mathematics and Science. Six additional credit hours selected from one of the core areas allows for the acquisition of further skills in a concentrated area. Courses taken as electives afford individuals an opportunity to explore a variety of academic disciplines or career fields.

In order to ensure optimal transfer of credits to upper division programs, students will work collaboratively with their academic advisor to plan a course of study that meets their goals. To facilitate the transfer of courses, students should identify, as soon as possible, the upper division program and institution in which they plan to enroll.

Program Educational Outcomes:

Upon completion of the Associate in Arts in General Studies degree program the graduate is prepared to:

1. Communicate clearly and effectively employ written and oral skills.
2. Access, analyze, summarize and interpret a variety of reading materials.
3. Understand and utilize fundamental mathematical concepts.
4. Appreciate self as an individual in interaction with a biological/physical environment.
5. Think critically and link concepts across a variety of disciplines.
6. Conceptualize society as being culturally diverse within a global community.
7. Evaluate personal values, interests and education/career goals.

Associate in Arts Degree Requirements

Upon successful completion of the following curriculum requirements (60-61 credit hours) at a minimum cumulative grade point average of 2.00 the student will be awarded the Associate in Arts in General Studies degree.

Communication 9 Credit Hours

ENG 101 College Writing and one of the following: ENG 131 Style and Syntax of American English; ENG 201 Technical Writing; ENG 220 Business Communication; ENG 221 Advanced Composition and Research; and SPE 101 Speech or SPE 111 Interpersonal Communication.

Mathematics and Science 10 Credit Hours

MAT 135 Statistics (or MAT 132, 280) and one of the following laboratory sciences: PHY 121-122 Technical Physics; PHY 142-143 Physics I; BIO 101-102 General Biology; BIO 115-116 Anatomy & Physiology I; CHY 101-102 Introduction to Chemistry; and one additional math or science course numbered at the 101 level or higher.

Humanities 9 Credit Hours

Three of the following: *HUM 101 Technology & Society; HUM 121 Mass Media & Popular Culture; ENG 111 American Literature, ENG 121 The Short Story; PHI 101 Critical Thinking; PHI 111 Introduction to Ethics, or PHI 151 Introduction to Philosophy.

**meets Humanities or Interdisciplinary requirement.*

Social Science 9 Credit Hours

Three of the following: HIS 110 Survey of American History; HIS 201 Maine History; PSY 101 Introduction to Psychology; PSY 111 Developmental Psychology, PSY 120 Psychology in the Workplace; SOC 101 Introduction to Sociology; or POS 201 Maine State Government.

Interdisciplinary 3 Credit Hours

One of the following: HUM 101 Technology & Society; MAT 102 Numbers & Logic; or INS 296 Interdisciplinary Seminar.

Core Concentration 6 Credit Hours

Two courses from one of the following core areas:

Communication
Mathematics and Science
Humanities
Social Science
Technical

Elective Courses (with Advisor endorsement) 14 - 15 Credit Hours

Total Credit Hour Requirements 60 - 61 Credit Hours

Graphic Arts/Printing Technology (GAT)

Program Description

Graphic Arts/Printing Technology is a program that offers students the option of earning a Certificate, a Diploma or an Associate in Applied Science degree. An intensive group of foundation courses introduces the total production process from design and desktop publishing through press work and bindery operations and prepares students for the broad range of employment opportunities available in the printing industry. A balance of classroom study and practical application assures the development of a solid theoretical background, good production skills and appropriate work attitudes. The program meets the PrintEd accreditation standards of the Graphic Arts Education and Research Foundation (GAERF).

Through the completion of assigned production projects, students become familiar with the operation of equipment and performance standards common to the industry. For students choosing the two-year program, an industrial internship provides supervised on-the-job training.

Career Opportunities

Graduates of this program may pursue careers in design and layout, electronic desktop publishing, imaging and camera work, image assembly, proofing and platemaking, litho and duplicator presswork, letterpress operations, screen printing and bindery and finishing work. Each student has the opportunity to focus their studies in prepress or press/bindery career areas. Employment may be found in small printing shops, large printing plants or in the graphic arts departments of companies that publish materials in-house.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science in the Graphic Arts/Printing Technology Program, the graduate is prepared to:

1. Apply the printing process at the spot color, line duplicator operator level.
2. Employ the specific skills and good work habits that are required in today's Printing Industry.
3. Analyze, plan and safely produce quality printing products within a production setting as part of a team approach within the time. Waste and quality standards established within the program with the guidance of the Maine Graphic Arts Association.
4. Clearly communicate with customers and other team members utilizing written, verbal and/or electrical means.
5. Participate in continuing education either formally through credit coursework, or through other education opportunities such as in-services or GAT Association activities.

Distribution of A.A.S. Credit Hour Requirements in Press/Bindery Concentration

Humanities and Social Science - 12 (17.3%)

ENG 101, 201 or SPE 101, one Humanities and one Social Science elective

Mathematics and/or Science - 9 (13%)

MAT 101, and two Mathematics/Science electives

Concentration - 45 (65.2%)

GAT 104, 105, 111, 121, 131, 132, 141 or 151, 281, 286, 233, 234, 235, 293, or 294 and one elective

Elective: 3 (4.3%)

Distribution of A.A.S. Credit Hour Requirements in Prepress Area of Specialization

Humanities and Social Science - 12 (17%)

ENG 101, ENG 201 or SPE 101, one Humanities elective and one Social Science elective

Mathematics and/or Science - 9-10 (13.2%)

MAT 101, and two Mathematics/Science electives

Concentration - 44 (65%)

GAT 104, 105, 111, 121, 131, 113, 155, 176, 281, 285, 292 (or 293), and two electives

Elective -3 (4.4%)

Graphic Arts/Printing Technology (GAT)

Associate in Applied Science Degree Requirements Prepress Area of Specialization

Semester I			Credit Hours	Semester II			Credit Hours
ENG	101*	College Writing	3	GAT	113	Advanced Stripping	3
GAT	104	Copy Preparation Techniques	1	GAT	155	Desktop Publishing: QuarkXpress	3
GAT	105	Copy Preparation Operations	2	GAT	176	Photoshop I	3
GAT	111	Offset Preparation	3	—	—	Elective: GAT - Advisor Approved	2
GAT	121	Copy Center Mgmt. & Operations	1	—	—	Elective: Humanities Advisor approved	3
GAT	131	Duplicator & Finishing Operations	3	—	—	Elective: Mathematics/Science Advisor approved	3-4
MAT	101*	Business Mathematics	3				
<i>*Course placement determined by assessment test scores and/or prior college coursework.</i>							
Semester III				Semester IV			
GAT	281	Intro to Printing Estimating	3	—	—	Elective: GAT Select one of the following:	12
GAT	285	Production Experience	6			GAT 292 Industrial Experience (in house)	
—	—	Elective: GAT - Advisor Approved	2			GAT 293 Industrial Experience (field)	
—	—	Elective: Communication - select one of the following:	3	—	—	Elective Mathematics/Science Advisor approved	3-4
		ENG 201 Technical Writing		—	—	Elective: Social Science Advisor approved	3
		SPE 101 Speech & Oral Comm.					
—	—	Elective: Advisor approved	3				
Total Credit Hour Requirements							68-70

Associate in Applied Science Degree Requirements Press/Bindery Area of Specialization

Semester I			Credit Hours	Semester II			Credit Hours
ENG	101*	College Writing	3	GAT	132	Advanced Duplicator Operations	3
GAT	104	Copy Preparation Techniques	1	—	—	Elective: GAT - select one of the following :	2
GAT	105	Copy Preparation Operations	2			GAT 141 Letterpress Printing	
GAT	111	Offset Preparation	3			GAT 151 Screen Printing	
GAT	121	Copy Center Mgmt. & Operations	1	—	—	Elective: GAT - Advisor approved	3
GAT	131	Duplicator & Finishing Operations	3	—	—	Elective: Humanities - Advisor approved	3
MAT	101*	Business Mathematics	3	—	—	Elective: Mathematics/Science Advisor approved	3-4
<i>*Course placement determined by assessment test scores and/or prior college coursework.</i>							
				—	—	Elective - Advisor approved	3
Semester III				Semester IV			
GAT	233	Litho Printing & Bindery Theory	2	—	—	Elective: GAT - Select one of the following:	12
GAT	234	Litho Printing & Bindery Operations	2			GAT 293 Industrial Experience (field)	
GAT	235	Web Press Theory	2			GAT 294 Industrial Experience (in house)	
GAT	281	Intro to Printing Estimating	3	—	—	Elective: Mathematics/Science Advisor approved	3-4
GAT	286	Production Experience	6	—	—	Elective: Social Science- Advisor approved	3
—	—	Elective: Communication - select one of the following:	3				
		ENG 201 Technical Writing					
		SPE 101 Speech & Oral Comm.					
Total Credit Hour Requirements							69-71

GAT Electives

GAT 106	Design & Layout I (3 cr)	GAT 176	Photoshop I (3 cr)
GAT 107	Introduction to Adobe Acrobat (1 cr)	GAT 177	Photoshop II (3 cr)
GAT 113	Advanced Stripping Techniques (3 cr)	GAT 204	Design & Layout II
GAT 141	Letterpress Printing (2 cr)	GAT 214	Continuous Tone Photography (2 cr)
GAT 151	Screen Printing (2 cr)	GAT 233	Litho Press and Bindery Theory (2 cr)
GAT 155	Desktop Pub: QuarkXPress (3 cr)	GAT 235	Web Press Theory (2 cr)
		GAT 296	Independent Study (Variable credit)

Graphic Arts/Printing Technology (GAT)

Diploma Requirements Prepress Area of Specialization

Semester I			Credit Hours	Semester II			Credit Hours
ENG	101*	College Writing	3	GAT	113	Advanced Stripping	3
GAT	104	Copy Preparation Techniques	1	GAT	155	Desktop Publishing: QuarkXpress	3
GAT	105	Copy Preparation Operations	2	GAT	176	Photoshop I	3
GAT	111	Offset Preparation	3	—	—	Elective: GAT - Advisor	3
GAT	121	Copy Center Mgmt. & Operations	1			Approved	
GAT	131	Duplicator & Finishing Operations	3				
MAT	101*	Business Mathematics	3				
<i>*Course placement determined by assessment test scores and/or prior college coursework.</i>							
Semester III				Semester IV			
GAT	281	Intro to Printing Estimating	3	—	—	Elective: GAT - Select one of the	12
GAT	285	Production Experience	6			following:	
—	—	Electives: GAT - Advisor	6			GAT 292 Industrial Experience (in house)	
		Approved				GAT 293 Industrial Experience (field)	
Total Credit Hour Requirements							55

Diploma Requirements Press/Bindery Area of Specialization

Semester I			Credit Hours	Semester II			Credit Hours
ENG	101*	College Writing	3	GAT	132	Advanced Duplicator Operations	3
GAT	104	Copy Preparation Techniques	1	—	—	Elective: GAT - select one of the	2
GAT	105	Copy Preparation Operations	2			following :	
GAT	111	Offset Preparation	3			GAT 141 Letterpress Printing	
GAT	121	Copy Center Mgmt. & Operations	1			GAT 151 Screen Printing	
GAT	131	Duplicator & Finishing Operations	3	—	—	Electives: GAT - Advisor approved	6
MAT	101*	Business Mathematics	3	—	—	Elective: Advisor approved	3
<i>*Course placement determined by assessment test scores and/or prior college coursework.</i>							
Semester III				Semester IV			
GAT	233	Litho Printing & Bindery Theory	2	—	—	Elective: GAT - Select one of the	12
GAT	234	Litho Printing & Bindery Operations	2			following:	
GAT	235	Web Press Theory	2			GAT 293 Industrial Experience (field)	
GAT	281	Intro to Printing Estimating	3			GAT 294 Industrial Experience (in house)	
GAT	286	Production Experience	6				
Total Credit Hour Requirements							57

GAT Electives

GAT 106 Design & Layout I (3 cr)
 GAT 107 Introduction to Adobe Acrobat (1 cr)
 GAT 113 Advanced Stripping Techniques (3 cr)
 GAT 141 Letterpress Printing (2 cr)
 GAT 151 Screen Printing (2 cr)
 GAT 155 Desktop Pub: QuarkXPress (3 cr)

GAT 176 Photoshop I (3 cr)
 GAT 177 Photoshop II (3 cr)
 GAT 204 Design & Layout II
 GAT 214 Continuous Tone Photography (2 cr)
 GAT 233 Litho Press and Bindery Theory (2 cr)
 GAT 235 Web Press Theory (2 cr)
 GAT 296 Independent Study (Variable credit)

Graphic Arts/Printing Technology (GAT)

Certificate Requirements Prepress Area of Specialization

Semester I			Credit Hours	Semester II			Credit Hours
ENG	101*	College Writing	3	GAT	192	Production Experience: Prepress	6
GAT	104	Copy Preparation Techniques	1	—	—	Electives: GAT - Advisor Approved	9
GAT	105	Copy Preparation Operations	2				
GAT	111	Offset Preparation	3				
GAT	121	Copy Center Mgmt. & Operations	1				
GAT	131	Duplicator & Finishing Operations	3				
MAT	101*	Business Mathematics	3				

**Course placement determined by assessment test scores and/or prior college coursework.*

Total Credit Hour Requirements 31

Certificate Requirements Press/Bindery Area of Specialization

Semester I			Credit Hours	Semester II			Credit Hours
ENG	101*	College Writing	3	GAT	193	Production Experience: Press/Bindery	6
GAT	104	Copy Preparation Techniques	1	—	—	Electives: GAT - Advisor approved	9
GAT	105	Copy Preparation Operations	2				
GAT	111	Offset Preparation	3				
GAT	121	Copy Center Mgmt. & Operations	1				
GAT	131	Duplicator & Finishing Operations	3				
MAT	101*	Business Mathematics	3				

**Course placement determined by assessment test scores and/or prior college coursework.*

Total Credit Hour Requirements 31

GAT Electives

GAT 106 Design & Layout I (3 cr)
 GAT 107 Introduction to Adobe Acrobat (1 cr)
 GAT 113 Advanced Stripping Techniques (3 cr)
 GAT 141 Letterpress Printing (2 cr)
 GAT 151 Screen Printing (2 cr)
 GAT 155 Desktop Pub: QuarkXPress (3 cr)

GAT 176 Photoshop I (3 cr)
 GAT 177 Photoshop II (3 cr)
 GAT 204 Design & Layout II
 GAT 214 Continuous Tone Photography (2 cr)
 GAT 233 Litho Press and Bindery Theory (2 cr)
 GAT 235 Web Press Theory (2 cr)
 GAT 296 Independent Study (Variable credit)

Human Services (HUS)

Program Description

The Associate in Applied Science Degree in Human Services will prepare graduates for entry-level positions in areas of substance abuse, mental health, developmental disabilities, child and adolescent services, and gerontology. The development of concentrations in each area may be explored in the future.

A grade of "C" or better in all Human Services courses, a cumulative GPA of 2.0 or better, completion of the first and second semester courses and approval of the Department Chair is required before enrollment in the Human Resources Practicums.

Career Opportunities

Graduates can be employed in the following capacities: activity therapist associate, addictions counselor, crisis counselor, human development associate, mental health associate, rehabilitation worker, family worker, activity director/associate, and volunteer coordinator. The facilities that employ individuals in these capacities, include: community mental health centers, programs for the elderly, hospitals, social service and mental health programs. Graduates may also be employed in facilities and programs for the developmentally disabled, special programs for alcoholics and drug abusers, youth services, and child care and Head Start programs.

Program Educational Outcomes

Upon completion of the Associate Degree in Applied Science in Human Services Program, the graduate is prepared to:

1. Utilize knowledge of the basic counseling skills necessary to establish collaborative relationship with clients and their families.
2. Demonstrate knowledge of formal and informal support systems available in the community.
3. Analyze problems and use appropriate methods in collaboration with other team members in the treatment of individual, family, group and community human service problems.
4. Demonstrate awareness of the challenges faced by clients with regard to human-rights issues, financial problems, administrative/legal hurdles and other issues/concerns.
5. Assume ethical responsibility and abide by the standards governing the field of Human Services.
6. Establish and maintain continuing education as a function of growth and maintenance of professional competence.

Admission Requirements

In addition to the general admission requirements of the College, applicants to this program must have had the following:

High school Algebra I & II

Personal interview with the program coordinator

Associate in Applied Science Degree Requirements

Semester I			Credit Hours
BIO	101	General Biology (Lec.)	3
BIO	102	General Biology (Lab)	1
ENG	101*	College Writing	3
HUS	110	Introduction to Human Services	3
PSY	101	Introduction to Psychology	3
SOC	101	Introduction to Sociology	3
Semester II			
HUS	151	Introduction to Mental Health	3
HUS	153	Substance Abuse	3
HUS	155	Case Management	3
PSY	111	Developmental Psychology	3
PSY	151	Interviewing and Counseling	3
Semester III			
HUS	201	Developmental Disabilities	3
HUS	241	Human Services Practicum I	4
MAT	122*	College Algebra	3
PSY	201	Psychosocial Rehabilitation	3
SOC	201	Sociology of Aging	3
*Course placement determined by assessment test scores and/or prior college course work.			
Semester IV			
HUS	251	Human Services Practicum II	4
MAT	135	Statistics	3
PHI	101	Critical Thinking	3
SOC	220	Sociology of the Family	3
SPE	101	Speech and Oral Communication	3
—	—	Elective - Advisor approved	3
Total Credit Hour Requirements			66

Pre-Registration Requirements

The following are additional requirements needed prior to registration in the first practicum course. Other programs at CMTC and comparable colleges have similar requirements.

- 1) A physical exam performed by a qualified health care professional
- 2) Proof of the following immunizations or titers:
Measles Mumps Rubella (MMR)
Hepatitis B Virus (HBV) - 3 doses
Adult Tetanus
Purified Protein Derivative (PPD for TB)
Varicella titer for Chicken Pox
- 3) Purchase College professional liability insurance prior to the start of the first HUS practicum.
- 4) All students are advised to purchase their own Health/Accident Insurance

Once an applicant's file is complete, the applicant is invited to an informal meeting with the HUS Program Chairperson for the purpose of reviewing the program and selecting the appropriate course of study. Upon admission to the program, the student is assigned a HUS faculty advisor.

Distribution of A.A.S. Credit Hour Requirements

Humanities & Social Sciences - 30 (45%)	Mathematics and/or Science - 10 (15%)	Concentration - 23(35%)
ENG 101, PHI 161, PSY 101, 111, 151, 201, SOC 101, 201, 220, and SPE 101	BIO 101, 102, MAT 122, and 135	HUS 110, 151, 153, 155, 201, 241, & 251 Elective - 3 (5%)

Liberal Studies (LS)

Program Description

The Associate in Arts in Liberal Studies degree program is designed primarily for individuals who plan to transfer to a four-year college or university in pursuit of a bachelor's degree. A core of courses in the program offers students the opportunity to develop skills in Communication, the Humanities, the Social Sciences, Mathematics and Science. Six additional credit hours selected from one of the core areas allows for the acquisition of further skills in a concentrated area. Courses taken as electives afford individuals an opportunity to explore a variety of academic disciplines.

In order to ensure optimal transfer of credits to upper division programs, students will work collaboratively with their academic advisor to plan a course of study that meets their goals. To facilitate the transfer of courses, students should identify, as soon as possible, the upper division program and institution in which they plan to enroll.

Program Educational Outcomes:

Upon completion of the Associate in Arts in Liberal Studies degree program, the graduate is prepared to:

1. Communicate clearly and effectively employ written and oral skills.
2. Access, analyze, summarize and interpret a variety of reading materials.
3. Understand and utilize fundamental mathematical concepts.
4. Appreciate self as an individual in interaction with a biological/physical environment.
5. Think critically and link concepts across a variety of disciplines.
6. Conceptualize society as being culturally diverse within a global community.
7. Evaluate personal values, interests and education/career goals.

Admission Requirements

In addition to the general admissions requirements of the College, applicants to this program must have had the following:

High school Algebra I and II or equivalent

Associate in Arts Degree Requirements

Upon successful completion of the following curriculum requirements (60-61 credit hours) at a minimum cumulative grade point average of 2.00 the student will be awarded the Associate in Arts in General Studies degree.

Communication

9 Credit Hours

ENG 101 College Writing and one of the following: ENG 131 Style and Syntax of American English; ENG 201 Technical Writing; ENG 220 Business Communication; ENG 221 Advanced Composition and Research; and SPE 101 Speech or SPE 111 Interpersonal Communication.

Mathematics and Science

10 Credit Hours

MAT 135 Statistics (or MAT 132, 280) and one of the following laboratory sciences: PHY 121-122 Technical Physics; PHY 142-143 Physics I; BIO 101-102 General Biology; BIO 115-116 Anatomy & Physiology I; CHY 101-102 Introduction to Chemistry; and one additional math or science course numbered at the 101 level or higher.

Humanities

9 Credit Hours

Three of the following: *HUM 101 Technology & Society; HUM 121 Mass Media & Popular Culture; ENG 111 American Literature, ENG 121 The Short Story; PHI 101 Critical Thinking; PHI 111 Introduction to Ethics, or PHI 151 Introduction to Philosophy

**meets Humanities or Interdisciplinary requirement.*

Social Science

9 Credit Hours

Three of the following: HIS 110 Survey of American History; HIS 201 Maine History; PSY 101 Introduction to Psychology; PSY 111 Developmental Psychology, PSY 120 Psychology in the Workplace; SOC 101 Introduction to Sociology; or POS 201 Maine State Government.

Interdisciplinary

3 Credit Hours

One of the following: HUM 101 Technology & Society; MAT 102 Numbers & Logic; or INS 296 Interdisciplinary Seminar.

Core Concentration

6 Credit Hours

Two courses from one of the following core areas:

Communication
Mathematics and Science
Humanities
Social Science

Elective Courses

(with Advisor endorsement) 14 - 15 Credit Hours

No more than six credits may be from a technical area.

Total Credit Hour Requirements 60 - 61 Credit Hours

Machine Tool Technology (MTT)

Program Description

The Machine Tool Technology program offers a broad training experience that prepares individuals for employment in the metal products industry. Through a combination of classroom study and assigned shop activities, students acquire essential background information, develop trade skills, and become familiar with production methods and standards common to the industry. Within the shop setting, emphasis is on the practical application of skills.

Students learn to read blueprints, set up and operate manual and computer assisted numerical control machines, and use precision tools. Technical sketching, process planning and estimating, strength of materials, metallurgy, and quality control are integral parts of the curriculum.

Currently there are three MTT program options: Associate in Applied Science, Diploma and Certificate. Students may enroll on a full or part-time basis and may take courses in the day, evening, or both, depending upon availability. Students enrolled for full-time course work usually need two academic years to complete the associate degree. Part-time students may need several years to complete the program requirements.

Career Opportunities

Graduates of the Machine Tool program are employed as machine operators, machinists, CNC machinists, tool and die makers, quality control inspectors, machine assemblers, machine tool designers, CNC programmer or field service representatives.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science in the Machine Tool Technology Program, the graduate is prepared to:

1. Demonstrate entry level skills utilizing conventional and computer numerical control equipment in a modern manufacturing setting.
2. A. Interpret engineering drawings utilizing current standards set by ANSI.
B. Produce a part that meets the print specifications utilizing the appropriate measuring and gauging instruments to insure quality control.
3. Apply occupational health and safety standards related to the Machine Tool Industry.
4. Integrate all learning experiences gained from the general education courses to the practice of the machine tool trade.
5. Demonstrate a commitment to life-long learning through formal education, on the job inservice or independent participation in other technical/trade resources.
6. Prepares the student for future leadership roles in a modern machine shop environment.

Associate in Applied Science Degree Requirements

Semester I			Credit Hours
BCA	120	Intro. To Computer Applications	3
MAT	100*	Intermediate Algebra	3
MECT	103	Print Reading & Sketching	3
MTT	111	Introduction to Lathes	2
MTT	112	Introduction to Milling	2
MTT	113	Grinding I & Drilling	2
MTT	115	Introduction to Computer Numerical Control	2
Semester II			
ENG	101*	College Writing	3
MAT	105	Geometry & Trigonometry	3
MTT	121	Intro. To Threading Processes	2
MTT	122	Work Holding Methods for Milling	2
MTT	123	Intermediate Grinding	2
MTT	124	Applied Computer Numerical Control	2
OHS	102	OHS for General Industry	1
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>			
Semester III			
ENG	201	Technical Writing	3
MTT	211	Advanced Threading Processes	2
MTT	212	Circular Milling Processes	2
MTT	214	Advanced Computer Numerical Control	2
MTT	217	Introduction to Toolmaking	2
PHY	121	Technical Physics I (Lec.)	3
PHY	122	Technical Physics I (Lab)	1
—	—	Elective: Social Science - Advisor approved	3
Semester IV			
MTT	204	Geometric Dimensioning & Tolerance	1
MTT	221	Advanced Turning Processes	2
MTT	222	Advanced Milling Processes	2
MTT	223	Advanced Grinding Techniques	2
MTT	227	Advanced Toolmaking Techniques	2
MTT	228	Metallurgy	1
—	—	Elective: Advisor approved	3-4
—	—	Elective: Humanities - Advisor approved	3
Total Credit Hour Requirements			66-67

Distribution of A.A.S. Credit Hour Requirements:

Humanities and Social Science - 12 (18.1%)

ENG 101, 201, one Social Science elective and one Humanities elective.

Mathematics and/or Science - 10 (15.1%)

MAT 100, 105; PHY 121, 122.

Concentration - 41 (62.1%)

BCA 120, MTT 111, 112, 113, 115, 121, 122, 123, 124, 211, 212, 214, 217, 204, 221, 222, 223, 227, 228; and MECT 103, OHS 102..

Elective - 3 (4.5%)

Machine Tool Technology (MTT)

Diploma Requirements

Semester I		Credit Hours
MAT	100* Intermediate Algebra	3
MECT	103 Print Reading & Sketching	3
MTT	111 Introduction to Lathes	2
MTT	112 Introduction to Milling	2
MTT	113 Grinding I & Drilling	2
MTT	115 Introduction to Computer Numerical Control	2
Semester II		
BCA	120 Intro. To Computer Applications	3
ENG	101* College Writing	3
MAT	105 Geometry & Trigonometry	3
MTT	121 Introduction to Threading Processes	2
MTT	122 Work Holding Methods for Milling	2
MTT	123 Intermediate Grinding	2
MTT	124 Applied Computer Numerical Control	2
OHS	102 OHS for General Industry	1
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>		
Semester III		
MTT	211 Advanced Threading Processes	2
MTT	212 Circular Milling Processes	2
MTT	214 Advanced Computer Numerical Control	2
MTT	217 Introduction to Toolmaking	2
PHY	121 Technical Physics I (Lec.)	3
PHY	122 Technical Physics I (Lab)	1
Semester IV		
MTT	204 Geometric Dimensioning & Tolerancing	1
MTT	221 Advanced Turning Processes	2
MTT	222 Advanced Milling Processes	2
MTT	223 Advanced Grinding Techniques	2
MTT	227 Advanced Toolmaking Techniques	2
MTT	228 Metallurgy	1
Total Credit Hour Requirements		54

Certificate Requirements

Semester I		Credit Hours
MAT	100* Intermediate Algebra	3
MECT	103 Print Reading & Sketching	3
MTT	111 Introduction to Lathes	2
MTT	112 Introduction to Milling	2
MTT	113 Grinding I & Drilling	2
MTT	115 Introduction to Computer Numerical Control	2
Semester II		
BCA	120 Intro. To Computer Applications	3
ENG	101* College Writing	3
MTT	121 Introduction to Threading Processes	2
MTT	122 Work Holding Methods for Milling	2
MTT	123 Intermediate Grinding	2
MTT	124 Applied Computer Numerical Control	2
OHS	102 OHS for General Industry	1
<i>*Course placement determined by assessment test scores and/or prior college course work..</i>		
Total Credit Hour Requirements		29

Mechanical Engineering Technology (MECT)

Program Description

The Mechanical Engineering Technology Program prepares individuals to become technicians in the field of Mechanical Engineering. Classroom studies, which provide a solid theoretical foundation, are combined with computer assisted drafting and design (CAD) assignments and group projects to teach basic engineering principles, problem solving, critical thinking, communication and technical skills. Students use a combination of traditional engineering methods and computer simulations to solve assigned problems. Students majoring in Mechanical Engineering Technology have the opportunity to earn a Certificate, an Associate in Applied Science or an Associate in Science degree.

Career Opportunities

Graduates may support engineers and designers in the development, manufacture, and testing of mechanical systems as engineering technicians and/or computer assisted drafters. Graduates may also choose to transfer to baccalaureate degree engineering or engineering technology programs.

Program Educational Outcomes:

Upon completion of either the Associate in Applied Science or Associate in Science in the Mechanical Engineering Program, the graduate is prepared to:

1. Formulate and communicate hypothesis by utilizing a variety of informational and presentation media.
2. Generate computerized technical drawings that meet current American Society of Mechanical Engineers standards.
3. Solve mathematical problems, both analytically and graphically, related to the mechanical engineering field.
4. Work as a group to meet common objectives, while being tolerant of others.
5. Demonstrate ethical behavior consistent with established professional engineering codes.
6. Conceptualize, analyze and refine solutions to product and process design through the use of engineering methodology.

Admissions Requirements:

Algebra I & II, Geometry, Physics

Pre-registration Requirements:

In addition to the general admissions requirements of the College, applicants to this program must have had the following:

Basic computer & keyboard skills.

Associate in Science Degree Requirements

Semester I			Credit Hours
ENG	101*	College Writing	3
MAT	122*	College Algebra	3
MECT	103	Print Reading & Sketching	3
MECT	111	Computer Assisted Mechanical Drafting I	4
MTT	106	Introduction to Machine Tool Processes	2
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>			
Semester II			
MAT	132	Pre-Calculus	3
MECT	142	Computer Assisted Mechanical Drafting II	4
MECT	151	Statics & Strength of Materials	3
PHY	142	Physics I (Lec.)	3
PHY	143	Physics I (Lab)	1
—	—	Elective: Social Science - Advisor approved	3
Semester III			
CAD	282	3-D CAD and Solid Modeling	3
ENG	201	Technical Writing	3
MECT	211	Introduction to Design	3
MECT	221	Manufacturing Technology	3
PHY	242	Physics II	3
—	—	Elective: Humanities - Advisor approved	3
Semester IV			
CAD	292	Advanced Solid Modeling	3
MAT	280	Calculus	3
MECT	241	Mechanical Design Projects	3
MECT	251	Applied Dynamics	3
SCI	151	Hydraulics & Pneumatics (Lec.)	2
SCI	152	Hydraulics & Pneumatics (Lab)	2
Total Credit Hour Requirements			66

Distribution of A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (18%)

ENG 101, 201, one Humanities elective and one Social Science elective

Mathematics and/or Science - 20 (30%)

MAT 122, 132, 280, PHY 142, 143, 242; SCI, 151, 152

Concentration - 34 (52%)

MECT 103, MECT 111, 142, 151, 211, 221, 241, 251; MTT 106, CAD 282, and CAD 292

Mechanical Engineering Technology (MECT)

Associate in Applied Science Degree Requirements

Semester I		Credit Hours
ENG 101*	College Writing	3
MAT 122*	College Algebra	3
MECT 103	Print Reading & Sketching	3
MECT 111	Computer Assisted Mechanical Drafting I	4
MTT 106	Introduction to Machine Tool Processes	2
SPE 101	Speech and Oral Communication	3

**Course placement determined by assessment
test scores and/or prior college course work.*

Semester II		
MAT 132	Pre-Calculus	3
MECT 142	Computer Assisted Mechanical Drafting II	4
MECT 151	Statics & Strength of Materials	3
PHY 142	Physics I (Lec.)	3
PHY 143	Physics I (Lab)	1
— —	Elective: Social Science - Advisor approved	3

Semester III		
CAD 282	3-D CAD and Solid Modeling	3
MECT 211	Introduction to Design	3
MECT 221	Manufacturing Technology	3
PHY 242	Physics II	3
— —	Elective: Humanities - Advisor approved	3

Semester IV		
CAD 292	Advanced Solid Modeling	3
MECT 241	Mechanical Design Projects	3
MECT 251	Applied Dynamics	3
SCI 151	Hydraulics & Pneumatics (Lec.)	2
SCI 152	Hydraulics & Pneumatics (Lab)	2
— —	Elective: Mathematics - select one of the following: MAT 135 Statistics MAT 280 Calculus	3

Total Credit Hour Requirements **66**

Certificate Requirements

Semester I		Credit Hours
ENG 101*	College Writing	3
MAT 122*	College Algebra	3
MECT 103	Print Reading & Sketching	3
MECT 111	Computer Assisted Mechanical Drafting I	4
MTT 106	Introduction to Machine Tool Processes	2

**Course placement determined by assessment
test scores and/or prior college course work.*

Semester II		
MAT 132	Pre-Calculus	3
MECT 142	Computer Assisted Mechanical Drafting II	4
MECT 151	Statics & Strength of Materials	3
PHY 142	Physics I (Lec.)	3
PHY 143	Physics I (Lab)	1
— —	Elective: Humanities	3
— —	Elective: Social Science - Advisor approved	3

Credit Hours Required for Certificate **35**

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (18%)

ENG 101, SPE 101, one Humanities elective and one Social Science elective

Mathematics, and/or Science - 20 (30%)

MAT 122, 132, MAT 135 or MAT 280, PHY 142, 143, 242, SCI 151, 152

Concentration- 34 (52%)

MECT 103, 111, 142, 151, 211, 221, 241, 251, CAD 282, 292, MTT 106

Medical Assistant (MEA)

Program Description

The Associate in Applied Science in Medical Assistant prepares the graduates of this program for entry-level employment in a physician's office or those capacities in which medical secretarial and/or basic clinical and laboratory training are required. The program curriculum will provide studies in Anatomy and Physiology, Communications, Medical Assisting Administrative Procedures, Medical Transcription, and Medical Assisting Clinical Procedures. Also, a 160-hour Externship will be required.

A grade of "C" or better in all Medical Assistant, Biology, and Business and Computer Applications courses, a cumulative GPA of 2.0 or better, completion of the first and second semester courses and approval of the Department Chair is required before enrollment in the first Medical Assistant Externship.

Career Opportunities

Jobs for which graduates are expected to be qualified include medical office assistant, medical secretary or transcriptionist, in a single or group practice of physicians, hospital, or public health facility, and other capacities requiring medical secretarial, medical assisting and office management skills.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science in Medical Assistant, the graduate is prepared to:

1. Be able to evaluate and perform medical office administrative procedures including records management, coding and claim filing.
2. Demonstrate the ability to understand and transcribe medical correspondence.
3. Collect, process and analyze biological specimens.
4. Apply principles of safety, sterilization and disinfecting in all aspects of patient/office procedures.
5. Demonstrate professional conduct and interpersonal communication skills with patients, health care professionals, and the public.
6. Obtain vital signs, patient history and instruct patients on treatments.
7. Prepare patients for routine or specialty examinations or procedures.
8. Assist other healthcare professionals in patient preparation or procedures.

Admission Requirements

In addition to the general admissions requirements of the college, applicants to this program must have had the following:
High school biology

Pre-registration Requirements

Prior to enrollment in the MEA course, applicants of this program must have had the following:

Associate in Applied Science Degree Requirements

Semester I

			Credit Hours
BCA	120	Introduction to Computer Applications	3
BIO	115	Anatomy & Physiology I (Lec.)	3
BIO	116	Anatomy & Physiology I (Lab)	1
ENG	101*	College Writing	3
MAT	101*	Business Mathematics	3
MET	111	Medical Terminology	3

**Course placement determined by assessment test scores and/or prior college course work.*

Semester II

BCA	101	Computer Keyboarding	3
BCA	121	Word Processing	3
BIO	117	Anatomy & Physiology II (Lec.)	3
BIO	118	Anatomy & Physiology II (Lab)	1
MET	101	Medical Transcription I	4
SPE	101	Speech and Oral Communication	3

Semester III

MEA	200	Medical Administrative Procedures	4
MEA	220	Medical Clinical Procedures I	2
MEA	221	Medical Clinical Procedures I (lab)	2
MEA	260	Medical Assistant Externship I (80 hrs.)	2
PSY	101	Introduction to Psychology	3

Semester IV

MEA	210	Insurance Coding/Claims Processing	3
MEA	230	Medical Clinical Procedures II	3
MEA	231	Medical Clinical Procedures II (lab)	2
MEA	261	Medical Assistant Externship II (80 hrs.)	2
—	—	Elective: Humanities - Advisor approved	3
—	—	Elective: BUS or BCA - Advisor approved	3

Total Credit Hour Requirements

62

- ♦A physical exam performed by a qualified health care professional.
- ♦Proof of the following immunizations or titers:
Measles Mumps Rubella (MMR)
Hepatitis B Virus (HBV) - 3 doses
Adult Tetanus
Purified Protein Derivative (PPD for TB)
Varicella titer for Chicken Pox
- ♦Purchase the College professional liability insurance prior to the start of the first MEA Externship.
- ♦All students are advised to purchase their own Health/Accident Insurance certification prior to the beginning of the third semester.
- ♦The program is designed for a fall start of the MEA courses.

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (19%)

ENG 101, SPE 101, Humanities elective and PSY 101

Mathematics and/or Science - 11 (18%)

MAT 101, BIO 115, 116, 117, 118

Concentration - 39 (63%)

BCA 101, 120, 121, MEA 200, 210, 220, 221, 230, 231, 260, 261, MET 101, MET 111, and one Business elective.

Medical Transcription (MET)

Program Description

The Medical Transcription (MET) Certificate Program offers students the opportunity to acquire job entry skills in medical transcription, or to improve upon their existing skills. Several of the courses in this program can also be applied to other certificate or degree programs offered at CMTC.

Students may take courses during the day, evening or both, depending upon availability.

Full-time students who begin their studies in the fall semester can expect to complete the Certificate requirements in three semesters. Part-time students may require several semesters of course work.

Career Opportunities

Graduates of the program will be prepared to accept medical transcriptionist positions in hospitals, doctors' offices, home health care facilities, and companies specializing in providing transcription services. Additional education and experience can lead the graduate to further career opportunities in the medical field.

Pre-registration Requirements

In addition to meeting the general admission requirements of the College, applicants to this program must have average or better skills in mathematics, English, and spelling.

Students must earn a grade of C (not C-) or better in College Writing (ENG 101) in order to meet the Certificate requirements of this program.

Certificate Requirements

Recommended Sequence of Course work

Semester I **Credit Hours**

BCA	101	Computer Keyboarding	3
BCA	120	Intro. Computer Applications	3
ENG	101*	College Writing**	3
MET	111	Medical Terminology	3

Semester II

MAT	101*	Business Mathematics	3
MET	101	Medical Transcription I	4
MET	150	Medical Specialties I	3

**Course placement determined by assessment test scores and/or prior college course work.*

Semester III

BCA	121	Word Processing	3
MET	102	Medical Transcription II	4
MET	151	Medical Specialties II	3

Total Credit Hour Requirements **32**

***Students must earn a grade of C (not C-) or better in College Writing (ENG 101) in order to meet the Certificate requirements of this program.*

Please Note: MET courses are offered only in the evening hours. BCA, ENG and MAT courses are offered during the day and/or evening hours.

Nursing (NUR)

Program Description

The Nursing program at CMTC is designed as a multiple entry/exit curriculum preparing individuals at both the Practical Nurse level and the Registered Nurse level.

Year one of the curriculum serves a dual purpose; by itself it meets the educational criteria for practical nursing but also serves as the first year of the two year Associate in Science (RN) degree program.

Upon application, the individual chooses to pursue the goal of either the Diploma (PN) or the Associate Degree (RN). Students in the diploma option exit at the completion of the first year and are eligible to sit for the National Council Licensing examination, for licensure as a Practical Nurse. Graduates in the associate degree program are eligible to sit for the National Council Licensing Examination, for licensure as a Registered Professional Nurse.

All applicants should note that: "The Maine State Board of Nursing may refuse to grant a license on the basis of criminal history record information relating to convictions denominated in Title 5, chapter 341, subsection 5301 of the Maine Revised Statutes Annotated."

Applicants with previous nursing knowledge and skills have the opportunity for advanced placement. Applicants can be admitted as full or part-time students. The Nursing program is approved by the Maine State Board of Nursing and the associate degree option is accredited by the National League for Nursing Accrediting Commission.

Career Opportunities

Graduates of either level are prepared to work in structured health care settings such as hospitals and extended care facilities and pursue careers in medical/surgical, obstetrical, pediatric, geriatric, or psychiatric nursing. Graduates earning an associate degree may transfer into the Bachelor of Science in Nursing program at the University of Southern Maine.

Program Educational Outcomes

1. The graduate is accountable for his/her own actions, serves as a positive role model, assumes ethical responsibility as member of the profession of nursing and practices within the Nurse Practice Act.
2. The graduate will use effective therapeutic and interpersonal communication skills in his/her practice of nursing.
3. The graduate will holistically evaluate client/patient needs through the collection, analysis and synthesis of relevant data for the provision of patient care.
4. The graduate will generate safe and effective clinical judgments using critical thinking skills when providing care to individuals, families and groups of patients with complex health needs in a variety of settings.
5. The graduate will integrate all previous learning experiences to provide holistic caring interventions to patients of all ages with multiple complex needs.
6. The graduate will incorporate teaching/learning methods, implementing and evaluating the effectiveness of relevant strategies in the delivery of nursing care to a group of patients with complex needs.
7. The graduate will collaborate with other health care team members and the patient and significant others in planning and providing safe and effective care across health care in a variety of settings.
8. The graduate assumes responsibility as a manager of care for a group of patients by establishing priorities for nursing care, use of resources, and through delegating aspects of nursing care to other health care workers and seeking assistance from experienced health care team members when necessary.
9. The graduate will continue his/her education either formally through organized upper division classes and in-service education or independently utilizing nursing research and other professional resources.

Selective Admission Requirements

In addition to meeting the general admission requirements of the College, applicants to the Nursing program must:

Submit evidence of successful completion of HS Algebra 1, HS Biology (with laboratory), and HS Chemistry (with laboratory);

Pre-registration Requirements

- 1) Demonstrate above average proficiency in reading, writing and mathematics as evidenced by CMTC assessment;
- 2) Submit medical history and physical exam results two months prior to the start of the first nursing course.
- 3) Because health care workers are at high risk for certain illnesses, the applicant must submit proof of the following immunizations two months prior to the start of first nursing course (Students not in compliance must withdraw from the course):

MMR: Measles, Mumps, and Rubella; 2 Doses

Students born before 1957 are exempt from this requirement. An official record of an immune titer for each disease may be accepted.

HBV: Hepatitis B; 3 Doses

An official record of an immune titer may be accepted.

TD: Adult Tetanus within the past 10 years

PPD: Purified Protein Derivative (TB) annual testing required. If not tested within the past year, initial testing must consist of 2 tests not more than three weeks apart.

Varicella Titer: an official record to demonstrate immunity to Varicella-Zoster

Nursing (NUR)

(Continued from previous page)

A Physical Exam by a Qualified Health Care Professional Including:

Height, Weight, Blood Pressure, Hematocrit or Hemoglobin, Urinalysis, Pap Smear, Visual Acuity/Color Vision, Family Medical History, Personal Medical History

In addition, other yearly tests and/or immunizations may be required.

- 4) Submit other medical or educational documentation as requested by the Nursing Department.
- 5) Submit the application process by January 31st of the anticipated enrollment year.

Admissions and Registration Condition

Due to compliance with the standards of the National League for Nursing Accreditation Commission (NLNAC) and Maine State Board of Nursing, prospective nursing students should be aware that admission and program changes may occur.

It is the applicant's responsibility to submit the required documentation. Once an applicant's file is deemed complete, the applicant is invited to an informal meeting with the Program Director for the purpose of reviewing the program and selecting the appropriate course of study. Upon admission to the program, the student is assigned a nursing faculty advisor.

Non-Academic Requirements for the Nursing Major

- 1) Be certified in cardiopulmonary resuscitation (CPR - provider level) prior to the start of the first nursing course. This certification must be current through out the program.
- 2) Purchase the college professional liability insurance prior to the start of the first nursing course.
- 3) All nursing students (both full and part-time) must carry personal health insurance.
- 4) Nursing majors must purchase uniforms before entry into the nursing courses.
- 5) Clinical learning experiences take place in a variety of settings and geographic locations. Nursing majors must therefore provide their own transportation to and from the clinical settings.
- 6) Nursing majors must follow the proper course sequence and should note that a minimum grade of C (with a satisfactory clinical grade) in each nursing course is required in order to progress from one nursing course to another. Students must adhere to the nursing program attendance requirements. Failure to meet the attendance requirement may result in dismissal from the program. Completion of all Nursing program courses with a grade of C or better and a minimum GPA of 2.00 is required to graduate.

Associate in Science Degree Requirements

Arts and Sciences (General Education) courses supportive to the Nursing major must be taken prior to, or concurrent with nursing courses as outlined in the curriculum design. Nursing courses must be taken in the sequence listed. Students must achieve a minimum grade of C in all nursing (NUR) courses and a satisfactory clinical grade in each nursing course in order to progress from one nursing course to another.

Semester I			Credit Hours
BIO	115	Anatomy & Physiology I (Lec.)	3
BIO	116	Anatomy & Physiology I (Lab)	1
ENG	101*	College Writing	3
NUR	112	Foundations of Nursing/ Nursing Care of Adults	9

**Course placement determined by assessment test scores and/or prior college course work.*

Special Requirement		(1 credit hour)
NUR	110	Role Transition (<i>this course is required only of Licensed Practical Nurses prior to second year nursing courses</i>)

Semester II			Credit Hours
BIO	117	Anatomy & Physiology II (Lec.)	3
BIO	118	Anatomy & Physiology II (Lab)	1
NUR	121	Nursing Across the Life Span I	10
PSY	101	Introduction to Psychology	3

Special Session		(2 credit hours)
NUR	134	Clinical Practicum (<i>for only those pursuing the Diploma award and exiting at the practical nursing level</i>)

Semester III			Credit Hours
BIO	211	Microbiology (Lec.)	3
BIO	212	Microbiology (Lab)	1
NUR	212	Nursing Across the Life Span II	9
PSY	111	Developmental Psychology	3

Semester IV			Credit Hours
NUR	213	Nursing Across the Life Span III	9
SPE	101	Speech & Oral Communication	3
—	—	Elective: Humanities - Advisor approved	3
—	—	Elective: General Education - Advisor approved	3

Total Credit Hour Requirements **67**

Distribution of A.S. Credit Hour Requirements

Communication, Humanities and Social Sciences -15 (22%)
ENG 101, PSY 101, 111; SPE 101 and one elective.

Mathematics and/or Science - 12 (18%)

BIO 115, 116, 117, 118, 211 and 212.

Concentration - 37 (55%)

NUR 111, 121, 212 and 213

Elective (General Education) 3 (5%)

Occupational Health & Safety (OHS)

Program Description

Graduates of the Occupational Health and Safety program can; work independently or as part of a team to make the workplace safer and healthier; identify potential job-related hazards; address potential job-related hazards through engineering solutions and practices and; train and educate workers in safe and healthy work practices. Graduates of this program can also advance their careers through training, education and participation in professional societies in the field of OHS.

Students receive traditional classroom instruction as well as hands-on experience. In the fall of 1998, the program became available on the Internet. The Occupational Health and Safety program offers students the option of earning a 30-credit hour Certificate or a 66-credit hour Associate in Applied Science Degree. The Associate in Applied Science Degree is accepted by the Council on the Certification of Health, Environmental, and Safety Technicians (CCHST) and entitles graduates to sit for the OHST examination. Graduates who earn an Associate Degree may transfer directly into the University of Southern Maine's baccalaureate degree program in Environmental Safety and Health. This program is accredited by the Applied Science Accreditation Commission (ASAC) of the Board for Engineering and Technology, Inc (ABET).

Career Opportunities

Graduates of the program are qualified for employment in industry, insurance companies, consulting firms and government agencies as occupational health and safety inspectors or technicians, safety program supervisors or managers or assistants to baccalaureate or masters degree prepared health and safety professionals.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science in Occupational Health & Safety Program, the graduate is prepared to:

1. Demonstrate knowledge of applied mathematics, sciences and related topics relevant to the field of Occupational Health and Safety (OHS).
2. Demonstrate knowledge of conducting experiments that apply to the Occupational Health and Safety profession.
3. Identify and formulate solutions to safety engineering problems as they apply to Occupational Health and Safety (OHS).
4. Participate in and function on teams.
5. Assume professional and ethical responsibility in the Occupational Health & Safety field.
6. Effectively utilize oral and written skills unique to the field of Occupational Health & Safety.

Associate in Applied Science Degree Requirements

Suggested Sequence of Courses

Semester I

			Credit Hours
ENG	101*	College Writing	3
MAT	122*	College Algebra	3
OHS	101	Basic Principles of Occupational Health	3
OHS	106	Basic Principles of Occupational Safety	3
—	—	Elective: BCA - select one of the following:	3
		BCA 120 Introduction to Computer Applications	
		BCA 125 Navigating the Net	

**Course placement determined by assessment test scores and/or prior college course work.*

Semester II

ENG	201	Technical Writing	3
OHS	126	Legal Rights & Responsibilities	3
OHS	200	Practicum I in OHS	3
OHS	216	Worksite Evaluation	3
OHS	260	Ergonomics	3
—	—	Elective: Humanities - Advisor approved	3

Semester III

CHY	101	Introduction to Chemistry (Lec.)	3
CHY	102	Introduction to Chemistry (Lab)	1
OHS	221	Emergency Planning & Response	3
OHS	250	Safety & Health Program Management	3
PHY	121	Technical Physics (Lec.)	3
—	—	Elective: Select one of the following - Advisor approved	1
		PHY 122 or OHS 141, 142, 143, 215	
—	—	Elective: Social Science - Advisor approved	3

Semester IV

OHS	265	Introduction to Industrial Hygiene (Lec.)	3
OHS	266	Introduction to Industrial Hygiene (Lab)	1
OHS	293	Construction Safety & Health Management	3
OHS	295	Basic Principles of Safety Engineering	3
—	—	Elective: OHS - Advisor approved	3
—	—	Elective: - Advisor approved	3

Total Credit Hour Requirements **66**

Occupational Health & Safety (OHS)

(Continued from previous page)

7. Recognize the need for continued educational growth in the field of Occupational Health & Safety.
8. Examine contemporary issues in the Occupational Health & Safety profession.
9. Utilize the techniques, skills and modern engineering-related technology tools necessary for professional practice in OHS.

Special Admission Requirement for the Certificate Program:

Applicants must be currently working in the field of Occupational Health and Safety and/or have an earned post-secondary degree or equivalent.

Distribution of A.A.S. Credit Hour Requirements

Communication, Humanities & Social Sciences - 12 (18%)
ENG 101, 201 and one Social Science and one Humanities elective.

Mathematics and/or Science - 13 (20%)
MAT 122, PHY 121, CHY 101, 102, BCA 120 or 125 and 4 cr. hrs. of electives.

Concentration - 37 (56%)
OHS 101, 106, 216, 221, 126, 200, 250, 260, 265, 266, 293, 295 and one 3 credit elective.

Electives - 4 (6%)
PHY 122 or OHS 141, 142, 143, 215 and one 3 credit Advisor approved.

Certificate Requirements			
Suggested Sequence of Courses			Credit Hours
ENG	101*	College Writing	3
OHS	101	Basic Principles of Occupational Health	3
OHS	106	Basic Principles of Occupational Safety	3
OHS	221	Emergency Planning & Response	3
—	—	Elective: Mathematics	3
		MAT 050* - Algebra I	
		MAT 122* - College Algebra	
OHS	216	Worksite Evaluation	3
OHS	126	Legal Rights & Responsibilities	3
—	—	Electives: - approved by Advisor	9
*Course placement determined by assessment test scores and/or prior college course work.			
Total Credit Hour Requirements			30

Radiologic Technology (RAT)

Program Description

In cooperation with Central Maine Medical Center (CMMC-Lewiston) School of Radiologic Technology, Central Maine Technical College (CMTC) provides courses in life sciences, communication, social sciences and computer applications to students matriculated in the CMMC program who wish to earn an Associate in Applied Science Degree.

CMTC awards forty-five academic credits in recognition of the full two-year CMMC Radiologic Technology program, which is accredited by the Joint Review Committee on Education in Radiologic Technology. In addition, CMTC requires twenty-three academic credits in arts and sciences in order for the student to meet the requirements of the Associate of Applied Science Degree. Students are strongly encouraged to pursue the degree requirements during their enrollment at CMMC.

Prospective applicants for the program must contact the School of Radiologic Technology at Central Maine Medical Center in Lewiston, Maine at (207) 795-2428, for further information and application details.

The opportunity to earn the associate degree is also available to CMMC graduates (1959 to present) provided they are recommended by the CMMC Radiologic Technology program faculty. Prospective degree applicants who meet these criteria should contact the admissions office at Central Maine Technical College for further information and application details.

Career Opportunities

Graduates of the program are eligible to apply to take the examination of the American Registry of Radiologic Technologists. Graduates are eligible for Maine State Licensing and are qualified to work in hospitals, clinics and physician offices. Graduates may choose to pursue specialty training in the various modalities of radiology or transfer into the Bachelor of Science in Health Sciences program at the University of Southern Maine.

In addition to the successful completion of the CMMC program requirements, the following CMTC coursework must be completed in order to earn an Associate in Applied Science Degree (all degree candidates must complete a minimum of 17 credit hours at CMTC):

Program Educational Outcomes

Upon completion of the Associate in Applied Science in Radiologic Technology, the graduate is prepared to:

1. Integrate all previous learning experiences gained from the general education courses to provide diagnostic radiography services to patients in health care settings.
2. Utilize effective written and oral communication skills in the practice of radiologic technology as a member of the health care team.

Associate in Applied Science Degree Requirements				Credit Hours
BCA	120	Introduction to Computer Applications		3
BIO	115	Anatomy and Physiology I (Lec.)		3
BIO	116	Anatomy and Physiology I (Lab)		1
BIO	117	Anatomy and Physiology II (Lec.)		3
BIO	118	Anatomy and Physiology II (Lab)		1
ENG	101	College Writing		3
RAT	199	Radiologic Technology - Prior Learning		45
SPE	101	Speech & Oral Communication		3
—	—	Electives: Humanities - Advisor approved		3
—	—	Elective: Social Science - Advisor approved		3
Total Credit Hour Requirements				68

3. Employ critical thinking skills in the practice of diagnostic radiologic services to patients in health care settings.
4. Assume ethical and legal responsibility as a member of the profession of Radiologic Technology by following the Code of Ethics of the American Registry of Radiologic Technologists and practices within the Maine Radiation and Health Safety Act.
5. Continue their education either formally through organized upper division classes, in-service education, radiologic specialty education or independently utilizing professional resources.

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (18%)

ENG 101, SPE 101 and two electives.

Mathematics and/or Science and/or Business - 11 (16%)

BIO 115, 116, 117, 118, and BCA 120

Concentration - 45 (66%)

RAT 199

Radiologic Technology (RAT)

(Continued from previous page)

Selective Admission Requirements

In addition to meeting the general admission requirements of the College, applicants to the Radiologic Technology Program must:

- 1) Be accepted to the Central Maine Medical Center School of Radiologic Technology,
- 2) Submit evidence of successful completion with a grade of C or better of 2 years of High School college preparatory math including Algebra,
- 3) Submit evidence of successful completion with a grade of C or better of High School college preparatory Biology with laboratory and Chemistry with laboratory,
- 4) Complete the application process by December 31st each year for competitive review process. Admission is granted for the following fall semester.

Pre-registration Requirements

- 1) Demonstrate above average proficiency in reading, writing and mathematics as evidenced by CMTC assessment;
- 2) Submit medical history and physical exam results two months prior to the start of the first Radiologic Technology course.
- 3) Because health care workers are at high risk for certain illnesses, the applicant must submit proof of the following immunizations two months prior to the start of the first Radiologic Technology course. Students not in compliance must withdraw from the course.

a. **MMR: Measles, Mumps & Rubella; 2 Doses**

Students born before 1957 are exempt from this requirement. An official record of an immune titer for each disease may be accepted.

b. **HBV: Hepatitis B; 3 Doses**

An official record of an immune titer will be accepted.

c. **TD: Adult Tetanus** within the past 10 years.

d. **PPD: Purified Protein Derivative (TB)** annual testing required. If not tested within the past year, initial testing must consist of 2 tests not more than 3 weeks apart.

e. **Varicella Titer:** An official record to demonstrate immunity to Varicella Zoster.

f. **A Physical Exam by a Qualified Health Care Professional Including:**

Height, Weight, Blood Pressure, Hematocrit or Hemoglobin, Urinalysis, Pap Smear, Visual Acuity/Color Vision, Family Medical History, Personal Medical History.

g. In addition, other yearly tests and/or immunizations may be required.

4) Submit other medical or educational documentation as requested by the Radiologic Technology Department.

It is the applicant's responsibility to submit the required documentation. Upon admission to the program, the student is assigned a Radiologic Technology faculty advisor.

Telecommunications Technology (TET)

Program Description

The Telecommunications Technology program at CMTC is based on curricula developed in conjunction with the Northeast Center for Telecommunications Technology (NCTT, www.nctt.org) and funded by the National Science Foundation. The resulting curriculum is recognized throughout the Northeast as preparation for students entering the multifaceted field of telecommunications. Many disciplines such as telephony, computer technology, networking, data communications, and electronics contribute to the field of telecommunications. The Telecommunications Technology program draws from each of these disciplines to provide the graduate with a technical background sufficient either to join the workforce upon graduation or to pursue further education in a four-year program. A graduate may transfer the associate degree towards a four-year bachelor's degree at one of several four-year colleges in New England that participate in the NCTT program.

There are two types of associate degrees a student may pursue. The Associate of Science (A.S.) degree is designed for students intending to continue to a four-year college upon graduation. The Associate in Applied Science (A.A.S.) degree is designed for individuals intending to enter the workforce immediately upon graduation.

Career Opportunities

The Telecommunications Technology program prepares students for a career involving some of the more technical aspects of the global communications infrastructure, networking, intranetworking, the Internet, and computers. Graduates will be able to work with the hardware infrastructure of networking, solving problems that require an understanding of electrical and electronic principles. Some jobs in this field are Computer Technician, Network Technician, Internet Service Provider Technician, Communications Network Specialists, LAN/WAN Managers, and Cable/Cellular/Wireless Communications Technicians. Graduates will also have a background in soft skills, such as teamwork, communications and problem solving. This will enable them to interact with MIS administrators, network administrators and computer users, who must communicate their problems without the benefit of hardware expertise. Graduates will be able to maintain, repair and suggest enhancements to hardware as well as take part in strategic planning for future expansions. Graduates will be proficient in electricity and electronics fundamentals and could therefore go on to a career as an electronics-engineering technician.

Associate in Science Degree Requirements

Semester I			Credit Hours
CPT	141	Operating Systems	3
ELT	111	Electricity I	4
ELT	153	Digital Logic	3
ENG	101*	College Writing	3
MAT	122*	College Algebra	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>			
Semester II			
ELT	112	Electricity II	4
ELT	145	Electronic Devices I	3
MAT	132	Pre-Calculus	3
—	—	Elective: CPT - Advisor approved	3
Semester III			
ELT	245	Electronic Devices II	3
PHY	142	Physics I (Lec.)	3
PHY	143	Physics (Lab)	1
SPE	101	Speech & Oral Communication	3
TET	201	Telecommunications I	3
—	—	Elective: Humanities - Advisor approved	3
—	—	Elective: Social Science - Advisor approved	3
Semester IV			
ENG	201	Technical Writing	3
MAT	280	Calculus	3
SPE	111	Interpersonal Communication	3
TET	211	Telecommunications II	3
—	—	Elective: CPT - Advisor approved	3
Total Credit Hour Requirements			63

Distribution of A.S. Credit Hour Requirements

Humanities and Social Sciences - 18 (28%)

ENG 101, 201, SPE 101, 111, one Humanities and one Social Science elective.

Mathematics and/or Science - 13 (20%)

MAT 122, 132, 280; PHY 142, 143

Concentration - 32 (51%)

ELT 111, 112, 145, 153, 245; TET 201, 211; CPT 141, and two CPT electives.

Telecommunications Technology (TET)

Program Educational Outcomes:

Upon completion of either the Associate in Science degree or the Associate in Applied Science degree in the Telecommunications Technology Program, the graduate is prepared to:

1. Demonstrate oral and written presentation skills.
2. Employ entry-level skills in the electrical, electronic, and process control fields.
3. Analyze electrical and electronics prints and specifications.
4. Compute operating voltages, and currents for electrical and electronic circuits.
5. Select and utilize test equipment to measure electrical quantities and troubleshoot circuits.
6. Employ personal computer skills to operate technical application software and set up networking.
7. Design, implement, and evaluate a basic network.
8. Demonstrate a commitment to life-long learning through formal education, on-the-job inservice or through independent participation in other technical/trade resources.

Admission Requirements

In addition to the general admissions requirements of the College, applicants to this program must have had the following:

High School - Algebra I and II or Equivalent

High School Science (with lab) recommended

Pre-registration requirements:

BCA 120 or Equivalent (Computer Applications) Skills

Reading and Writing Proficiency

Associate in Applied Science Degree Requirements			
Semester I			Credit Hours
CPT	141	Operating Systems	3
ELT	111	Electricity I	4
ELT	153	Digital Logic	3
ENG	101*	College Writing	3
MAT	122*	College Algebra	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>			
Semester II			
CPT	146	Introduction to PC Repair	3
ELT	112	Electricity II	4
ELT	145	Electronic Devices I	3
MAT	135	Statistics	3
—	—	Elective: Humanities - Advisor approved	3
—	—	Elective: Social Science - Advisor approved	3
Semester III			
ELT	245	Electronic Devices II	3
PHY	121	Technical Physics I (Lec.)	3
PHY	122	Technical Physics (Lab)	1
TET	201	Telecommunications I	3
—	—	Elective: Communication - select one from list below	3
		ENG 201 Technical Writing	
		SPE 101 Speech and Oral Communication <i>or</i>	
		SPE 111 Interpersonal Communication	
Semester IV			
CPT	235	Networks I	3
ELT	246	Linear Integrated Circuits (Lec.)	3
ELT	247	Linear Electronic Project	1
TET	211	Telecommunications II	3
—	—	Elective: Business - Advisor approved	3
Total Credit Hour Requirements			61

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Sciences - 12 (20%)

ENG 101, ENG 201 or SPE 101 or SPE 111, one Humanities and one Social Science elective.

Mathematics and/or Science - 10 (16%)

MAT 122, 135; PHY 121, 122

Concentration - 39 (64%)

ELT 111, 112, 145, 153, 245, 246, 247; TET 201, 211; CPT 141, 146, and 235; BUS elective.

Telecommunications Technology - VERIZON (TTV)

Program Description

Telecommunications Technology: Verizon is a corporate specific, Associate in Applied Science degree program designed for qualified employees. The goal of the program is to prepare a more highly educated work force in order to compete successfully in the rapidly changing telecommunications marketplace.

CMTC faculty and administrators are participating with other community and technical colleges in Maine, Massachusetts, Vermont, New Hampshire, Rhode Island and New York in planning and delivering the curriculum. Selected employees are released from their work assignments to attend eight hours of classes for one day each week throughout the academic year. Students who meet the curriculum requirements can earn an Associate in Applied Science degree in eight semesters.

A lap top computerized virtual learning environment is provided to teaching faculty and students to facilitate extensive learning activity between class days through assignments and team communication. The virtual learning environment is a critical component for each course.

Group and individual educational project assignments incorporate contents such as team building, mentoring by senior technicians, problem solving and troubleshooting of real tasks, customer service for a diverse customer base, project management, information acquisition, individual responsibility for continuous learning, and the latest high technology field applications.

This unique offering is made possible by the collaborative efforts of Verizon, the International Brotherhood of Electrical Workers and the participating colleges. It is also referred to as the Next Step Program.

Program Educational Outcomes:

Upon completion of the Telecommunications Technology (Verizon) Program, the graduate is prepared to:

1. Help to define standards for quality and evaluating products, processes and/or services against those standards; doing the job right the first time, and doing it in a way that satisfies customers requirements.
2. Work as part of a team to achieve mutual goals, building meaningful and productive professional relationships regardless of personal differences, and coach others to enhance individual and team performance.
3. Demonstrate a rigorous organized approach to planning work and projects; ensure leadership among peers to ensure customer service projects are completed in a timely manner and in such a way as to completely satisfy customers.
4. Demonstrate confidence in applying knowledge of the Telecommunications Industry, especially up-to-date knowledge of Verizon's core technology, products and

services for the purpose of being able to deliver these products and services to Verizon's customers in a timely and expert fashion; be driven by a recurring concern to do things better, or at a higher standard, than has been done previously.

5. Conduct his/her work with a strong focus on the needs of the customer to a quality standard that builds trust and confidence for long term relationships; use effective interpersonal skills to build and maintain relationship with others.
6. Systematically obtain and evaluate information to develop and implement practical and cost competitive solutions to customer problems in a timely manner; see challenging situations as a means to learn.

Telecommunications Technology - VERIZON (TTV)

Associate in Applied Science

Degree Requirements

Courses for the Telecommunications Technology (Verizon/IBEW NEXT STEP) Program includes three main areas of study: arts and sciences, general education, electricity/electronics, and telecommunications, for a total of sixty credit hours.

Sequence of Courses:

Semester 1		Credit Hours
BCA 120	Introduction to Computer Applications	3
LER 011	Orientation Seminar *(a non degree credit, program requirement)	*1
MAT 130	Technical Mathematics I	4
Semester 2		
TTV 114	Electrical Circuits	4
ENG 106	College Writing	3
Semester 3		
MAT 230	Technical Mathematics II	4
TTV 143	Electronics I	4
Semester 4		
PHY 130	Physics	4
TTV 240	Electronics II	4
Semester 5		
TTV 151	Digital I	4
TTV 281	Telecommunications I (Introduction to Voice and Data)	4
Semester 6		
TTV 254	Digital Logic II	4
TTV 283	Telecommunications II (Data Communications)	4
Semester 7		
ENG 201	Technical Writing	3
TTV 285	Telecommunications III (LANs and WANs)	4
Semester 8		
SSC 216	Changing Nature of Work	3
TTV 287	Telecommunications IV (Advanced Topics in Telecommunications)	4
<i>Note: additional class and/or lab hours are conducted via an electronic network.</i>		
Total Credit Hour Requirements		60

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Science - 9 (15%)

ENG 106, 201 and SSC 216.

Mathematics and/or Science - 12 (20%)

MAT 130, 230; PHY 130.

Concentration - 39 (65%)

TTV 114, 143, 151, 240, 254, 281, 283, 285 and 287;
BCA 120.

Trade and Technical Occupations (TTO)

Program Description

This program recognizes proficiency at the associate in applied science degree level for various trades and technical occupations where an individual has completed a formal registered Apprenticeship program (i.e. journey status).

Individuals who have completed a registered* Apprenticeship program and those who wish to complete the Trade and Technical Occupations Program while concurrently meeting Apprenticeship requirements, are eligible for admission.

**Registered by Maine State Apprenticeship Council; Bureau of Apprenticeship Training, U.S. Department of Labor; or formal programs approved by the College. It is the responsibility of the individual to make the appropriate sponsor arrangements for his/her Apprenticeship experience prior to filing an Application for Admission to the TTO program.*

Program Educational Outcomes:

Upon completion of the Associate in Applied Science Degree in the Trade and Technical Occupations Program, the graduate is prepared to:

1. Communicate clearly using written and verbal means.
2. Work with others to solve problems that could affect the outcomes of specific projects in the workplace.
3. Continue to gain knowledge/skills through formal or informal means.
4. Realistically analyze career opportunities vs. individual strengths and make sound career path decisions.

Admission to the Program

Individuals who seek admission to this program should contact the CMTC Admissions Office and follow the standard admission procedures. Apprentices who are currently registered must submit their Program of Training and Apprenticeship Contract with their completed CMTC Application.

Residency Requirement

In addition to the credit hours awarded for a valid Apprenticeship, at least 12 academic credits must be earned by the Trade and Technical Occupations student at CMTC. These credits must represent catalog courses approved by the student's Academic Advisor.

Assessment of Prior Learning

The student is responsible for providing the necessary documentation to verify his/her successful completion of the apprenticeship program; i.e., certification documents, a schedule of training required by the employer, and other credentials that support student enrollment.

Associate in Applied Science Degree Requirements

Sample Student Program		Credit Hours
Technical Specialty (prior learning):		
TTO 199	Completed Apprenticeship	18-24
Electives:		
—	— Advisor Approved	27-21
General Education (minimum)		
ENG 101*	College Writing	3
—	Elective: General Education - Advisor approved	3
—	Elective: Humanities - Advisor approved	3
—	Elective: Social Science - Advisor approved	3
—	Elective: Mathematics - Advisor approved	3
—	Elective: Mathematics/Science - Advisor approved	6-8
—	Elective: Communication - Select one of the following:	3
	SPE 101 Speech and Oral Communication	
	SPE 111 Interpersonal Communication	
	ENG 201 Technical Writing	
*Course placement determined by assessment test scores and/or prior college course work.		
Total Credit Hour Requirements		69-71

Distribution of A.A.S. Credit Hour Requirements

Humanities and Social Science - 12 (17.3%)

ENG 101, one Humanities, one Social Science and one Communication elective

Mathematics and Science - 9-11 (13% - 16%)

One Math elective, two Math/Science electives

Concentration - 45 (65.2%)

TTO 199 and Advisor approved electives

Elective - 3 (4.3%)

General Education (Advisor approved)

Workplace Technology (WOT)

Program Description

The Workplace Technology program recognizes validated workplace competencies achieved by students enrolled in the two year Maine Career Advantage program (MCA) and provides a pathway for a smooth transition from the MCA experience in high school to a technical college education and beyond. The program recognizes the value of successful and certified MCA experience with 15 academic credits. The remaining degree requirements are determined collaboratively by the student and the academic advisor from among associate degree level courses which complement the technical content of the student's internship experience.

The A.A.S. Degree in Workplace Technology is designed for qualified and motivated MCA participants. Students will be able to enroll in the program on a full or part-time basis and may take courses in the day, evening, or both, depending upon availability. A Certificate of completion is awarded to students who meet 32 credit hours of required course work.

Career Opportunities

Employment studies continue to show the value of post-secondary education to a person's career opportunities and earning potential. Many employers look upon the associate degree as a minimum requirement for skilled occupations. In addition, the associate degree can serve as a platform of accomplishment for pursuing additional educational and career goals.

Program Educational Outcomes:

Upon completion of the Associate in Applied Science in Workplace Technology, the graduate is prepared to:

1. Communicate clearly using written and verbal means.
2. Work with others to solve problems that could effect the outcomes of specific projects in the workplace.
3. Continue to gain knowledge/skills through formal or informal means.
4. Realistically analyze career opportunities vs. individual strengths and make sound career path decisions.

Distribution of A.A.S. Credit Hour Distribution

Communication, Humanities, and Social Sciences - 12 (19%)
ENG 101, one Communication elective, one Social Science elective, one Humanities elective.

Mathematics and/or Science - 9 (14%)

Two Mathematics electives and one Math/Science elective.
Concentration - 39 (62%)

BCA 120, MCA 199, and twenty one credit hours of Advisor approved Technical and Career electives.

Elective: - 3 (5%)

One General Education.

Associate in Applied Science Degree Requirements

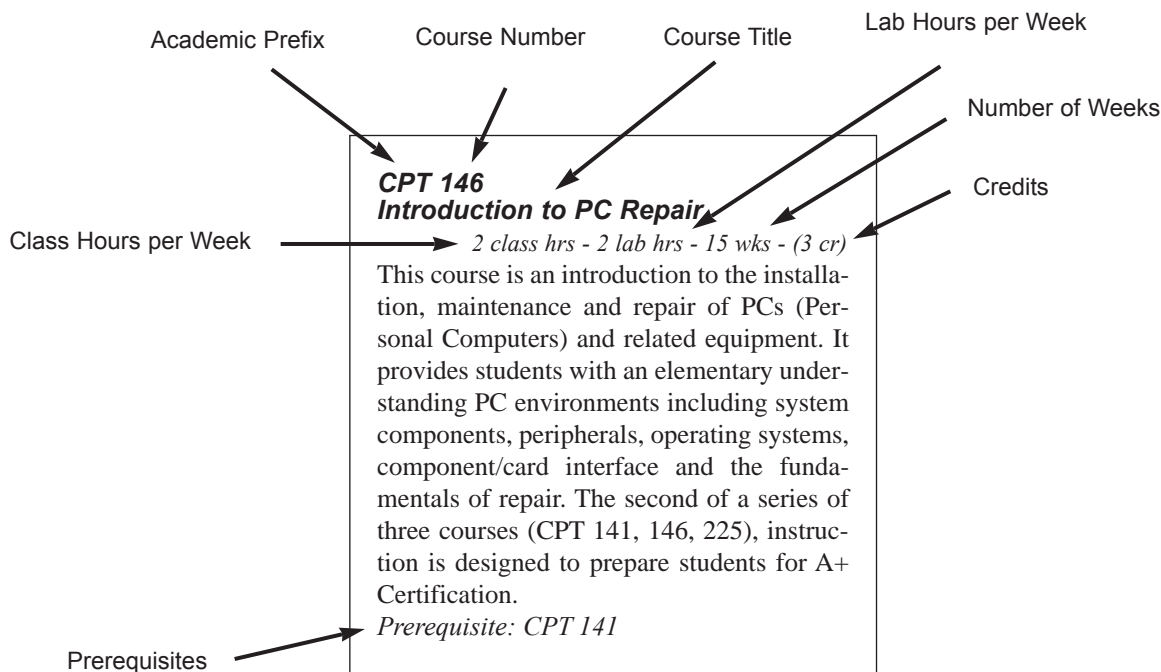
Course No. and Title	Credit Hours
MCA 199 Maine Career Advantage (completed and worksite supervisor validated)	15
BCA 120 Introduction to Computer Applications	3
ENG 101* College Writing	3
— — Elective: Communication - select one of the following: -Advisor approved	3
ENG 201 Technical Writing	
SPE 101 Speech and Oral Communication	
SPE 111 Interpersonal Communication	
— —* Elective: Mathematics - select one of the following: -Advisor approved	3
MAT 100 Intermediate Algebra	
MAT 101 Business Mathematics	
MAT 102 Numbers and Logic	
MAT 105 Geometry and Trigonometry	
MAT 122 College Algebra	
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>	
— — Electives: Technical and Career - Advisor approved	21
— — Elective: General Education -Advisor approved	3
— — Elective: Humanities -Advisor approved	3
— — Elective: Mathematics -Advisor approved	3
— — Elective: Mathematics/Science - Advisor approved	3-4
— — Elective: Social Science - Advisor approved	3
Total Credit Hour Requirements	63-64

Certificate Requirements

Course No. and Title	Credit Hours
BCA 120 Introduction to Computer Applications	3
ENG 101* College Writing	3
MCA 199 Maine Career Advantage (completed and worksite supervisor validated)	15
— — Elective: Mathematics* - select one of the following:	3
MAT 100 Intermediate Algebra	
MAT 101 Business mathematics	
MAT 102 Numbers and Logic	
MAT 105 Geometry and Trigonometry	
MAT 122 College Algebra	
— — Electives: Technical Career Related	8
<i>*Course placement determined by assessment test scores and/or prior college course work</i>	
Total Credit Hour Requirements	32

The course listings that follow include descriptions of courses offered by the College to meet curricula requirements. Courses are listed alphabetically by discipline prefix and then numerically. Descriptions are general in nature and are not intended to include all topics which may be part of the course and, in some cases, items in the descriptions may be omitted from the course. Revisions are sometimes necessary to meet changes in course or program objectives.

Explanation of Course Description Codes



Class Hours - the number of hours per week a particular course meets in an instructor directed classroom situation.

Lab Hours - the number of hours per week a particular course meets in a student and equipment laboratory situation. Field work, small group discussions and shop hours may also be included in these hours.

Number of Weeks - the number of weeks in which the course is scheduled to meet.

Credit Hours - the number of credit hours awarded to the student who successfully completes a course.

Definition of Units of Credit -

CMTC curricula designs are based on the following (MTCS Academic Affairs Policy No. 304) definition of a Unit of Credit: "(1) one semester credit hour for each fifteen hours of classroom contact plus thirty hours of outside preparation or the equivalent; or (2) one semester credit hour for each thirty hours of laboratory work plus necessary outside preparation or its equivalent, normally expected to be fifteen hours; or (3) one semester credit hour for not fewer than forty-five hours of shop instruction (contact hours) or the equivalent..."

Source: Miller, W. Jerry, and Mills, Olive, *Credentialing Educational Accomplishment, Report and Recommendations of the Task Force on Educational Credit and Credentials*. (Washington, D.C.: American Council on Education, 1978), p. 13.

Prerequisite - any course work that must be completed before the student is eligible to register for a course.

Corequisite - any course which must be taken during the same semester.

Applied Technical Studies (ATS)

ATS 199

Prior Learning - Portfolio Assessment

(variable credit - maximum 24)

This catalog listing reflects CMTC's recognition of appropriate and significant prior learning and its credit relationship to Degree requirements. Knowledge and skills (not chronological experience) acquired prior to matriculation are systematically identified and documented in a portfolio which is assessed by faculty representatives of the College and credit is awarded.

Prerequisites: ENG 101, ENG 201 and Portfolio Development Seminar

Architectural & Civil Engineering Technology (ACET)

ACET 113

Architecture & Design

1 class hr., 4 lab hrs., 15 wks., (3 cr)

Students will research design and construction processes, materials, and methods to design a commercial wood frame building and its components. The student will be introduced to basic drafting and presentation techniques utilized by the A/E industry utilizing CAD within a "hands-on" approach for CAD training for the creation of construction documents.

Prerequisite: Score above the 40th percentile on CMTC Assessment Tests, Knowledge of basic computer skills, Co-requisite: ACET 115

ACET 114

Construction & Materials

2 class hrs., 4 lab hrs., 15 wks., (4 cr)

Students will research design and construction processes, materials, and methods to design a commercial masonry steel frame building, compo-

nents and a preliminary site plan. The student will evaluate and implement expanded concepts in CAD construction document preparation utilized within the A/E industry. The student will expand their knowledge use of CAD through the "hands-on" approach for CAD training for the creation, presentation of construction.

Prerequisites: ACET 113 & ACET 115

ACET 115

Building & Site Pre-design

2 class hrs., 1 lab hr., 15 wks., (3 cr)

Introduces students to the pre-design research and the design phases towards construction document creation. Students will analyze preliminary design considerations impacting the site and buildings design. Students will research, evaluate, and present their findings on the building and site's use, program considerations, code study, building systems research & evaluation, zoning, site vehicular/pedestrian access, building orientation, topography, landscaping, storm water management. Students will explore architectural history through a brief overview with emphases on the precedents in design. Students will expand their use of CAD software tools to translate preliminary hand drawn sketches of building and site into CAD presentation drawings. Students will also be introduced to the office environment, with emphasis on accurate record keeping, teamwork, profession ethics problem solving skills, written & oral communication skills and presentation of final works of study.

Prerequisite or Corequisite: ACE 113

ACET 121

Structures I

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The student is introduced to the strength of materials by determining internal stresses of basic structural members and the computation of reactions and bending moments of beams and girders. Emphasis is on the design and selection of statically

determinate structures of timber.

Prerequisite or Corequisite: ACET 113

ACET 122

Structures II

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is a continuation of ACET 121. The student is introduced to structural steel design, determining internal stresses from bending moments. Emphasis is on the design and selection of statically determinate structural steel members.

Prerequisites: ACET 121 and Pre or Corequisites: ACET 114

ACET 131

Surveying I

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course covers elementary land surveying, including the theory of measurements, the theory and practice of computing land areas by trigonometric methods, angles and bearings, and highway curves.

ACET 132

Surveying II

1 class hr., 4 lab hrs., 15 wks., (3 cr)

This course covers the use of the theodolite, total station and survey data collector for levels, traversing and topography. The computations for traversing in the State Plane Coordinate System are oriented from GPS (Global Positioning System) monuments located on campus.

Prerequisite: ACET 131

ACET 204

Building Systems

1 class hr., 4 lab hrs., 15 wks., (3 cr)

This course introduces plumbing, heating, air conditioning and electrical systems for building applications. Students design building systems and create plumbing, heating and lighting plans for industrial or commercial buildings.

Prerequisite: PHY 141, ACET 114

ACET 234

Legal Aspects of Surveying

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course looks at the U.S. Legal System, the role of the surveyor, deed

descriptions, and land use regulations are used to prepare a land subdivision plan.

Prerequisite: ACET 131 or Faculty approval

ACET 242 **Independent Project**

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

An independent project related to the course of study is selected by the student with faculty approval.

Prerequisite: Faculty approval

ACET 261 **Civil Technology**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course includes: (A) Steel shop drawings and the introduction to structural fabrication drawings. (B) Storm water drainage, the methods of estimating the rate and amount of flow from small water sheds.

Prerequisite: ACET 113 and ACET 122

ACET 262 **Soils and Foundations**

1 class hr., 4 lab hrs., 5 wks., (1 cr)

Determination of soil properties and appropriate selection of building foundations are presented in this course. Soils lab work is performed. A building foundation is designed and drawn.

ACET 274 **Project Management**

1 class hr., 4 lab hrs., 10 wks., (3 cr)

Students are introduced to construction project management and its array of disciplines consisting of methods of management, scheduling, safety, contracting, documentation construction operations and preliminary estimating. Students participate in teamwork project utilizing CPM scheduling, and construction field observations.

Prerequisite: Senior Standing

American Sign Language (ASL)

ASL 101 **American Sign Language I**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces students to American Sign Language (ASL), including an examination of the cultural values and rules of behavior of the Deaf community in the United States. In developing conversational competence in ASL, the course covers the following: sign vocabulary, finger spelling, manual numbering system, basic sentence patterns of ASL, correct use of idioms, receptive and expressive language activities; Deaf culture in North America.

Prerequisites: Fluency in English strongly recommended

Art (ART)

ART 101 **Introduction to 2D Design**

1 class hr., 4 studio hrs., 15 wks., (3 cr)

This introductory course deals with the basics of design on a two dimensional surface: line, shape, space, color, texture, form and value. Emphasis is placed on general design concepts and vocabulary, conceptual thinking, design process, application, and observational skills. This course is divided into a series of projects in several media, dealing with specific design principles and elements, and employs workshops and outside assignments to help students create and evaluate those projects. No previous art experience necessary.

ART 102 **3-D Design**

1 class hr., 4 studio hrs., 15 wks., (3 cr)

This course explores the conceptual process of design as applied to the three dimensional form. It emphasizes formal analysis and 3-D design processes to study structure, organization, and aesthetics. This is a hands-on, problem-solving course, which explores various techniques and media. Emphasis is placed on solving three-dimensional design problems, which are material, function, site, or client specific.

SECTION 1: This section deals with freehand drawing and observation and will last approximately one month.

SECTION 2: This section of the course is divided into a series of projects relating to three-dimensional form. These projects will also address client specified design as well as material and technique influences.
Prerequisite: ART 101

ART 125 **Twentieth Century American Crafts**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This survey course follows the growth of American crafts from the late 1800's to the present. Emphasis is placed on the relationship between period stylistic trends in craft, the arts, and architecture and larger societal influences. The overall world historical context and its relationship to and influence on American craft will be explored. The course is organized around a series of slide lectures and class discussions. The research paper will allow the student to explore areas of personal interest within the bounds of American craft.

Astronomy (AST)

AST 101 **Astronomy,**

3 class hours, 0 lab hours, 15 wks, (3 cr)

This course will cover the fundamentals of astronomy. Topics covered will include the solar system and Earth's place in it, stars, galaxies, and concepts of the universe. Also covered will be telescopes, spacecraft, and other tools used to acquire knowledge of distant objects. There is no math prerequisite, however math concepts will be used in describing models, and students will be expected to solve problems using arithmetic and simple algebra concepts.

Automotive Technology (AUT)

AUT 100

Introduction to Automotive Technology

3 class hrs., 9 lab hrs., 2 wks., (1 cr)

This is the first course of instruction for Automotive Technology students. The course deals with shop safety, tools and procedures related to automotive technology. Safety and health in the workplace along with a look at personal lifestyle will be discussed. Hand tools, power tools, torch operation, battery boosting and charging will be covered.

AUT 110

Brakes*

3 class hrs., 9 lab hrs., 5 wks., (2 cr)

This course teaches the theory of hydraulics, mechanical advantage and all types of brake systems with practical instructions in testing and servicing car and light truck brakes. Laws from the Maine State Inspection Manual pertaining to brakes are presented.

AUT 120

Suspension & Alignment*

3 class hrs., 9 lab hrs., 5 wks., (2 cr)

This course teaches the theory and operation of the suspension systems of modern vehicles with practical experiences in analyzing problems and replacement of worn parts. Included will be the study of front and rear wheel alignment and wheel balance.

AUT 130

Engine Repair I

2.5 class hrs., 0 lab hrs., 6 wks., (1 cr)

This course teaches the basic construction of modern automotive engines. The theory, operation, identification and location of all engine system components will be studied.

AUT 131

Engine Repair Lab

1.5 class hrs., 18 lab hrs., 6 wks., (3 cr)

This lab will provide the opportunity for students to diagnosis and repair of all engine system components. The systems will include but not be limited: cylinder heads, valve train, engine block, crankcase, cooling passages and lubrication. The repair section of this unit will require students to remove, disassemble, reassemble and reinstall a functional engine.

Co-requisite: AUT 130

AUT 150

Electrical Systems I*

7.5 class hrs., 12 lab hrs., 4 wks., (3 cr)

This course is the first in the electrical series covering the theory and fundamentals of electricity. The principles and procedures for servicing batteries, starters and charging systems using standard test equipment will be covered. A comprehensive study of these systems will be performed with testing both on and off the vehicle.

AUT 155

Electrical Systems II

2.5 class hrs., 0 lab hrs., 6 wks., (1 cr)

This course teaches the basic electronic control of accessory and body components. The theory, operation, identification and location of chassis electrical and electronic components will be studied.

AUT 156

Auto Electric II Lab

5 class hrs., 15 lab hrs., 6 wks., (4 cr)

This lab will provide the opportunity for students to diagnosis and repair the electronic control system for accessory and body components. The systems will include but not be limited to: electronic feedback systems, heat/cooling ventilation, interior accessories, lighting and body electrical.

Corequisite: AUT 155

AUT 160

Air Conditioning

5 class hrs., 7.5 lab hrs., 2 wks., (1 cr)

This course introduces the principles of refrigeration and heat transfer. Modern test and recovery equipment

will be used to diagnose and service automotive air conditioning systems.

AUT 170

Engine Performance I*

7.5 class hrs., 12 lab hrs., 4 wks., (3 cr)

This course will cover electronic control systems and computer functions as they relate to drivability, diagnosis and repair of cooling, ignition, fuel and emission components.

AUT 175

Alternate Fuels

5 class hrs., 7.5 lab hrs., 2 wks., (1 cr)

This course introduces the principles and use of alternate fuels to power the automobile of the future. Multi-power and multi-fuel use of gas, propane, diesel, alcohol and electric cells will be explored.

AUT 190

Field Experience

240 hrs. Externship (3 cr)

In AUT 190 the student works in the service department of a sponsoring automotive dealership or independent repair facility. This hands-on training, under the direction and supervision of an experienced technician, reinforces the subjects learned in the first semester automotive core curriculum. The student, while not required, will have an opportunity to use skills learned from the second semester AUT curriculum. This technical concentration elective will satisfy the program major requirement for AUT 291 Advanced Chassis Systems (laboratory)

Prerequisite: Department Chairperson approval and a minimum 3.0 GPA with AUT 110, 120, 150, 170, and 6 credits from the required Gen Ed course work.

AUT 200

State Inspection

5 class hrs., 7.5 lab hrs., 2 wks., (1 cr)

This course will interpret the Maine State Inspection manual. Testing and measuring equipment will be used to do a practice inspection on a motor vehicle.

Prerequisite: Automotive Core

AUT 240**Automatic Transmission**

5 class hrs., 15 lab hrs., 9 wks., (6 cr)

This course teaches theory and practice devoted to all types of automatic transmissions/transaxles and their adjustment, troubleshooting and overhaul. Removal, disassembly, repair, assembly of pumps, converters, gear train, shafts, bushings, case friction and reaction units, hydraulic and electronic shift control will be covered.

Prerequisite: Automotive Core

AUT 245**Manual Drive Train/Axles**

7 class hrs., 15 lab hrs., 5 wks., (4 cr)

This course will cover transmission theory and power flow from the engine to the drive axle. Diagnosis and repair of clutch, transmission, transaxle, drive shaft, ring/pinion, axle shaft, differential case, and four-wheel drive components will be included.

Prerequisite: Automotive Core

AUT 270**Engine Performance II**

9 class hrs., 9 lab hrs., 5 wks., (4 cr)

This course deals with engine performance principles as related to electronic feedback systems for fuel control, spark management, emission controls and transmission related systems. Strategy based diagnosis will be emphasized using electronic diagnostic equipment.

Prerequisite: AUT 170

AUT 275**Engine Performance III**

6 class hrs., 9 lab hrs., 5 wks., (3)

This course will cover all electronic components found in today's automobile. The student will troubleshoot OBDII derivability faults as they relate to modern emission controlled engines. Diagnosis leading to tests and repairs to trade standards of time and accuracy.

AUT 290**Advanced Chassis Systems (theory)**

15 class hrs., 0 lab hrs., 15 wks., (1 cr)

This course will involve a comprehensive study of electronic and computerized brake, traction, suspension, steering, and alignment system of modern vehicles. A guide to practical experiences in analyzing problems and replacement of faulty sensors and associated components will provide students with theory and procedures necessary to diagnose faults.

AUT 291**Advanced Chassis Systems (Laboratory)**

0 class hrs., 90 lab hrs., 15 wks., (3 cr)

This course will involve a comprehensive study of electronic and computerized brake, traction, suspension, steering, and alignment systems of modern vehicles. The study of computer integrations with practical experiences in analyzing problems and replacement of faulty sensors and associated components will provide students with practical applications to classroom lectures. Successful completion of the technical elective, AUT 190 Field Experience, can satisfy the requirements for this course.

AUT 296**Independent Study**

(variable credit)

This provision allows for a performance contract between student and Department instructor(s) to reach mutually agreed upon goals. Credit earned and grade dependent upon quality and efficiency of performance. (Credit hours are variable at a formula of 45 hours of student effort equaling 1 credit hour.)

Pre-requisite: Department Chair approval

**Automotive Core Requirement*

Biology (BIO)

BIO 101**General Biology (Lec.)**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

BIO 102**General Biology (Lab) -**

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

An introduction to the chemical and physical nature of biological processes. Cell structure, metabolism, reproduction, inheritance, and evolution are examined in lecture & laboratory using a wide variety of plants and animals as examples and experimental models.

Prerequisites: High school biology with lab or Instructor approval

BIO 115**Anatomy & Physiology I (Lec.)**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

BIO 116**Anatomy & Physiology I (Lab)**

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

The study of cell chemistry, structure, and function. Students will be introduced to the principles of genetics, reproduction, growth and development and to the study of the integumentary and skeletal system.

Prerequisites: High school biology with lab and high school chemistry with lab

BIO 117**Anatomy & Physiology II (Lec.)**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

BIO 118**Anatomy & Physiology II (Lab)**

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

This course focuses on many of the organ systems of the human body. The structure and function of the muscular, nervous, endocrine, cardiovascular, respiratory, digestive, and urinary systems will be discussed.

Prerequisites: grade of C or higher in BIO 116

BIO 121**Nutrition**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Nutrition will be studied by examining the metabolic and structural requirements of human cell, tissues, and organ systems. This knowledge will be applied to understanding the nutritional needs of various life stages including pregnancy, infancy, adolescence, adulthood and the older years. The nutrition related to health, disease, sports and eating disorders will also be included in this course.

Prerequisites: BIO 101 and 102 General Biology with Laboratory, or BIO 115 and 116 Anatomy and Physiology with Laboratory.

BIO 211

Microbiology (Lec.)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

BIO 212

Microbiology (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

The biology of viruses, bacteria, cyanobacteria, fungi, protozoa and helminthes is presented. The structure and metabolism of common microbes are emphasized. Ecological principles are developed using microbial examples. Mammalian immunity is also examined. Techniques for handling, culturing, and identifying representative microbes are performed by the student in the laboratory.

Prerequisites: BIO 115, 116, 117, 118

Building Construction Technology (BCT)

BCT 101

Introduction to Hand & Power Tool Safety

0 class hrs., 20 lab hrs., 1.5 wks., (1 cr)

This course introduces students to safety procedures used for hand and stationary power tools. Students will demonstrate their understanding by constructing a tool box and saw horse from a provided drawing.

BCT 106

Concrete Forms

0 class hrs., 20 lab hrs., 3 wks., - (2 cr)

The student is introduced to reinforced concrete theory. Shop and field experience includes principles and practices of form construction and placement of concrete.

BCT 107

Floor Framing

0 class hrs., 20 lab hrs., 3 wks., (2 cr)

Students are introduced to the principles of layout and construction of

floor framing. Students will demonstrate their understanding by framing a floor on a foundation including rough openings.

BCT 108

Wall Framing

0 class hrs., 20 lab hrs., 3 wks., (2 cr)

This unit introduces students to the principles of wall framing including blocks, lines and spring boards used to straighten walls. Students will demonstrate their comprehension by assembling walls with rough openings.

BCT 122

CAD, Site Design & Construction Site Surveying

(3 cr)

Students are introduced to residential site design and planning through the use of CAD. Students will be introduced to preliminary site design, and prepare preliminary research of: local ordinances, deed research, and codes. Students will be introduced to AUTOCAD and its commands through the preparation of computer-aided designs of site plans demonstrating the principles of site design, topography, and field construction surveying. Construction surveying is introduced through the demonstrated use of surveying transits & theodolites and associated equipment and record the information for CAD data compilation.

Corequisite: BCA 120

BCT 124

Basic Strength of Materials & CAD

(3 cr)

Student are introduced to construction industry standard residential design of structural components, through the preliminary evaluation of residential materials. The students will research structural forces on timber and incorporate findings into standard tables and formulas for the selection of structural members. Students will be introduced to the principles and practices of preparing construction sketches and Computer

aided drafting through the use of AutoCad to prepare industry standard sketches and shop drawings. Construction industry standards will be introduced and maintained throughout the duration of study and activity by the student.

Prerequisites: BCT 122, *Corequisite:* MAT 100

BCT 135

Roof Framing

0 class hrs., 20 lab hrs., 3 wks., (2 cr)

This course introduces students to the use of a framing square, calculator, and rafter manual to layout rafters. Students will demonstrate these principles by laying out, cutting and installing different types of rafters.

BCT 136

Exterior Roof Trim

0 class hrs., 20 lab hrs., 3 wks., (2 cr)

Students will be introduced to exterior roof trim styles such as open and closed returns. Students will demonstrate their skills by applying roof trim.

BCT 137

Roofing and Siding

0 class hrs., 20 lab hrs., 3 wks., (2 cr)

This course introduces students to common roofing materials such as shingles, rolled roofing, and drip edge. Students will apply their understanding by installing roofing on a sloped roof and in a valley. This unit also introduces students to the application of common sidings, including clapboard, cedar shingles, and vinyl siding that each student will apply.

BCT 138

Doors and Windows

0 class hrs., 20 lab hrs., 3 wks., (2 cr)

This course introduces student to the application of doors and windows. Students will identify door and window components and hardware. To demonstrate their comprehension, students will build and install a Boston style window and install an exterior door.

BCT 202 Construction Estimating*0 class hrs., 20 lab hrs., 7.5 wks., (3 cr)*

Training is given in the use of estimator's tools, the use of the quantity survey, subsummary and summary sheets. Instruction is also given in establishing unit prices by determining methods of construction, analyzing labor procedures and computation of material lists.

BCT 203 Interior Trim*0 class hrs., 20 lab hrs., 3 wks., (2 cr)*

The identification and installation of an interior door and trim. Includes recognition of flush, pocket bypass, and sliding doors. Identification and application of interior trims, ceiling molding, mopboards and wall panels is also included.

BCT 235 Cabinets*0 class hrs., 20 lab hrs., 3 wks., (2 cr)*

Students design, layout, draw plans and develop working drawings for the construction of kitchen and commercial cabinets. Students will select stock, hardware and obtain estimates for all materials. Utilizing plans, working drawings, and estimates, students learn to cut stock, assemble cabinets and install hardware. Students also select and apply laminates, become familiar with both power and hand trimming, and select and utilize adhesives in a safe and proper manner.

BCT 236 Finished Stairs*9 class hrs., 20 lab hrs., 3 wks., (2 cr)*

Students are introduced to the knowledge and practices of layout, estimation of material, and the construction of finished stairs, skirt boards, rails and balusters.

BCT 237 Masonry*0 class hrs., 20 lab hrs., 3 wks., (2 cr)*

Students will be introduced to the practical application of brick and block laying. Students will demonstrate their understanding through

hands-on projects of mixing mortar to lay bricks and blocks.

BCT 240 Construction Drafting*30 class hrs., 15 lab hrs., 15 wks., (3 cr)*

Students will prepare a framing plan, and stair section. Students are introduced to physical features, legal ordinances, building codes, and environmental considerations which effect planning. Blueprint reading will be included as a study and class activity.

Prerequisites: BCT 122 and BCT 124

BCT 296 Independent Study*(variable credit)*

The provision allows for a performance contract between student and a department instructor to reach mutually agreed upon goals. Credit earned and grade depend upon quality and efficiency of performance.

Prerequisite: Approval of BCT Department Chairperson

Business Administration and Management (BUS)

BUS 100 Understanding Business*3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

The purpose of this course is to introduce students to the nature and structure of business in the United States. The scope of the course will include an overview of the functional areas (i.e. finance, marketing, etc.) as well as the terms and concepts used in modern organization.

BUS 101 Small Business Management*3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

The purpose of this course is to introduce students to terms, concepts and tools used to start and/or manage a small business. The course will analyze typical problems, tasks and responsibilities confronting managers of small organizations.

BUS 110 Principles of Supervision*3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

The purpose of this course is to introduce students to the principles involved in working through, and understanding human resources. It is designed to enhance the leadership and administrative skills of existing and potential first line managers, supervisors and small business owners.

BUS 115 Leadership and Interpersonal Relations*3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This course is designed to introduce students to the concept of leadership, various leadership styles and the cause and effect relationships in using the styles. Student successfully completing this course will learn that leadership is a set of practices that can be mastered. Participants will "experience" leadership activities by developing appropriate interpersonal skills through role playing and other activities.

BUS 120 Employment Law*3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

Employment Law (State of Maine and Federal) covers a broad range of subject areas and its impact develops well before the advertising and recruiting of personnel. The purpose of this course is to promote an understanding of acceptable and unacceptable employment practices for hiring and supervising employees.

BUS 122 Business Law*3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This course provides an overview of the legal environment in which both large and small businesses operate. The course content includes discussion of the Uniform Commercial Code and its impact on sales and contracts, agency relationships, government regulation, torts, personal and real property rights.

Prerequisite: BUS 100

BUS 125**Total Quality Control**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to introduce students to the concept that Total Quality Control is designed to present the modern field of quality control as a body of managerial, technological, behavioral, and economic knowledge together with the organized application of this knowledge to the practical improvement of industrial or service operations.

BUS 140**Intro to Sports Management**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will discuss sports management and the scope of opportunities the sports industry presents. It will discuss major challenges confronting various segments (collegiate, professional, and international) of the industry. The course will also explore the historical, psychological, sociological, and philosophical foundations of sports management, organizational concepts and their application to sport management. Event planning and facility management will also be introduced.

BUS 145**Facilities Management**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will explore the world of Facilities Management. The student will gain an understanding as to the complexity involved in the overall programming, operation, maintenance, promoting and managing various types of facilities. The course will include the theory behind planning and managing a facility as well as numerous case studies allowing the student to apply the theory presented in the beginning of the course.

BUS 150**Effective Customer Relations**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

A sound and loyal customer base is one of an organization's most important assets. This course details the origin of positive customer relations

and discusses the tools, attitudes and training required to support a comprehensive program.

BUS 155**Business Retail and Merchandising Management**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Considered a major component of economic activity, Retailing surrounds and impacts us on a daily basis. This course is designed to provide an understanding of the principles involved in a successful retail operation and recognize the dramatic change the activity is undergoing - from "bricks and mortar" to E-Commerce. Additionally, 25% of the course will concern itself with merchandising tools, techniques, and strategies. *Note: if a student is interested in a specific field of retailing (i.e. auto parts and service etc.) their assignments will be directed accordingly.*

BUS 160**Intro to Sales and Sales Management**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The course begins with an introduction to personal selling techniques, and the advantages of personal selling over other forms of promotion. Relationship or consultative selling will be emphasized as the most modern approach to sales. The principle tasks of Sales Management will be explored with an emphasis on how sales managers and sales people can most effectively work together.

BUS 180**Managing Office Procedures: Optimizing Task Resources**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The efficient and economical operation of a contemporary office requires knowledge and skills in a wide variety of functional areas. This course will examine in detail the basic operational aspects of managing an office including shipping and receiving of materials, record and data storage, managing calendars, efficient inter-office communications and staff training and development.

BUS 190**Completing Your Business Plan**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is somewhat unique in that it expects each student to bring an outline or rough draft of their business plan to class by the second meeting. This course will be taught using a seminar format, in addition to lectures and guest speakers. From that point on specific issues will be addressed relative to each plan. By the end of the course, the original draft will have been refined sufficiently so that it can: a) be circulated in order to gather financial support; and b) be used as an operating plan to implement and manage the venture.

Prerequisite: BUS 101 or Faculty approval

BUS 208 Financial Accounting

This course is a one-semester course for non-accounting majors. It is designed to give students a basic foundation in financial accounting and the language of business. Key topics include the correct classification and recording of accounting transactions, preparation of basic financial statements, and analysis and interpretation of financial data. Students will use computer software in and out of class for some problem solving.

BUS 210**Principles of Accounting I**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is a beginning accounting course that introduces the student to basic financial statements and the double-entry accounting system. The course includes methods and procedures such as merchandising operations, internal control, accounts and notes receivable and accounting for merchandise inventory.

BUS 212**Principles of Accounting II**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to further the understanding of basic accounting principles, methods and procedures

gained in Principles of Accounting I; for example, inventory valuation, depreciation, partnerships and capital stock. In addition, an integrated computer simulation will be completed at the end of the semester.

Prerequisite: BUS 210 or Faculty approval

BUS 215
Principles of Marketing

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The course begins by dissecting the elements of the marketing mix-product, price, promotion and place and ends with the completion of a marketing plan for a product chosen by each student. Topics include segmentation, distribution, consumer behavior, etc. Different aspects of marketing-product vs service and wholesale vs retail vs direct and industrial marketing, will also be explored.

BUS 218
Human Resource Management

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Recruitment, selection, training, human resource planning, compensation management, Equal Employment Opportunity (EEO), performance evaluation, discipline, and employee health and safety topics are covered in the course. Students are introduced to the role of the human resource executive and staff in corporate management as well as their role in the planning for the organization.

BUS 220
Managing People and Organizations

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

When employees work in organizations, managerial effectiveness is enhanced when the dynamics of human behavior in group situations are understood. This course will apply the principles developed by behavioral scientists to the human resource component of the business organization.

BUS 225
Strategies, Policies and Procedures

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The success of an organization is dependent upon its assessment of the environment in which it operates, the timing and appropriateness of responses to change in this environment and the consistency with which it pursues its objectives. This course will examine, in detail, the development and implementation of planned dependent Strategies, Policies and Procedures requisite to this activity.

BUS 230
Independent Study/Internship

(3 cr)

This course is designed to allow a student to work on a semester long project. The specifics of the assignment will be developed by the Faculty Advisor in conjunction with the student and the student's current or prospective employer (sponsor).

BUS 235
Operations and Decisions Systems

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to acquaint the student with the more prominent quantitative aids to decision making. Techniques and concepts used in scheduling, inventory control, quality control, sales forecasting, project management and resource allocation will be explored and applied to specific situations.

BUS 240
Intermediate Accounting I

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course begins with a comprehensive review of accounting principles, including the conceptual framework of accounting as prescribed by the Financial Standards Board (FASB) and Generally Accepted Principles (GAAP). Other topics include concepts of future and present value, theory underlying revenue recognition practices, internal control procedures for cash, basic alternative

inventory valuation methods, as well as recording of investment securities.
Prerequisite: BUS 212 with a grade of "C" or better or Faculty approval

BUS 242
Intermediate Accounting II

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course continues the intensive study of financial accounting including the valuation of long-term liabilities and accounting for income taxes, leases, and pensions. Other topics are forming a corporation, recording various types of dividends, computing earnings per share, as well as the preparation of the statement of cash flows. Application of accounting principles in recording, reporting, and disclosing accounting changes and prior period adjustments are also included.

Prerequisite: BUS 240 with a grade of "C" or better or Faculty approval

BUS 244
Computerized Accounting

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course utilizes Peachtree integrated accounting software whereby both service and merchandizing businesses are set up from inception. Depending upon the particular business, the following topics will be covered throughout the course: general ledger, accounts payable, accounts receivable, payroll, inventory, job costing, importing and exporting of files, and other advanced Peachtree applications. The necessity of an audit trail will be emphasized.
Prerequisites: BUS 210 or Faculty approval.

BUS 246
Tax Accounting (Individual)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This introductory course examines taxation for individuals, including Schedule C, which is filed for sole proprietorship businesses. Filing requirements, gross income, exclusions, deductions, exemptions, tax credits, and tax research are a sampling of the topics covered. A general overview of tax consequences for

different forms of business entities such as corporations, partnerships, limited liability companies, and S Corporations is included.

Prerequisite: BUS 210 or Faculty approval

BUS 248

Money, Banking, and Financial Markets

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to provide students with a better understanding of the U.S. monetary and banking system. The student will also develop an awareness of current economic issues and events relating to monetary policy.

BUS 250

Advanced Management Concepts

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

As one advances from a Supervisor to a Manager the scope and time horizon for planning, organizing, directing and controlling change. This course will explore these changes and allow the student to apply the new knowledge to a variety of situational and case studies. It is designed to be a "wrap up" course for the Associate Degree Program and features problem solving and decision making.

BUS 255

Electronic Commerce

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is a computer-based and case study course. It is designed to introduce students to various aspects of Electronic Commerce. Electronic Commerce is doing business electronically. It will include the following business processes: advertising and marketing, sales, ordering, manufacturing, distribution, customer service, and inventory control. This course will examine sixteen successful companies who have brought their products and services to the Internet. A session will be dedicated to CyberLaw.

BUS 260

Business Finance

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to investigate the mechanisms of business finance including financial analysis, capital management, budgeting and commercial financing.

Pre-requisite: BUS 100

BUS 265

Managerial Accounting

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to internal management accounting. Emphasis is on the use of accounting information in controlling the operations of the enterprise. Specific areas covered include: cost classifications, accumulating costs through job order and process costing techniques, budgeting, responsibility accounting, and transfer pricing. The fundamental accounting concepts and techniques for planning and control are applicable to all types of functions of organizations; therefore, this course deals with not-for-profit, retail, wholesale, selling and administrative functions as well as the more traditional manufacturing organizations.

BUS 270

Hospitality Management

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to provide Culinary Arts students and others, having a career interest in Hospitality Management with an understanding of how the industry functions, including its policies and procedures. The focus will be on Food Service and Lodging Management, although other aspects of the industry will be covered.

BUS 278

Hospitality Internship

(3 cr)

This course is designed to provide the student with practical field experience in the Food Service and/or Lodging industry. The semester long, 150 hour on site experience, will be developed jointly by the Business

and Culinary Arts Department Chairpersons. Students will be required to provide two written reports of their experiences.

Business and Computer Applications (BCA)

BCA 045

Fundamentals of Computing

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This fundamental course is designed to familiarize students with using personal computers as a learning tool. The course is designed for individuals who have had little or no experience with personal computers and need a fundamentals course to acquire basic user skills. This course includes the fundamentals of keyboards (including keyboarding), mouse, printers, monitors, and general computer operations.

BCA 101

Computer Keyboarding

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is an introductory course in electronic keyboarding designed to present and develop basic keyboarding skills including speed, accuracy and professional standards. Students successfully completing this course will be expected to prepare documents and correspondence quickly, with a high degree of accuracy and will be judged using professional office standards. This course will use IBM compatible computers and a variety of instructional software programs. BCA 101 Computer Keyboarding will prepare individuals for Business and Computer Applications and a variety of other CMTC programs requiring keyboarding skills.

BCA 120

Introduction to Computer Applications

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is an introductory computer course that is structured to familiarize

the student with usage of computers as a tool for business and industry. Taking a hands-on approach, students will become skilled in the use of Windows XP and Microsoft Office XP. These competencies include the operation of word processing, spreadsheets, database and presentation software. All learning will be in a lab environment where students will directly apply instructions using individual computers.

Prerequisite: Students should be familiar with basic mouse and keyboard operation prior to registration.

BCA 121

Word Processing

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is intended to introduce skills and build mastery with Microsoft Word XP in a Windows environment. It is designed to develop competencies in a variety of word processing functions while building typing speed and accuracy. Students will become proficient in document management, text handling, merging, macros and a wide variety of document enhancements available in the software.

Prerequisites: Basic keyboarding skills and knowledge of PC operations. (Students are advised to check with faculty prior to registration).

BCA 125

Navigating the Net

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is intended to instruct entry-level students in the fundamentals of presentation and internet software. It will teach them to use e-mail, make presentations and do research on the web as well as design and maintain web pages. Specific software programs will include Outlook, PowerPoint and Netscape.

BCA 241

Spreadsheet

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is intended to instruct beginning and entry level students in the fundamentals of spreadsheet

operations using Microsoft Excel XP. It will expose them to basic spreadsheet concepts as well as many of the more sophisticated functions which enhance spreadsheet utilization, improve functionality and increase a wide variety of applications for spreadsheet analysis.

Prerequisite: BCA 120. (Students are advised to check with faculty prior to registration).

BCA 246

Database Management

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is intended to introduce skills and build proficiency in database management using Microsoft Access XP. It is designed to develop competencies in a variety of database processing functions. Students will become proficient in setting up databases, managing data, querying, creating forms and reports, using report enhancements and manipulating data.

Prerequisites: BCA 120 or CPT 152.

Chemistry (CHY)

CHY 101

Introduction to Chemistry (Lec.)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Corequisite: CHY 102

CHY 102

Introduction to Chemistry (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

Corequisite: CHY 101

This course is intended to satisfy the need for a one semester course in Introductory Chemistry. It is structured to familiarize the student with principles of Inorganic Chemistry and a survey of Organic Chemistry. The student will become familiar with standard chemical procedures and the terminology of Chemistry. The student will also be able to predict chemical reactions under a variety of situations.

Prerequisite: High School Algebra I, or MAT 050, or Faculty approval

CHY 111

Principles of Organic and Biological Chemistry (Lec.)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Corequisite: CHY 112

CHY 112 Organic and

Biological Chemistry (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

Corequisite: CHY 111

The student will be observing changes in organic and biological matter and finding cause and effect relationships. The student will conduct scientific experiments on organic matter and interpret the results of these experiments.

Prerequisites: CHY 101, 102

Clinical Laboratory Science (CLS)

CLS 101

Clinical Laboratory Science I

2 class hrs., 4 lab hrs., 15 wks., (4 cr)

Introductory course to the concepts and techniques of the clinical laboratory. Topics include safety, phlebotomy, basic lab procedures, concepts of basic clinical chemistry, urinalysis, body fluids, and hematology. Mathematics, as applied to the clinical setting, is integrated throughout the course.

CLS 102

Clinical Laboratory Science II

2 class hrs., 4 lab hrs., 15 wks., (4 cr)

This course expands upon the knowledge gained in CLS 101 and covers such topics as Clinical Chemistry where tests are performed and correlated with human diseases. Blood Bank study explores antigens and antibodies in the ABO/Rh systems and their relevance to transfusion therapy. The topic of Immunology explores the concepts, procedures, and common immunological diseases. A study of Parasitology covers commonly seen human parasites of the world.

Prerequisite: CLS 101

CLS 103**Clinical Laboratory Science III***4.5 class hrs., 6 lab hrs., 10 wks., (5 cr)*

This course continues to build upon skills introduced in CLS 101 and CLS 102. Students are prepared for the clinical experience by covering expanded clinical chemistry, automated analysis, complex manual analysis, quality control, and coagulation testing.

Prerequisite: CLS 102

CLS 201**Clinical Affiliation I***3 class hrs., 32 lab hrs., 15 wks., (12 cr)*

This course provides an integrated, clinically-based rotation which correlates cognitive and technical skills in the selected areas of chemistry, hematology, immunohematology, microbiology, serology, and urinalysis.

Prerequisite: CLS 103

CLS 202**Clinical Affiliation II***3 class hrs., 32 lab hrs., 15 wks., (12 cr)*

This course provides an integrated, clinically-based rotation which correlates cognitive and technical skills in the selected areas not completed in CLS 201.

Prerequisite: CLS 103

Computer Aided Drafting/Design (CAD)

CAD 110 Introduction to Computer Aided Drafting (CAD)*3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This is an introductory drafting course utilizing AutoCad on Windows based personal computers. This course offers an overview of CAD - what can be done and how to do it, including a coverage of drafting fundamentals. Students will learn the necessary commands and functions to produce a variety of two-dimensional drawings. This course uses a hands-on approach, with all topics being directly applied in the CAD lab.

CAD 262**Intermediate Computer Aided Design (CAD)***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This is an intermediate course utilizing AutoCAD on Windows-based personal computers. Students will learn advanced concepts such as paper space, xrefs, customizing and 3-D. This course uses a hands-on approach, with all topics being directly applied in the CAD lab.

Prerequisite: CAD 110 or Faculty approval.

CAD 282**3-D CAD and Solid Models***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This course is designed as an advanced CAD course using AutoCAD Mechanical Desktop on Windows-based personal computers. AutoCAD's 3-D Solid Model features will be the focus of this course utilizing parametric solids. All assignments will pertain to the design of mechanical components.

Prerequisite: CAD 262, MECT 141 or Faculty approval

CAD 284**Architectural CAD***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This is an advanced level CAD course utilizing AutoCAD on Windows-based personal computers. The focus of the course will be the creation of drawings for the construction industries. An emphasis will be given to the use of scales, dimension styles, and file management. The course will also include the use of 3-D with the creation of elevation and perspective views.

Prerequisite: CAD 262 or CAD 110 or Faculty approval

CAD 292**Advanced Solid Modeling***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This course is designed to teach students to use the advanced features found in CMTC's parametric modeling software. Students will work in a networked environment to: utilize

advanced modeling techniques, produce assemblies, and use advanced drawing creation and annotations. The principles of finite element analysis (FEA) will also be introduced. All assignments will pertain to the design of mechanical components.

Prerequisite: CAD 282 or Faculty approval

Computer Technology (CPT)

CPT 130**Introduction to Visual BASIC***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This is an introductory course that is designed to instruct the student in the fundamentals of computer programming, using Microsoft Visual BASIC. The students will learn to write, test, and debug a variety of programs that are constructed to teach programming concepts and applications. The topics covered will include programming logic, flow-charting, conditional statements, loops, arrays, sub-routines, input/output statements, formatting, menus, and file manipulation.

CPT 141**Operating Systems***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

The first in a series of three courses (CPT 141, 146, 225), instruction is designed to prepare the student for A+ Certification. Students are introduced to Microsoft DOS, and Windows 98.

CPT 146**Introduction to PC Repair***2 class hrs., 2 lab hrs., 15 wks., (3 cr)*

This course is an introduction to the installation, maintenance and repair of PCs (Personal Computers) and related equipment. It provides students with an elementary understanding of PC environments including system components, peripherals, operating systems, component/card interface and the fundamentals of repair. The second of a series of three

courses (CPT 141, 146, 225), instruction is designed to prepare students for A+ Certification.

Prerequisite: CPT 141

CPT 152 **Integrated Software Applications**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is a course in the use of integrated software packages for report, document, presentation and information development activities. A variety of instructional activities will stress file and data integration and explore intra and inter package communications. Integration of word processing, spread sheet, data base and graphics software will be featured using linking and other tools such as VBA. Students will be expected to produce documents, spreadsheets, data base reports and presentations which take full advantage of interoperability, communication, translating, linking and sharing functions.

CPT 201 **Linux**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to the Linux operating system. It will provide students with the basic abilities required to install, configure, administer, and troubleshoot the Linux operating system.

Prerequisite: CPT 141

CPT 202 Linux Systems Administration/Networking

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an extension of CPT 201, Linux Operating Systems. It introduces the system management functions associated with the Linux operating system. Students will install a version of the Redhat Linux Operating System and use system management resource commands to manage and improve system performance by locating system bottlenecks, using benchmarking programs and automating shell scripts (scripting) to improve system performance and decrease system downtime. The

focus of this class is on proper system management and system administration but an introduction to Linux Networking will also be covered including installation and usage of management software that allows setup of network applications such as DNS, DHCP, Apache, etc.. Students will also be introduced to the concepts of rights, permissions, and ownership as it applies to network resources controlled by the operating system.

Prerequisites: CPT 201 (Linux Operating Systems) AND permission of the instructor

CPT 208 **Routers for Beginners**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces communication equipment that is commonly found in an effective Internet infrastructure. The course provides product-specific installation and configuration. Equipment used in this class include hubs, Ethernet switches, and routers. Taking a hands-on approach, students will become skilled in setting up and maintaining network equipment. All learning will be a lab environment where students will directly apply instructions using individual computers.

CPT 210 **Introduction to Routing Technologies**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces the student to concepts and terminology encompassing generic networking and routed WANs. The seven layer OSI model is examined in depth and used to explain communication between two entities on a routed WAN. Particular attention is devoted to the TCP/IP protocol and how its addressing scheme functions to provide network and host addresses and can be used to subnet a large network into more manageable segments. Student will attend 45 hours of instructor-led class and an additional 25 hours of proctored lab time.

CPT 211 **Introduction to Routers**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is the second semester of the four semester routing concentration. This course builds upon material presented in the first semester and introduces the student to the router. The major router components are examined as well as the router operating system and configuration files. The basic router commands are introduced and used in hands on situations to program the routers to function in a routed WAN environment. Students will learn to use a TFTP server for storing configuration files and the router operating system and how to load new copies into router flash and NVRAM. Students will attend 45 hours of instructor-led class and an additional 25 hours of proctored lab time.

Prerequisite: CPT 210

CPT 212 **Advanced Routing**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is the third semester of the four semester routing concentration. This course builds upon material presented in the first and second semesters and introduces the student to the more advanced abilities required to install, configure, administer, and troubleshoot Cisco routers in a WAN setting. This course introduces switching and VLANs and explains their relevance to good network design and implementation. Particular emphasis during this semester is placed upon ACLs (Access Control Lists), and how they function to control access through the WAN. Configuration of Novell IPX/SPX in a Cisco WAN is also introduced. All material is presented with a hands on approach in a class/lab setting and attempts to recreate the real world as closely as possible. Students will attend 45 hours of instructor-led class and an additional 25 hours of proctored lab time.

Prerequisite: CPT 211

CPT 213 **WAN Routing**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is the fourth semester of the four semester routing concentration. This course builds upon material presented in the first, second, and third semesters and introduces the student to the more advanced abilities required to install, configure, administer, and troubleshoot Cisco routers in a WAN. Serial line authentication techniques are introduced and practiced in hands on labs. The basic commands required to configure a router to handle ISDN and Frame Relay are introduced. The last weeks will be devoted to a final preparation for taking the Net+ and CCNA exams. Students will attend 45 hours of instructor-led class and an additional 25 hours of proctored lab time.
Prerequisite: CPT 212

CPT 225 **Advanced PC Repair**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

The third of a series of three courses, instruction is designed to prepare students for A+ Certification.
Prerequisites: Basic keyboarding skills and knowledge of PC operations, and CPT 146; or one year's experience with PC repair and installation and Faculty approval.

CPT 230 **Field Experience (Internship)** (3 cr)

This course is designed to provide the student with field experience in an actual workplace under the supervision of an information technology professional. Sites for this practical must be arranged prior to course registration.
Prerequisite: Faculty approval

CPT 235 **Networks I**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to core network fundamentals. It will provide students with the ability to design, install, maintain and troubleshoot computer networks. Stu-

dents will be expected to demonstrate an understanding of a wide variety of network cabling, components and architecture. Identification of the seven-layer OSI (Open Systems Interconnection) model, and how it interacts vertically and horizontally with other networks will also be required. *The introduction and appropriate use of network protocols (NetBEUI, TCP/IP/SPX) and network services will be introduced in this course.

Note: Network administration covering Software, Servers, Services, Domains, Workgroups and Users, will be covered in CPT 265 Networks II.

Prerequisites: CPT 146, 141 or two years of IT experience and Faculty approval

CPT 236 **Intro to TCP/IP**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to the TCP/IP protocol stack and its associated services and utilities as implemented in Windows NT 4.0. It will provide students with the basic abilities required to install, configure, administer, and troubleshoot the TCP/IP protocol stack.

Prerequisites: CPT 267 Networks 2, or equivalent experience and permission of the instructor.

CPT 237 **Novell NetWare**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to the Novell NetWare operating system. It will provide the students with the ability to design, install, maintain and troubleshoot Novell networks. Students will be expected to demonstrate an understanding of: NetWare 3.12 - Server hardware requirements and installation of the NetWare 3.12 operating system; set up configuration of the NetWare 3.12 printing environment using "Pconsole" and "Rprinter", use of the NetWare 3.12 administration utility "Syscon". NetWare 4.XX - Server hardware requirements and how they differ

from previous versions; installation of NetWare 4.XX operating system; upgrading from a previous version: the NetWare Directory Services tree, its terminology, and its time requirements; time servers; partitions and replicas; the concept of "context" in reference to the "NWAdmin" and "Partition Manager" utilities; set up and configuration of the NetWare 4.XXX printing environment.

Prerequisite: CPT 236

CPT 238 **Network Support & Trouble Shooting**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is a relatively advanced look at network functions, which then analyzes those functions from a troubleshooting and support perspective. Rather than learning simply facts, students will learn techniques and mind sets required to support and troubleshoot networks on a daily basis by utilizing every day examples of actual failure modes. Students will be expected to demonstrate their expertise using a "hand-on" approach whenever possible. CPT 235 Networks 1 or two or more years of IT work experience and the permission of the instructor

CPT 240 **Advanced Visual BASIC**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course builds on the skills learned in CPT 130, Intro to Visual Basic. Students will learn advanced programming practices using Microsoft's Visual Basic 6.0. Skills learned will include; creating custom menus, working with sequential access files, integrating applications with databases, writing, adding, deleting and updating record sets, working with variable arrays, creating functions, creating a web page with DHTML, linking Visual Basic applications with Excel spreadsheets, Integrating Visual Basic with an Access database, and creating active X controls. Study time outside of class will be required to complete

reading assignments and complete homework exercises.

Prerequisite: CPT 130 Intro to Visual Basic or Faculty approval

CPT 245

Introduction to Java Programming

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is an introductory course in Java programming. Students taking this course will learn how to create programs using the Java programming language. Skills will include writing program code, testing and debugging programming code, and compiling Java programs. Students will learn to create a variety of Java programs, such as, loan calculators, billing and invoicing, bid/cost calculators, payroll calculators, education software (math games) and a variety of problem solving programs to automate complex calculations. Study time outside of class will be required to complete reading assignments, complete programming assignments and homework exercises. This will be a hands on class, where students will learn programming concepts by creating a variety of programs.

Prerequisites: A basic understanding of computers and completion of at least one Programming class, or equivalent experience and the permission of instructor

CPT 248

Introduction to PERL/CGI Programming

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is an introductory course in PERL (Practical Extraction and Report Language)/CGI, (Common Gateway Interface) programming. PERL/CGI is used for processing web forms, accessing data and automating operations. It is a scripting tool that is both lightweight and powerful. Some of the subjects covered in this lecture and hands-on course will include: basic PERL program structure, syntax, flow control, HTML forms processing and file

handling. No prior programming experience needed.

CPT 250

Programming in "C"

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is an introductory course in the applications of "C", a programming language common in electronics and electromechanical engineering, using Microsoft Visual C. The C language facilitates a structured and disciplined approach to Computer Program Design. Through examples, exercises and projects, students will be given the opportunity to solve real-world problems.

CPT 252

Web Development

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

A broad based introduction course that will teach all the fundamentals to make web pages and post them on a Web site. The course will cover both types of web sites, FTP sites and FrontPage sites. The student will design web pages that can be deployed to FTP and FrontPage '98 web sites. The class will cover the basics of using HTML and JAVA scripting. The class will also cover how to develop a web site and register a domain name, including costs and some locations to do so. The students will be required to deploy a small web site on the World Wide Web, using an NT server on campus. Taking a hands-on approach, students will become skilled in Web Page design, management and deployment. These competencies include a basic understanding of HTML and Java scripting. All learning will be in a lab environment where students will directly apply instructions using individual computers.

CPT 253

Advanced Web Development

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

An intermediate course that will teach the skills necessary to expand a static web site into a data-driven, interactive website suitable for E-

commerce applications. The class will cover the basics of web-based data manipulation applications and using Cold Fusion®-based web site on the World Wide Web, hosted on an NT server on campus. The class will also test these web sites using peer reviews and other quality assurance techniques, making changes to the sites as needed. Taking a hands-on approach, students will become skilled in complex web page design and data management. These competencies include advanced HTML, including Java, Javascript, and Cold Fusion®. All learning will be in a lab environment where students will directly apply instructions using individual computers.

Prerequisites: Completion of CPT-252 or Equivalent.

CPT 266

Networks II

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course builds on the foundation established with CPT 235 Networks I and prepares the student for a more in-depth knowledge of network communication, protocols such as TCP/IP and peripherals such as Servers, Bridges and Routers. Students will design a network, install server software, create domains, workgroups, users and trusts. Students will also create and apply user rights, privileges, file and print sharing and services. Server and data security will also be introduced.

Prerequisite: CPT 235 or Faculty approval

CPT 267

Windows NT 4.0

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course builds on the foundation established with CPT 235 Network I and prepares the student for a more in-depth knowledge of network communication, protocols such as TCP/IP and peripherals such as Servers, Bridges and Routers. As a student of this course you will design a network, install server software. Create domains workgroups, users and

trusts. Students will also create and apply user rights, privileges, file and print sharing and services. Server and data security will also be introduced.
Prerequisites: CPT-235 Network I, or the approval of the instructor

CPT 271

Network Security

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course builds on the foundation established in CPT-141 Operating Systems and CPT-235 Network I, and provides the student with a more in-depth knowledge of the TCP/IP networking protocol, firewalls, security tools, and various computer security techniques. This class is NOT a course in hacking to the extent that encourages illegal intrusion into other systems. The class enforces legal and security concepts to help computer professionals and enthusiasts prevent such occurrences. Several networking operating systems will be used, including Microsoft Windows NT 4.0 Server, Microsoft Windows 2000 Server, and Linux. Students will enhance their knowledge and familiarity with these network operating systems, more advanced computer networking concepts, and security issues that surround these topics. Students will also experiment with various system services, such as Telnet, FTP and HTTP servers. In addition, students will research computer security topics and practice gained knowledge in a controlled environment. Demystifying the "hacking" world and providing a comfort with securing the popular network operating systems are the primary goals of this course.

Prerequisites: CPT 235 Network I or instructor approval.

CPT 272

MS Exchange/IIS

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This class is an introduction to Internet Information Server 5.0 and Microsoft Exchange Server 2000. This class will be a fast-paced, intense study in these two subjects.

Students will begin preparation for the Microsoft Certified Systems Engineer (MCSE) exams.

Prerequisites: Networks I & II. Networks II may be taken concurrently, with permission of the instructor

Culinary Arts (CUA)

CUA 101 Principles of Cooking

1 class hr., 8 lab hrs., 15 wks., (4 cr)

The student will become familiar with food preparation terminology, the safe use of hand tools and commercial kitchen equipment, and basic working techniques. Students will learn how to prepare stock and soups, vegetables, potatoes, rice and other farinuous products, sauces and thickening agents, salads and salad dressings, and sandwiches and eggs and cheeses. On occasion, the application and presentation of student skills will involve evening functions. Full participation on three evenings in the fall semester is a requirement of this course. Students will be notified at least two weeks in advance of each date.

Corequisite: CUA 111 or Faculty approval

CUA 111

Introduction to Baking

1 class hr., 8 lab hrs., 15 wks., (4 cr)

This course instructs students in the fundamentals of baking science, understanding of weights and measures, equipment use, baking terminology, and the function of ingredients. Students are introduced to basic yeast, quick breads, muffins, rolls and breads, doughnuts, fritters, pancakes, waffles, custard, puddings, and cookies.

Corequisite: CUA 101 or Faculty approval

CUA 121

Food Preparation Sanitation - Certified Course

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course stresses the importance and use of sanitary practices used in

kitchen work. Proper storage and temperature control of perishable foods as well as methods of freezing food to slow down the growth of bacteria are studied. Maine laws governing eating and lodging establishments are reviewed.

CUA 151

Quantity Food Production

1 class hr., 8 lab hrs., 15 wks., (4 cr)

Students will learn how to prepare a variety of beef, veal, poultry, fish and shellfish products. The elements of preparing a complete meal including menu planning, purchasing, and serving food are studied. Students learn the essentials of organizing their time to reduce waste and assure efficiency in the kitchen. Special emphasis is placed on proper food appearance and arrangement. Preparation of appetizers and hour d'oeuvres is also included. Short order cooking techniques are an integral part of this course. On occasion, the application and presentation of student skills will involve evening functions. Full participation on five evenings in the spring semester is a requirement of this course. Students will be notified at least two weeks in advance of each date.

Prerequisites: CUA 101, CUA 111; and corequisite: CUA 161 or Faculty approval

CUA 161

Desserts and Pastries

1 class hr., 8 lab hrs., 15 wks., (4 cr)

Students are introduced to the preparation of desserts, including puddings, and specialty desserts, cakes and icings, pie doughs and fillings, tarts, eclairs, danish, and puff pastries. Desserts are prepared to complement the daily production menu to serve dining room guests. The course content is presented in theory, demonstration, and hands-on production learning experiences.

Prerequisites: CUA 101, 111; and corequisite: CUA 151 or Faculty approval.

CUA 171**Nutrition and Food Quality - Certified Course***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

A study of the relationship between food and health. The importance of balanced and well-prepared meals is emphasized through study of the functions of carbohydrates, fats, protein and fiber in the diet. Students learn how to develop standardized menus and recipes, and how to prepare high protein foods such as meat, fish and poultry.

CUA 181**Food Purchasing - Certified Course***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This course emphasizes the principles of food storage, the determination of shelf life, how to date and rotate stock, preparation of purchase orders and the development of specifications for purchasing food and other materials. Practices to be followed when receiving and inspecting materials used in the kitchen will also be studied in this course.

Early Childhood Education (ECE)

ECE 100**Introduction to Early Care and Education***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

This course provides an overview of all aspects of the professional field of Early Childhood Education, including the history, terminology, and career options of the field. Also discussed are diverse programs for young children, qualities and skills of caregivers, health/safety and regulatory requirements of programs, principles of child development and partnerships with families.

ECE 105**Infant and Toddler Curriculum***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

All domains of development will be reviewed pertaining to the child

between birth to three years. This review will be used as the context for developing philosophy, goals and objectives for planning and providing appropriate environments and individualized curriculum. Students will discuss best ways to build relationships with children, nurture themselves as caregivers, and to build successful partnerships with parents.

Prerequisites: ECE 100 & PSY 114; Corequisite: ECE 107 or approval of ECE Chairperson

ECE 107**Infant and Toddler Practicum***0 class hrs., 2 lab hrs., 15 wks., (1 cr)*

The student will visit, on a weekly basis, a child care setting where infants and/or toddlers (birth-3 years) receive care. Specific techniques for observing and recording children's behavior will be required during these visits, and as the student becomes comfortable with the setting, he or she will also assist the staff in providing appropriate care and education to the children. Each student is responsible for arranging a schedule (usually mornings) and transportation that will assure the completion of the required number of hours at this site. Students will be required to complete a portfolio of assignments and observations throughout the course.

Prerequisites: ECE 100, PSY 114; Corequisite: ECE 105

ECE 113**Curriculum and Environments for Young Children***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

The physical, social, emotional, cognitive and language development of young children age 3- 8 years will be reviewed in this course, as a basis for developing philosophy and goals for curriculum planning and development. Students will discuss and observe the diversity of learning styles, as well as ways to assess and evaluate development on an ongoing basis. The design of developmentally appropriate learning environments

will be presented, and students will participate in hands-on experiences and assignments throughout the course.

Prerequisites: ECE 100, PSY 114; Corequisite: ECE 114 or approval of ECE Chairperson

ECE 114**Young Children Practicum***0 class hrs., 4 lab hrs., 15 wks., (2 cr)*

The student will observe and assist in an approved pre-school or school-age child care setting during the semester, under the supervision of an experienced early childhood professional. The student will be expected to apply the theory, ideas, and developmentally appropriate activities learned in ECE 113 to the work at the practicum site. Interactions that support a professional relationship between parents and early childhood educators will be expected to be practiced. Each student is responsible for arranging a schedule (usually morning) and transportation that will assure the completion of the required number of hours and assignments for this course.

Prerequisites: ECE 100, PSY 114; Corequisite: ECE 113

ECE 150**Language and Literacy for Young Children***3 class hrs., 0 lab hrs., 15 wks., (3 cr)*

Students will be introduced to how children acquire and develop language during the early years. The roles of the teacher in assisting children through the stages of language and communication development will be discussed. Developmentally appropriate ways to promote emerging literacy and to select and use excellent children's literature while working in partnerships with families, will be integral parts of this course.

ECE 198
CDA Prior Learning
Experience

(Documented and Reviewed-Up to 9 credits)

An individual with a completed Child Development Associate (CDA) credential may submit documentation and their Resource File for evaluation to receive credit when matriculating into the Early Childhood program. Please contact the Department Chairperson for more information.

ECE 199
Apprenticeship
(Prior Learning)

(12 credits)

This catalog listing reflects CMTC's recognition of appropriate apprenticeship experience and its credit relationship to degree requirements. Credit awards vary and are considered for posting, at the discretion of the College, only after successful completion of the apprenticeship. Documentation of an apprenticeship and its completion are required prior to consideration of credit award. All apprenticeship must be authorized by the Maine Department of Labor, Bureau of Employment Services, Maine State Training and Apprenticeship Council.

ECE 205
Education of Children with
Special Needs

3 class hrs., 0 lab hr., 15 wks., (3 cr)

This course explores the meaning and practices of inclusive early childhood programs, as well as the history of legislation and regulations that have had an impact on early intervention. The student will learn the process of observing and referring children to community agencies, working in conjunction with parents. Ways to design appropriate learning environments, create curriculum with children, and evaluate children's development will be included in this course.

Prerequisites: ECE 100 and PSY 114

ECE 210
Issues in Early Care
and Education

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course explores topics such as, but not limited to: children's advocacy, management of early childhood programs, supervision of staff and children, recordkeeping and budgeting, state and federal regulations and standards, accreditation, and visions for future programs for children and families. The course will involve discussions, presentations by guest speakers, student research and related projects.

Prerequisites: ECE 100, PSY 114, or approval of ECE Chairperson

ECE 230
Practicum Capstone

1 class hr., 12 lab hrs., 15 wks., (6 cr)

As a final practicum experience, students will work in an approved early childhood setting under the supervision of an experienced professional. Students will choose the age range of children for their work, and will also attend seminars with the course instructor to discuss their experiences and professional portfolios. Evidence of student's ability to relate theory to practice must be clear when the instructor visits the practicum site while the student is working. The student is responsible for arranging a schedule and transportation that will assure the completion of the required number of hours and assignments for successfully completing this course.

Prerequisites: All Early Childhood Courses, except ECE 210

Economics
(ECO)

ECO 200
Principles of Economics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

These are underlying economic principles, concepts and relationships that once understood, help to explain the workings of the national economy as

well as individual markets and industries. This course will survey this material with an orientation toward macro economics.

Electromechanical
Technology
(ELT)

ELT 102
Electric Motors

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is a study of electric motor theory and operation. Electro-mechanical principles of motor operation are examined in detail. Single-phase AC Motor types include the Shaded-Pole, Split-Phase, and Capacitor-Start motor. Three-Phase motors applications. Motors are selected for specific applications and motor protection is selected following NEC regulations. Emphasis is placed on trouble shooting, on-site preventative maintenance, testing, repair, and replacement of electric motors.

Prerequisite or corequisite: ELT 112

ELT 103
Residential Controls

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is a study of the functioning of electrical devices that are primarily used for manual switching of circuits such as piloted single-pole switches, Eagle three-way switches, and four-way switches. Emphasis is placed on methods of wiring these devices into a wiring system following NEC procedures and interpreting blueprints and schematics. Applications include selecting proper size and type of electrical devices and cables for a particular application. Students will convert electrical plans into physical installations.

Prerequisite or corequisite: ELT 111 or permission of the instructor

ELT 104
Blueprint Reading
and Estimation

2 class hrs., 0 lab hrs., 15 wks., (2 cr)

This course is a study of electrical prints and electrical estimation. Students will examine residential, commercial, and industrial blueprints in conjunction with regulation that apply from the latest version of the National Electrical Code. Emphasis is placed on examining these prints for the purpose of cost analysis and material ordering.

Prerequisite: ELT 103 or ELT 123

ELT 105
Commercial Wiring
and Transformers

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is a study of transformers, associated commercial/industrial wiring, and applicable National Electrical Code (NEC) articles. Emphasis will be placed on practical applications and study of single and three phase connections, polarity testing, use of test equipment to determine shorts, grounds, and opens, transformer types, and code requirements for transformer installations.

Prerequisite: Electricity I, ELT 111, or permission of the instructor

ELT 107
Industrial Motor Controls

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is a study of electrical motor controls. Students select I.E.C. and NEMA magnetic starters and overloads to control and protect motors in conjunction with Article 430 of the NEC. Input devices include pushbuttons and selector switches. Control devices include motor starters, On-delay timers, and Off-delay timers. Typical circuits include Stop/Start, Job, Sequence, Interlock, and Time-control. Particular emphasis is placed on ladder diagrams, designing and wiring control circuits.

Prerequisite: ELT-111

ELT 108
Basic Electronics

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is designed to serve as an introduction to active electronic devices. Satisfactory completion will help satisfy state of Maine electricians licensing requirements.

The student will review major DC and AC concepts that will be needed for topics to be covered in this course. Emphasis will be placed on superposition, Norton, and Thevenin's theorems used in analyzing and simplifying electronic circuits. Particular emphasis will be placed on semiconductor theory, rectification, filters, limiters, clippers, transistor current sources and switches. The course will provide a foundation for future studies in the electrical and electronics areas.

Prerequisite: Algebra (MAT 100), Electricity II (ELT 112) or instructor permission

ELT 109
National Electrical Code I

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is a study of the first half of the latest National Electrical Code, NEPA 70. It offers electricians an understanding of how the NEC is organized and provides information on proper electrical installations. Students will review and research code rules pertaining to chapters 1 through 4. This course can be used as the code requirement to sit for the Electrician's Exam.

ELT 111
Electricity I

3 class hrs., 2 lab hrs., 15 wks., (4 cr)

This is the student's first course in electronics and covers the concepts of mass, work, and energy. Atomic structure and units of electrical charge are covered as they apply to D.C. circuits. Necessary test equipment including voltmeters, ammeters, ohmmeters, and oscilloscopes will be covered in this unit. Particular emphasis is placed on Ohm's Law, Kirchoff's voltage and current laws,

series, parallel, series parallel circuits, magnetism, and basic DC ammeter and voltmeter design. The student will learn advanced techniques such as Superposition, Norton, Thevenin, and Millman's theorems used in trouble-shooting complex circuits and networks. The course will provide a foundation for future studies in the electrical and electronics areas.

Prerequisite: MAT 100; Corequisite: MAT 100 or Faculty approval

ELT 112
Electricity II

3 class hrs., 2 lab hrs., 15 wks., (4 cr)

This course will prepare the student in the areas of logical analysis, testing, and trouble-shooting. This course is essential for the student's understanding of electricity and is a foundation for the study of more advanced courses. Necessary test equipment including oscilloscopes and signal generators will be covered in this unit. Proficiency in the use of test equipment and AC concepts used in troubleshooting circuits will be demonstrated by the student through hands on laboratory experimentation. Particular emphasis is placed on inductance, capacitance, magnetism, transformers, impedance matching, resonance, phase angle, and frequency effects in reactive circuits. The student will learn advanced circuit analysis techniques using vector analysis and the j operator.

Prerequisites: ELT 111, MAT 100

ELT 113
Measurement and
Control Systems

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is designed to prepare the student in the areas of logical analysis, trouble-shooting technique, maintenance, and selection of industrial primary devices and transmitters used for the measurement and control of process variables. Particular emphasis is placed on the theory and application of pressure, flow, level, and temperature measurements.

Processes will be analyzed in terms of process dead time and capacity to determine optimum loop turning parameters. Selected labs using Foxboro instrumentation will be used throughout to create real and simulated process control systems.

Prerequisites: ELT 112, *Electricity II* or instructor permission

ELT 123

Electrical Controls I

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is a study of the functioning of electrical devices that are primarily used for manual switching of circuits such as piloted single-pole switches, Eagle three-way switches, four-way switches, momentary relays, and latching relays. Emphasis is placed on methods of wiring these devices into a system following N.E.C. procedures and interpreting blueprints and schematics. Applications include wiring switches to control lights and receptacles. Complete switching systems are formed by wiring together electrical equipment such as timeclocks, photoeyes, and relays. Single-phase transformers are used to step-up, step-down, and buck/boost voltages. DC motors are tested and connected for specific direction of rotation and speed.

Prerequisite or corequisite: ELT-111

ELT 126

Electrical Controls II

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is a study of basic control concepts and their applications to automated systems. This includes: single and three phase motors, manual and magnetic motor starters, pushbutton circuits, and oil burner controls. Particular emphasis is on: three phase principles and calculations, single & 3 phase motor connections, basic motor and heating control circuits and article 430 of the NEC. Interpreting blueprints and schematics. Applications include: testing 3 phase motors and connecting them to basic motor control circuits. Testing and troubleshooting single phase motors. Connecting

and troubleshooting oil burner control circuits. Interpreting motor control catalogs.

Prerequisite: ELT 123

ELT 145

Electronic Devices I

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This first course in analog electronics is a study of semiconductor theory, PN diodes, and Bipolar transistors. These devices are analyzed by the use of 'r' parameters, Load-Line analysis, and the Ebers-Moll Model. Equivalent circuits are derived using Thevenin's and Nortons's theorems. Particular emphasis is placed on I/V characteristics, methods of biasing, and selection of replacement devices. Diode applications include filtered rectifiers, limiters, clippers, and Zener voltage regulation. Bipolar transistor applications include current sources, transistor switch, and the CE amplifier.

Prerequisite or corequisite: ELT 112

ELT 153

Digital Logic

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is a study of the basic principles of TTL integrated circuits, and their applications in digital systems. This includes the use of logic gates, flip-flops, counters, shift registers, decoders, multiplexers and demultiplexers. Particular emphasis is placed on IC terminology, design, circuits and troubleshooting. Electronic Workbench will be used for boolean algebra and to simulate circuit principles.

Pre or corequisite: ELT 111

ELT 211

Control Systems

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is designed to provide an introduction to motors, industrial controls and programmable controllers. Full voltage and IEC magnetic starters and overload units are selected for a particular motor according to NEC guidelines. Applications include: Stop-Start, jog, forward-reverse, and timer circuits.

Ladder, wiring and PLC diagrams are generated. The Allen-Bradley SLC-500 family line of programmable controller is used. Instruction, hardware, and programming of PLC are examined. Particular emphasis placed on wiring circuits and their applications to programmable controllers.

Prerequisites: ELT 111, ELT 153, MAT 100, or Faculty approval

ELT 221

Industrial Controls

2 class hrs., 3 lab hrs., 15 wks., (3 cr)

This course is a study of electro-magnetic controls, their applications in automated industrial systems and how to interface them with intelligent controllers. This includes the usage of I.E.C. and NEMA magnetic starters, overload heater selection, pushbuttons, timers, counters, and intelligent controllers. Particular emphasis is placed on ladder diagrams, designing and wiring control circuits, article 430 of the NEC, programming of an AC frequency Drive. Three phase distributors and three phase motors are also covered.

Prerequisites: ELT 123, MAT 100

ELT 222

Programmable Controls

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is a study of Programmable Logic Controllers (PLCs), which monitor electrical inputs and in turn controls outputs to automate a process or machine. Particular emphasis is placed on ladder logic programming. Programs are created using PLC instructions that are categorized by function: Relay logic, timers, counters, data-manipulation, arithmetic, data-comparison, data-transfer, and program control. Students set up hardware addressing on PLC racks/modules and verify physical wiring of real-world devices. They establish communications between a computer and a PLC processor using Rockwell's RSLinx software. Ladder logic programs are written for Allen Bradley's PLC5

programmable controller using RSLogix5 software. Application includes the control of electric motors and industrial control circuits. Advanced topics include remote I/O communications and analog output control of AC frequency drives.

Prerequisites: ELT 221

ELT 231

Process Measurement

2 class hrs., 3 lab hrs., 15 wks., (3 cr)

This course is designed to prepare the student in the areas of logical analysis, trouble-shooting technique, maintenance, and selection of industrial primary devices and transmitters used for the measurement and control of process variables. The selection, sizing, and calibration of devices for measuring steam, liquid and gas flows will be introduced to the student in class and lab. Particular emphasis is placed on the theory and application of pressure, flow, level, density, humidity, and temperature measurements.

Prerequisites: ELT 112 and ELT 145

ELT 232

Process Control

2 class hrs., 3 lab hrs., 15 wks., (3 cr)

This course is a continuation of Process Measurement and explores the characteristics of common feedback control loops, mechanisms, and the application of various control algorithms. Processes will be analyzed in terms of process dead time and capacity to determine optimum loop tuning parameters. Advanced control techniques such as feed forward, ratio, cascade, and auto-selector will be introduced to the student. Control valve sizing, selection, and typical applications will also be discussed. Selected labs using Foxboro instrumentation will be used throughout to create real and simulated process control systems. The student will be afforded the opportunity to demonstrate proficiency in process control fundamentals and techniques in the lab.

Prerequisite: ELT 231; *Corequisite:* ELT 245

ELT 245

Electronic Devices II

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is a study of BJT amplifiers, Field-Effect transistors, and Thyristors. Bipolar CE amplifiers are examined for voltage gain, loading and frequency effects. CC amplifiers are used for current gain and buffering. Large-signal amplifiers include Class A, B, and C power amplifiers. Field-Effect transistors are studied with emphasis placed on transconductance curves, parameters, and bias stability. Depletion and Enhancement MOSFETs are also covered. Thyristor coverage includes the Silicon Control Rectifier and the TRIAC.

Prerequisite: ELT 145

ELT 246

Linear Integrated Electronics

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

The goal of the course is to ensure that the student can recognize, construct, analyze, troubleshoot, repair and modify common operational amplifier electronics circuits. Differential amplifiers are discussed to introduce the students to the inner-workings of integrated circuit operational amplifiers. Students will then progress through the theory and practice of inverting and noninverting amplifiers; summing amplifiers; level conversion; active filters; comparators; integrators and differentiators; logarithmic amplifiers; oscillators; and 555 Ics.

Prerequisite: ELT 245

ELT 247

Linear Electronic Project

1 class hr., 15 wks., (1 cr)

This course will be offered in conjunction with and should be considered an extension of ELT 246. It will augment that course by requiring the student to do a combination of extra labs, writing assignments, electronics work bench projects and circuit projects which are related to material being contemporaneously covered in ELT 246.

ELT 271

Industrial Robotics

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is a study of industrial robotic systems. Students examine practical applications typically found in automated industries. Particular emphasis is placed on microcomputer programming of a robot manipulator. A Teach Pendant is used to manually operate an industrial robotic arm. Visual BASIC, and ASCII editors are used to program robots in the native language. This course examines industrial robot terminology, manipulator arm geometry, robot classification, work envelope, and end-effectors. Parallel and serial personal computer communication is included.

Prerequisite or corequisite: ELT-221

ELT 275

Robotics & Control Systems

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course in robotics focuses on advanced applications of robotics and automation in industry. Students will write V+ programs to control a SCARA (Selective Compliance Assembly Robotic Arm) industrial robot. They will also use digital and analog programmable logic controllers in conjunction with robot I/O to form complete workcells. Man Machine Interface (MMI) will be used to integrate automation. This course includes an examination of Servo motors and feedback devices, End-Of-Arm tooling, and pneumatic systems using directional valves.

Prerequisite: ELT 271

ELT 296 Independent Study

(0 - 6 cr)

The purpose of Independent Study is to provide students in the senior year of their education: (1) the flexibility of choosing an area of preference in their major field of study; (2) the opportunity to explore their abilities in relation to actual job performance; and (3) the ability to observe other people working in a variety of

occupations, in lieu of required ELT courses. The combination of work and study contributes to a greater sense of responsibility and dependence on one's own judgment. This provision allows for a performance contract between the student and a department instructor to reach mutually agreed upon goals.

Prerequisite: Approval of ELT Department Chairperson and Faculty advisor

Emergency Medical Care (EMC)

EMC 109

Emergency Medical Care Portfolio Assessment

(6 cr)

This course is designed to award academic credit to those individuals who have completed an EMT-B Course through Tri-county EMS since 1984. Credit will be awarded to those candidates who submit documentation of course completion and a comprehensive portfolio that demonstrates mastery of pre-hospital emergency care. The portfolio will be assessed by faculty members of the College and representatives of Tri-County EMS. A total of 6 credits will be awarded.

English (ENG)

ENG 021

Basic Writing

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

An introductory course designed to help students achieve a minimal competency in writing. Specific skills covered include planning, organizing, and rudimentary sentence structure and mechanics. Students will use computer technology to produce their final drafts. Open only to matriculated students identified through CMTC's placement test. Successful completion of the course will enable students to enroll in ENG

101. This course is graded on a Pass/Fail basis.

ENG 030

Reading Workshop

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Reading Workshop II is an intermediate-level, intensive reading course. The course meets 6 hours/week for one half of the semester. Students will work on individualized work plans, word recognition skills and vocabulary development. Skills work will focus on identifying the main idea and supporting details of paragraphs and short essays. Basic group discussion skills will be developed. Open only to matriculated students identified through CMTC's placement test.

ENG 050

Introduction to Academic Reading

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Introduction to Academic Reading is an intensive course designed to prepare students for college-level reading. The course meets 3 hours/week and places college-level demands on students to read and respond to reading both inside and outside of class. Students will develop critical reading skills and learn to apply their understanding of texts to student-led classroom discussion and oral presentations. Emphasis will be placed on the reading of literature, essays and college-level textbooks. Open only to matriculated students identified through CMTC's placement test.

ENG 101

College Writing

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

College Writing is designed to expose students to the range of writing most likely to be encountered in the academic setting, and the skills most helpful in writing for all purposes. The course provides students with instruction and practice in writing clear arguments and expository prose. Emphasis is on the writing process, revising and editing. Students are

expected to use the library to research a contemporary issue and use either the MLA or APA citation style to document sources. This course is taught using a computer network.

Prerequisite: Successful completion of both a) CMTC writing assessment, or ENG 021, or Department approval and b) CMTC reading assessment, or ENG 050

ENG 106

College Writing: TTVE

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides the student with instruction and practice in writing clear arguments and expository prose. Emphasis is on the writing process, revision and editing skills. Students are introduced to library research techniques and learn to use the MLA citation style to document sources.

Prerequisite: Admission to TTVE program or Faculty approval

ENG 111

American Literature

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is a general introduction to American Literature, concentrating on major authors from the country's founding to the present day. It will include readings from every region, but will focus on New England. Themes reflected in the works will be examined as they relate to the place and time in which they were written. Through exploring the American character reflected in its literature, students may expect to gain a greater understanding of themselves and what it is to be a citizen of the United States.

Prerequisite: ENG 101 or Faculty approval

ENG 121

The Short Story

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces the students to the short story and examines universal themes through literature. The course content will focus on oral and written interpretations of short stories. The course will include the

definition of literary terms, and will examine the evolution of the short story as a unique literary form. In addition to the works presented in class, the students will also be required to complete some outside reading of their own choice. They will be encouraged to select some authors from non-dominant cultures.

Prerequisite: ENG 101 or Faculty approval

ENG 131 **Style and Syntax of** **American English**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course examines English grammar and usage, to assist students in understanding and producing correct and effective prose. Topics include parts of speech; common errors in sentence mechanics and spelling, punctuation and usage; and editing and proofreading techniques. The course is recommended for students whose jobs require them to produce accurate writing. Student work will be graded using tests and quizzes.

ENG 201 **Technical Writing**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Technical Writing familiarizes the student with common writing styles and formats used in business and industry. Students will practice organizing and presenting technical information for a variety of readers. Topics include style and readability of technical prose, organizing technical information, using graphics, writing effective letters and memos, writing reports, preparing employment correspondence, and presenting technical information orally.

Prerequisite: ENG 101

ENG 211 **Creative Writing**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces students to the creative writing techniques, with an emphasis on short fiction. Students are encouraged to sharpen their observation skills, use fresh and vivid

details, and develop realistic characters to create short pieces of writing. Students will produce a portfolio of writing, developed through review and discussion of students' drafts, and revision.

Prerequisite: ENG 101

ENG 215 **Film as Literature**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to introduce students to the use of film as a narrative device. This course will follow a chronological plan from early filmmaking as documentary of everyday life or historic, news making events to film as a vehicle for diverse, insightful and thought-provoking literature. Learners will enhance their analytical abilities by viewing various films and discussing specific topics, using the vocabulary of film, such as: the structure, cinematography, production design, performance style, editing, and sound design. Film viewing will take place in the classroom as well as independently. This course will provide opportunities to explore the modes of screen reality, Hollywood, and foreign films. Learners will be introduced to elementary Film Criticism and Interpretation. Last, learners will discuss models of film theory.

Prerequisite: ENG 101

ENG 220 **Business Communication**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Business Communication focuses on developing formal business documents, correspondence, presentations, sales literature, personnel documents (resumes and cover letters, performance evaluations, reprimands, etc.). The course will concentrate on correct document formats, grammar and editing, business etiquette, effective communication techniques, and job-seeking skills. Each student will prepare a portfolio and two formal oral presentations.

Prerequisite: ENG 101

ENG 221 **Advanced Composition and** **Research**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides instruction in composing for specific academic purposes. Topics include critical analysis of literature and historical documents, position papers, annotated bibliography and argument. The emphasis is on conducting research, evaluating sources, integrating information and documenting sources using both MLA and APA styles.

Prerequisite: ENG 101

ENG 296 **Portfolio Preparation Seminar**

1 class hr., 0 lab hrs., 5 wks., (1 cr)

This course is designed to assist students who wish to prepare a portfolio to document past learning for the purpose of obtaining credit towards their degree. The course introduces the student to the purpose of an experiential portfolio, presents a format for presenting their experience and learning outcomes, and provides an opportunity for peer evaluation and critique. The course is graded on a pass/fail basis.

Prerequisite: ENG 201 or ENG 220 or Faculty approval.

English as a Second **Language** **(ESL)**

Placement in all ESL courses is based on a variety of assessment measures, which may include: a written test of English, a self-assessment, an interview and/or TOFEL scores.

ESL 071 **Writing and Grammar**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Focuses on developing intermediate academic English skills using standard American English. The priority is written work, though reading, speaking and listening are also expected.

ESL 072**Reading and Vocabulary**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Focuses on reading as a method to build a strong working English vocabulary as well as to understand the techniques used in American texts to organize information, convey meaning and to stimulate thought. Written and oral responses to reading are expected.

ESL 073**Oral Language**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Focus on developing oral fluency in English at the high intermediate level: conversation, pronunciation, presentation skills, and listening comprehension. Some reading and writing is also expected.

ESL 074**English: Its Structure and History**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is an introduction to the origins and history of English and the structure of English grammar. The course covers the nature of language, its broader concepts, and particularly the roots of the English language. This course will use the analytic and critical methods to exploring language, and specifically, will use the Americana Structural approach when teaching the grammar of English.

ESL 101**Academic Writing and Grammar**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

A continuation of 070 with a focus on developing advanced academic writing skills, in preparation for ENG 101. This course covers narration, argument and research, with companion grammar and style components. Students will be expected to write according to the conventions of written American English.

ESL 102**Literature**

3 class hrs., 0 lab hrs., 15 wks. (3 cr)

This course introduces students to various genres of American literature, with a focus on exploring cultural mores and social interaction. Literature will be contemporary and historical, and will require some writing, speaking and listening comprehension.

ESL 103**American Studies**

3 class hrs., 0 lab hrs., 15 wks. (3 cr)

This course helps students develop an understanding and appreciation of the current social and economic structure of the US, applying those constructs to literature, current events and personal exploration. The student will examine historical documents, literature, music, and art to establish a foundation for living in the US.

Automotive - Ford ASSET (FOA)

(Automotive Student Service
Educational Training)

FOA 106**Auto Service/Auto Electrical/Electronics**

4 class hrs., 11 lab hrs., 8 wks., (5 cr)

This course consists of two major sections of instruction and lab experience. The first section introduces the student to the automotive industry; dealership operations; shop safety; Ford service publications; hand and power tool usage; basic vehicle overview. The second section teaches basic electrical and electronic theory, use of test equipment, diagnostic procedures, circuit and component testing and service. In addition, fundamentals, service and testing of starting systems, charging systems, ignition systems, lighting systems, and most electrical accessories will also be covered.

FOA 107**Field Experience**

0 class hrs., 40 lab hrs., 8 wks., (4 cr)

The student works in the service department of a local Ford or Lincoln/Mercury dealership. This hands-on training, under the direction and supervision of an experienced technician, reinforces the subjects learned in FOA 106.

Prerequisite: FOA 106

FOA 126 Brakes, Steering and Suspension, Manual Transmission & Driveline

4 class hrs., 11 lab hrs., 8 wks., (5 cr)

This course consists of three major sections of instruction and lab experience. The first section teaches basic hydraulic principles; operation of brake systems; master cylinder, drum brakes, disc brakes, power assist, parking brakes, and anti-lock brake systems. The second section teaches front and rear suspension systems; manual and power steering systems; wheel alignment; tire and wheel balance; tire wear; noise, vibration and harshness. In addition, electronically controlled vehicle riding height systems, variable shock dampening, and variable power steering assist will be covered. The third section teaches manual transmission operation and service; drivetrain basic principles; types of drivelines; differentials; clutches; U-joints; RWD, FWD, and 4-wheel drive.

Prerequisites: FOA 106 and FOA 107 or Faculty approval

FOA 127**Field Experience**

0 class hrs., 40 lab hrs., 8 wks., (4 cr)

The student works in the service department of a local Ford or Lincoln/Mercury dealership. This hands-on training, under the direction and supervision of an experienced technician, reinforces the subjects learned in FOA 126.

Prerequisite: FOA 126

FOA 201**Gasoline Engine Repair,
Climate Control***3 class hrs., 10 lab hrs., 7 wks., (4 cr)*

This course consists of two major sections of instruction and lab experience. The first section teaches the principles of four-stroke engine operation, identification of engine systems and components, cylinder head and valve train diagnosis and service, engine noise diagnosis, and turbocharger/supercharger principles. In addition, disassembly and reassembly of complete gas engines, inspection, measurement and repair of all components; engine repair and overhaul procedures will also be covered. The second section teaches the operation of heating/air conditioning systems; principles of refrigeration; inspection, testing and servicing climate control system components; and automatic temperature control.

Prerequisites: FOA 126, FOA 127 or Faculty approval

FOA 203**Field Experience***0 class hrs., 40 lab hrs., 4 wks., (2 cr)*

In FOA 203 the student works in the service department of a local Ford or Lincoln/Mercury dealership. This hands-on training under the direction and supervision of an experienced technician, reinforces the subjects learned in FOA 201.

Prerequisite: FOA 201

FOA 221**Computer Controlled Systems,
Engine Performance***4 class hrs., 11 lab hrs., 8 hrs., (5 cr)*

This course covers the fundamentals of electronic control systems, electronic control system components, automotive microcomputer systems, and electronic engine control strategies. Also covered will be Ford's EEC IV System and engine driveability diagnosis.

Prerequisites: FOA 201, FOA 203 or Faculty approval

FOA 222**Field Experience***0 class hrs., 40 lab hrs., 8 wks., (4 cr)*

In FOA 222 the student works in the service department of a local Ford or Lincoln/Mercury dealership. This hands-on training, under the direction and supervision of an experienced technician, reinforces the subjects learned in FOA 221.

Prerequisite: FOA 221

FOA 231**Automatic Transmission***4 class hrs., 11 lab hrs., 8 wks., (5 cr)*

This course consists of one section of instruction and lab experience. This section teaches operating principles of Ford rear-wheel drive automatic transmission and front-wheel drive automatic transaxles; diagnosis; disassembly; repair and reassembly.

Prerequisites: FOA 221, FOA 222 or Faculty approval

FOA 232**Field Experience***0 class hrs., 40 lab hrs., 8 wks., (4 cr)*

In FOA 232, the student works in the service department of a local Ford or Lincoln/Mercury dealership. This hands-on training under the direction and supervision of an experienced technician, reinforces the subjects learned in FOA 231.

Prerequisite: FOA 231

Graphic Arts/Printing Technology (GAT)

GAT 104**Copy Preparation Techniques***1 class hr., 0 lab hrs., 15 wks., (1 cr)*

This course emphasizes the study of typography and how it relates to the preparation of desktop published documents. Utilizing the Macintosh desktop publishing system, students will develop the ability to design and create layouts that incorporate sound typographic principles. GAT 105

Copy Preparation Operations must be taken concurrently.

Co-requisite: GAT 105

GAT 105**Copy Preparation Operations***2 class hrs., 0 lab hrs., 15 wks., (2 cr)*

A study of the Macintosh computer and how it is utilized in a graphic arts/desktop publishing environment in order to prepare electronic layouts. Through a study of the Macintosh operating system, typography, page layout software (QuarkXPress), word processing file formats, and line art scanning, students will develop skills and knowledge required to produce electronic artwork. GAT 104 Copy Preparation Techniques must be taken concurrently.

Co-requisite: GAT 104

GAT 106**Design & Layout I***2 class hrs., 2 lab hrs., 15 wks., (3 cr)*

The basics of graphic design and typography will be applied to solve a variety of practical layout problems and the planning for their printing production. The generation of thumbnail, rough and comprehensive layouts carried to the electronic mechanical stage will develop a professional degree of skill and a sound understanding of the procedures used in this aspect of prepress.

Prerequisites: GAT 104 and GAT 105

GAT 107**Introduction to Adobe Acrobat***1 class hr., .6 lab hrs., 15 wks., (1 cr)*

This course will introduce the creation and application of a program that converts any document both text and graphics to PDF (portable document format) for possible use over the web or as a soft proof in the printing industry. A mixture of class and lab will be used to convert files to PDF, setting distiller options, converting scanned documents to PDF, working and distributing documents in PDF.

Prerequisite: A working knowledge of a computer and its operating system

GAT 111**Offset Preparation**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course combines practical "hands on" lab experiences and related theory dealing with basic graphic arts line photography and image assembly techniques. Course of study includes offset camera/darkroom techniques, film, chemistry, copy reproduction control, basic image assembly techniques for offset duplicators, job proofing, offset plating techniques and shop/lab safety.

GAT 113**Advanced Stripping Techniques**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course combines practical "hands on" lab experiences and related theory dealing with job planning, production procedures and both manual and digital imposition of single, multiple and process color images for sheet and web fed offset lithographic presswork. Various layout, work flow and equipment considerations are employed as well as image contacting, registration systems, proofing and quality control.

Prerequisite: GAT 111 or Faculty approval

GAT 121**Copy Center Management & Operations**

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

This course is designed to give the student an awareness of all facets of copy center operations and management including setup and operation of A.B. Dick duplicators, digital networked copiers and all related bindery equipment. Customer relations and safety procedures are also presented and practiced.

GAT 131**Duplicator & Finishing Operations**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is designed to familiarize the student with the pressroom. Areas of study and activity include identifi-

cation of supplies, preparing paper for printing, operation and maintenance of offset duplicators and bindery operations. Emphasis on safe work habits is stressed throughout the course.

GAT 132**Advanced Duplicator Operation**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is designed for the student who has an interest in presswork and bindery. The causes of duplicator and bindery problems, proper adjustments, and maintenance of equipment are major areas of instruction. This course also includes troubleshooting the problems associated with paper, ink, and chemicals supplies. Good safe work habits are emphasized throughout the course.

Prerequisite: GAT 131 or Faculty approval

GAT 141**Letterpress Printing**

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is designed to familiarize the student with letterpress printing principles, platen press operation, rotary press operation, and related specialty operations. The course presents the student with a knowledge of identifying type, and the methods of proofing and printing. Safe work habits are emphasized throughout the course.

GAT 151**Screen Printing**

1 class hr., 2 lab hrs., 15 wks., (2 cr)

The student experiences lab work and study involving hand-cut and photographically prepared indirect and direct stencils, screen materials, and ink and its relationship to substrates. The course presents an industrial approach to screen-printing.

Prerequisite: GAT 111 or Faculty approval

GAT 155**Introduction to Desktop Publishing: QuarkXPress**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course is designed to introduce students to the powerful capabilities of a popular desktop publishing program. Students will learn the fundamentals of electronic publishing, including page planning, text editing, graphics manipulating, and printing.

Prerequisites: GAT 104 and 105 or Faculty approval

GAT 176**Photoshop I**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

A course designed to introduce the related theory and lab experiences involved in line and gray scale digital imaging for offset lithographic reproduction using Adobe PhotoShop. The effective use of desktop scanners, densitometers and PhotoShop's tools, palettes, plug ins, modes, path, layers and masks will be discussed and utilized within the course content.

Prerequisites: GAT 111 or Faculty approval

GAT 177**Photoshop II**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

An advanced course in the related theory and lab experiences involved in digital color imaging for offset lithographic, web and multi media reproduction using Adobe PhotoShop.

Prerequisite: GAT 176 or Faculty approval

GAT 192**Production Experience-Prepress (Certificate Program)****GAT 193****Production Experience-Press/Bindery (Certificate Program)**

0 class hrs., 18 lab hrs., 15 wks., (6 cr)

This certificate level program requirement for an in-school work experience that exposes the student to accountability for time, quality, waste and plant maintenance in meeting production demands in either prepress or press/bindery areas of employment. Live work assignments are obtained by the student from a production area instructor and stu-

dent performance is evaluated. The course is designed to provide closely supervised production experiences to students which were introduced in the first semester. This course also introduces the student to personnel policies, control and delivery, material specification, procurement and inventory, job tickets, employee evaluation, field trip reporting and career/employment preparation.

Prerequisite: Completion of 10 credit hours in GAT program and 6 hours of General Ed.

GAT 204 **Design & Layout II**

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

The student will apply the principles of typography, color theory and electronic illustration to the solution of advanced design problems, including identity design. In class critiques, discussion and analysis of work submitted will lead to the development of sound design practices and the ability to create designs that meet the requirements of a digital printing environment. This course includes an introduction to Adobe Illustrator.

Prerequisite: GAT 106

GAT 214 **Continuous Tone Photography**

1 class hr., 2 lab hrs., 15 wks., (2 cr)

A course designed to support the Copy Prep department in the production of printed material that requires photography to communicate or complete a message within a printing request. Students are introduced to 35 mm camera operations, black and white film processing, and the production of photographic prints. Other areas covered through study and lab assignments are digital imaging, exposure metering techniques, lighting conditions, composition and various film applications. The student must have access to 35 mm or a 2 1/4 camera.

GAT 233 **Litho Press and Bindery Theory**

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is designed to give the student an insight to the problems that occur in setting up, operating, and maintaining a medium sized offset press. Bindery methods, operations, and safety procedures are also presented and practiced.

Prerequisite: GAT 132 or Faculty approval

GAT 234 **Litho Press and Bindery Operations**

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is designed for the student who has an interest in operating medium-sized sheet fed presses and small web presses. Bindery methods, operations, and safety procedures are also presented and practiced.

Prerequisites: GAT 131 and GAT 132 or Faculty approval

GAT 235 **Web Press Theory**

1 class hr., 2 lab hrs., 15 wks., (2 cr)

This course is designed to give the student insight into the set-up, operation, and maintenance of a web offset forms press. In-line bindery and finishing operations and safety are also presented and practiced.

Prerequisite: GAT 132 or Faculty approval

GAT 281 **Introduction to Printing Estimating**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is intended to acquaint the student with the complexities of developing pricing in the printing industry. Students will apply past knowledge gained in a production setting to analyze, plan, schedule and price printing requests. Course content also includes the application of computers, marketing and management styles, basic hourly rate costs methods and production standards to complete an estimate.

Prerequisite: 21 credit hours in GAT program or Faculty approval

GAT 285 Production Experience-Prepress or

GAT 286 Production Experience-Press/Bindery

0 class hrs., 18 lab hrs., 15 wks., (6 cr)

This requirement is an in-school work experience that exposes the student to accountability for time, quality, waste and plant maintenance in meeting production demands in the prepress (or press-bindery) area of employment. Live work assignments are obtained by the student from a production area instructor and student performance is evaluated as work is executed. This course also introduces the student to personnel policies, production scheduling, control and delivery, material specification, procurement and inventory, job tickets computing production cost, employee evaluation, field trip reporting and career/employment preparation.

Prerequisite: Completion of 21 credit hours in GAT program or Faculty approval

GAT 292 Industrial Experience (in-house) Pre-press or

GAT 294 Industrial Experience (in-house) Press/Bindery

0 class hrs., 36 lab hrs., 15 wks., (12 cr)

This program requirement provides further skill development and refinement through work experience in the College's Graphic Arts Department.

Prerequisite: GAT 285 or GAT 286 and Faculty approval

GAT 293 **Industrial (Field) Experience**

0 class hrs., 36 lab hrs., 15 wks., (12 cr)

This program requirement provides further skill development and refinement through work experience in the graphic arts industry. The student must complete a fifteen week block of successful full-time employment at an approved work site within the industry.

Prerequisite: GAT 285 or 286 and Faculty approval

GAT 296 Independent Study - (variable credit)

This provision allows for a performance contract between student and Department faculty to reach mutually agreed upon goals. Credit earned and grade are dependent upon quality and efficiency of performance. (Credit hours are variable at a formula of 45 hours of student effort equaling 1 credit hour.)

Prerequisite: Department Chair approval

Geology (GEO)

**GEO 101
Geology**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will cover the fundamentals of geology. Topics covered will include rocks and minerals, the water cycle, glaciers, oceans, plate tectonics, volcanoes and earthquakes. Also covered will be tools and basic science concepts used to acquire information in each of these areas. There is no math prerequisite, however math concepts will be used in describing models, and students will be expected to solve problems using arithmetic and simple algebra concepts.

History (HIS)

**HIS 110
Survey of American History**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The political, economic, social, and historical trends of the United States will be discussed. The time period beginning with the colonial period to the present will be covered with particular focus on critical analysis of historical events.

**HIS 131
US History to 1877**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The political, economic, social and historical trends of the United States will be discussed. The time period beginning with the colonial period to

1877 will be covered with particular focus on critical analysis of historical events in this time frame. Such events can include: Native American culture, the European discovery of the new World, the social, political and military aspects of the American revolution, the Louisiana Purchase, the "Trail of Tears," the New Democracy of Andrew Jackson, slavery and the Civil War.

**HIS 132
US History Since 1877**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The political, economic, social and historical trends of the United States will be discussed. The time period beginning with 1877 to the present will be covered with particular focus on critical analysis of historical events in this time frame. Such events can include: The Gilded Age, Westward Expansion, Anger and Reform: Populism and Progressivism, World War I, the "Roaring Twenties," the Great Depression and the New Deal, World War II, the Cold War, the Civil Rights Movement, the Social and Political Activism of the Sixties and the resurgence of conservatism.

**HIS 201
Maine History**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will explore the social, political, and economic development of Maine from the time of settlement to the present. Discussion of early European and Native American influences on the political, social, and economic activities will provide a framework for discussion of contemporary fishing, hunting, lumbering, and tourist industries.

**HIS 220
America and the Cold War**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will introduce the student to the political, military, economic and social stresses of the Cold War era that lasted from the end of World War II until 1989. Emphasis will be placed on such developments as the

Cold War psyche, political discourse within the U.S., the arms race, the civil rights movement, the United Nations, international conflicts such as Korea and Vietnam, military spending, human rights and the Reagan and Gorbachev era.

Humanities (HUM)

**HUM 101
Technology and Society**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Technology and Society examines the issue of technology from a variety of perspectives. Students will explore how technological innovation has been treated in 20th century fiction and film, and how thinkers have examined the implications of living in a technological society.

Prerequisite: ENG 101

**HUM 121
Mass Media and
Popular Culture**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces the students to the economic, political, and social dimensions of mass media with an emphasis on electronic media. They will be introduced to the basic forms of mass media including newspapers, magazines, radio, television, film, and the Internet. The overall goal of the course is to enable students to develop media literacy skills to become active, informed media consumers.

Prerequisite: ENG 101

HUM 296 Independent Study in Humanities

(3 cr)

This course is designed to allow students to work on a semester long project in the humanities. The project will be developed by the student in conjunction with the instructor of the course. The student will meet with the instructor periodically through the semester to ensure the project objectives are being met.

Prerequisites: The student must have completed (12) credit hours in a catalog program, be in good academic standing, be recommended by his or her advisor, and meet with the course instructor.

Human Services (HUS)

HUS 110 **Introduction to** **Human Services**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides a historical framework for understanding the current role of human services in meeting a variety of human needs in society. An emphasis is placed on the work of social service agencies and the roles of human services workers. The nature of helping relationships including attitudes, skills and knowledge required, value conflicts and dilemmas in the field will be explored. The organization and delivery of services offered to individuals, families and the community will be discussed. Care of specific populations such as children, the aging, and those with substance abuse, mental illness, and developmental disabilities in a multicultural society will be highlighted. This course will also explore the different methods, careers, and job opportunities in the various helping professions, and the goals of the human service curriculum in particular.

HUS 151 **Introduction to Mental Health**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides a comprehensive overview of the field of community mental health and psychopathology. Students examine the origins, social context, and legislative and political history of community mental health. Students learn about community mental health approaches to the delivery of services to children, adolescents, adults, the aged, and the theoretical and applied

approaches, that can be taken to the community, its structure, quality of life, needs.

Prerequisite: Completion of Introduction to Human Services with a grade of "C" or better.

HUS 153 **Substance Abuse**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course investigates drug use, abuse, and addiction. Psychological, social, legal, spiritual, and philosophical sources of drug use and abuse are explored. Five areas of emphasis will be examined including the societal forces that influence the phenomenon; the drugs themselves, so-called licit and illicit drugs or "street drugs" and medications and their use and effects on mind, body, and emotions, i.e., the pharmacology of drug use; the drug users themselves, and why they use drugs; the theories of addiction; rehabilitation and relapse prevention which will address what works and what does not; and prevention including the drug wars, education as prevention, and the failure of drug education.

Prerequisite: Completion of Introduction to Human Services with a grade of "C" or better.

HUS 155 **Case Management**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course explores the theory, principles, and methods of casework in various social agency settings with attention focused on identifying and assessing situational problems using social and social psychological variables. Skill development will emphasize basic methods of caseload management, coordinating various components to community social services, and insuring continuity of services to clients. Topics covered include: information gathering, record-keeping, monitoring treatment plan implementation, referral to other service providers, and the appropriate utilization of a caseworker's time. The case management policies of

various community agencies will be examined.

Prerequisite: Completion of Introduction to Human Services with a grade of "C" or better.

HUS 201 **Developmental Disabilities**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will present an overview of current theoretical and philosophical perspectives relating to the day-to-day problems of those with mental, physical and developmental disabilities including mental retardation, autism, cerebral palsy, epilepsy, TBI, other nervous symptom disorders. Course content and activities will enable student to recognize ways in which disability affects individuals as members of families, groups, organizations and communities and explores techniques used in various life stages and reviews innovative ways to overcome apathy and discrimination in community settings. History, future directions, and characteristics directly affecting these populations will be considered. Ethical and legal issues such as self-determination, strategies for independence and nondiscrimination will be addressed.

Prerequisites: Completion of Introduction to Mental Health with a grade of "C" or better.

HUS 251 **Human Services Practicum I**

0 class hrs., 16 lab hrs., 15 wks., (4 cr)

The goal of the course is to integrate course theory learned throughout the curriculum with practical, beginning clinical work and community service networking, by providing prospective human services workers with an opportunity to learn experientially at a human services agency in the community. The focus is for the student to learn how an agency functions and experience being a part of that agency. A weekly one hour seminar will assist the student to process and integrate knowledge gained in the foundation courses with the experien-

tial learning gained at the field site. It will serve as a forum for sharing field experiences and provides students with a peer support group. The focus will be on developing the skills necessary for human services practice, i.e., observation, human relations, interviewing, self-awareness, and leadership. Requires a minimum of eight hours a week at the placement agency.

Prerequisites: Completion of *Introduction to Human Services, Introduction to Psychology, Introduction to Sociology, General Biology, Substance Abuse, Developmental Psychology, Case Management, Introduction to Mental Health, and Interviewing and Counseling with a grade of "C" or better, and permission of the program director.*

HUS 251

Human Services Practicum II

0 class hrs., 16 lab hrs., 15 wks., (4 cr)

A continuation of the practicum and seminar experience which will provide opportunities for students to advance their learning and practice skills, and to learn more about themselves, client populations with whom they work and the network of human services. Requires a minimum of eight hours a week at the placement agency and one hour for seminar attendance.

Prerequisites: Completion of *Human Services Practicum I, Developmental Disabilities, Psychosocial Rehabilitation, and Sociology of Aging with a grade of "C" or better, and permission of the program director.*

Interdisciplinary Studies (INS)

INS 296

Interdisciplinary Seminar

(3 cr) -delivery time of course varies with topic

This interdisciplinary seminar, which focuses on a different topic every year, is offered by the Humanities,

Social Science and/or Mathematics and Science faculty. Students will examine the topic from different viewpoints to gain a more broad-based understanding of the subject. This seminar requires students to read a variety of material to prepare for class discussions and participate actively in class.

Prerequisite: ENG 101. Offered in spring semester only.

Learning Resources (LER)

LER 010

Study Skills Seminar

1 class hr., 0 lab hrs., 15 wks. (1 cr)

The Study Skills Seminar course is designed to improve learning skills in a wide variety of academic competencies and assist students in reaching their academic potential. The seminar course strengthens a student's ability to learn by teaching strategies focused on critical thinking, planning and organizational topics while developing and reinforcing study skills. The comprehensive curriculum is designed to help students achieve better grades through more effective learning and promote a successful educational experience at Central Maine Technical College. Projects and activities are based on in-class activities, reading assignments and other sources.

LER 011

Orientation Seminar

1 class hr., 0 lab hrs. 15 wks.,- (1 cr)

This seminar is designed to assist Bell Atlantic/NEXT STEP (Telecommunications Technology) students to reach their academic potential and experience success at CMTC. Emphasis will be on the college environment and services, study/learning skills and self-awareness and self development.

Prerequisite: Bell Atlantic participant

LER 015

Fundamentals of Mathematics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This fundamentals course is designed to provide in-depth instruction in the very basic concepts of the arithmetic process. This course is designed for those students who need to learn this material, rather than review it. Included in this course will be reading and writing numbers, identifying place values and rounding, addition, subtraction, multiplication, division, prime numbers, factoring, fractions, exponents, decimals, ratios and proportions, percents, and order of operations.

Prerequisite: TRIO participant

LER 025

Master Student Seminar

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides both first-time and returning students with specific skills and strategies needed to accomplish their academic goals with a higher degree of success. Through lectures, readings, discussions, group exercises, and guest speakers, students will be introduced to a wide variety of topics critical to academic success, such as; time management, setting priorities, learning styles analysis, campus and community resources, campus policies, critical thinking, diversity, motivation, and test-taking skills. The focus of this course is on assisting students as they develop academic skills, competence, and increased confidence.

Prerequisite: TRIO participant

LER 150

Information Technology

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides students with instruction and practice in identifying, locating, evaluating, and utilizing information. The course focuses on both the traditional and newest methods of information retrieval, including the Internet. This course is designed to be especially helpful to those returning to the academic arena.

Prerequisites: ENG 101 and BCA 120 or Faculty approval

Machine Tool Technology (MTT)

MTT 106

Introduction to Machine Tool Processes

1 class hr., 3 lab hrs., 15 wks., (2 cr)

This course introduces the student to the basic operation of engine lathes, milling machines and surface grinders. Tool selection, shop safety and application of speeds and feeds will be taught in this course. The student will identify different types of measuring tools and take measurements on a wide variety of machined parts.

MTT 111

Introduction to Lathes

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course is designed to familiarize the student with the lathe and its functions. Each student will be taught safety precautions, setup and operating procedures for facing, turning, drilling and boring, tool geometry, and the use of measuring tools related to the lathe operations.

MTT 112

Introduction to Milling

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course will introduce the student to safety, the use and care of hand tools and measuring tools that relate to milling, the setup and operation of vertical and horizontal milling machines, calculations of feeds and speeds and the selection of different types of cutting tools. Layout of stock and many types of inspection procedures will be introduced.

MTT 113

Grinding I & Drilling

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course is designed to familiarize the student with surface grinders and drilling machines. Students will demonstrate layout, drill selection and drill sharpening. Instruction on grinding wheel selection, ring testing and proper wheel installation will be

given. Safety precautions for all machines and procedures will be emphasized.

MTT 115

Introduction to Computer Numerical Control

4 class hrs., 0 lab hrs., 7.5 wks., (2 cr)

This course is the foundation to "cnc" which includes the study of G codes, M codes and a glossary of terms related to "cnc." The students develop one milling and two lathe programs using manual programming. These programs will be processed on a computer using SmartCam Software. The students will run these programs when they take MTT 124 Applied Computer Numerical Control.

Prerequisites: MTT 111, 112, or Faculty approval

MTT 121

Introduction to Threading Processes

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course covers the principles of single point threading on the lathe. Methods of producing both external and internal sixty degree screw thread forms will be demonstrated. Methods of measuring screw threads utilizing the 3 wire method and thread gages will be taught.

Prerequisite: MTT 111 or Faculty approval

MTT 122

Work Holding Methods for Milling

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

Selection of different types of work holding devices including vises, vee blocks, angle plates and table setups. Machine maintenance schedules are explored and practiced. Selection of carbide tooling and the use of advanced inspection procedures will be introduced.

Prerequisite: MTT 112 or Faculty approval

MTT 123

Intermediate Grinding

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course is designed to expand upon the grinding skills and technical knowledge acquired in Grinding I.

Students will learn to grind parallel, square and to specific dimensions with +/- .001 tolerance. Students will make projects from tool steel that will be hardened and precision ground to a fine finish. This course will include the introduction of the Blanchard grinder and its use. Instruction on radial Drill will be given along with instruction on precision gage blocks and reaming and tapping of holes.

Prerequisite: MTT 113 or Faculty approval

MTT 124

Applied Computer Numerical Control

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

The students will set-up and run the Excel 510 CNC Machining Center, the Hwacheon CNC Turret Lathe, and the Hardinge CNC Chucker. Programs written in MTT 115 will be utilized in this course. Each student will manufacture two lathe projects and one milling project. The students will download programs from the computer to the cnc machines and be responsible for setting tooling and recording offsets.

Prerequisite: MTT 115 or Faculty approval

MTT 204

Geometric Dimensioning and Tolerancing

1 class hr., 0 lab hrs., 15 wks., (1 cr)

This course is designed to introduce the students to the basic principles of geometry dimensioning & tolerancing related to the machine tool industry. The content of this course is based on the latest standards set by the American Standards Institute (ANSI) 14.5 M - 1994.

Prerequisite: MECT 103 or Faculty approval

MTT 211
Advanced Threading Processes

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course covers methods of machining 29 degree Acme single and multiple start screw threads, methods of machining and measuring tapers, and the use of the steady rest will be demonstrated. The use of soft jaws will be emphasized during this course.

Prerequisite: MTT 121 or Faculty approval

MTT 212
Circular Milling Processes

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

The student will be responsible for machine maintenance and care. Students will perform more complex milling setups including dividing head and rotary table work, face mill, slab mill and slot milling operations. The setup and broaching of a keyway to print specifications will be covered.

Prerequisite: MTT 122 or Faculty approval

MTT 214
Advanced Computer Numerical Control

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course covers "cnc" programming using a computer. The student will input information into the computer that will generate code for the "cnc" machines. Circular interpolation, canned cycles, thread codes and tool library data will be introduced to the student. Once the programs are completed the students will machine complex parts on the "cnc" lathe and the "cnc" milling machine.

Prerequisites: MTT 115 & MTT 124 or Faculty approval

MTT 217
Introduction to Toolmaking

1 class hrs., 7.5 lab hrs., 7.5 wks., (2 cr)

This course will introduce the student to the realm of toolmaking. While the design of Jigs, Fixtures and Stamping Dies will be studied, the course will focus more on the basic

toolmaking practices and techniques used in their construction.

Prerequisites: MTT 123, MTT 211, MTT 212 or Faculty approval

MTT 221
Advanced Turning Processes

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course covers the machinability of metals, carbide identification systems, speeds and feeds for carbide tooling and silver soldering of carbide tooling. Metric threading and eccentric turning will be demonstrated by the students.

Prerequisite: MTT 211 or Faculty approval

MTT 222
Advanced Milling Processes

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

Advanced machining processes are covered in this course including angular, straddle, contour and gang milling set-up and operations. Hole to hole locations with very tight tolerances are machined using the offset boring head.

Prerequisite: MTT 212 or Faculty approval

MTT 223
Advanced Grinding Techniques

1 class hr., 7.5 lab hrs., 7.5 wks., (2 cr)

This course is designed to complete the grinding series of instruction. Students will receive instruction on dressing grinding wheel shapes and angles. Projects will be made from tool steel and will require a higher level of skill to form both wheel and project shapes. In general, a higher level of accuracy will be required for both grinding and inspection procedures.

Prerequisites: MTT 113, MTT 123 or Faculty approval

MTT 227
Advanced Toolmaking Techniques

2 class hrs., 6 lab hrs., 7.5 wks., (2 cr)

This course will expand upon the toolmaking skills acquired in MTT 217 Introduction to Toolmaking. More in depth instruction on the func-

tion and construction of jigs, fixtures and dies will be covered along with the study of plastic injection molds.

Prerequisite: MTT 217 or Faculty approval

MTT 228
Metallurgy

1 class hr., 0 lab hrs., 15 wks., (1 cr)

This course develops familiarization with the various ferrous and non-ferrous metals used in the machine tool industry. Various methods of heat treatment of tool steel will be discussed. The use of alternative materials such as lightweight carbon fiber and plastics will also be taught. Statistical process control philosophy will be introduced to the student.

Maine Career Advantage (MCA)

MCA 199
Maine Career Advantage
(15 cr)

This course represents CMTC's recognition of the value of successful and validated MCA experience. Academic credit will be awarded to the student matriculated in Workplace Technology or other approved CMTC Associate Degree programs upon completion of 15 credit hours of prescribed and advisor approved catalog coursework

Mathematics (MAT)

MAT 030
Basic Mathematics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This preparatory course provides a review of the arithmetic processes including addition, subtraction, multiplication and division of whole numbers, fractions, decimals, percents, and measurement. Includes an introduction to algebraic concepts. Students are expected to gain mastery in each of these areas and

demonstrate their competency on appropriate tests.

Prerequisite: LER 015 or above 29th percentile on Arithmetic Assessment & Placement Test

MAT 050

Algebra I

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course covers an introduction to algebraic operations including problem solving with simple equations, polynomials, factoring, rational expressions, systems of equations, graphs and quadratic equations.

Prerequisite: MAT 030 or above 39th percentile on Arithmetic and 19th on Algebra Assessment & Placement Tests, or Math SAT 480

MAT 100

Intermediate Algebra

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course covers the fundamentals of algebra including the real number system, solving equations and formulas, graphing equations, systems of linear equations, factoring and fractional expressions, quadratic equations, exponents and radicals.

Prerequisite(s): MAT 050 or HS Algebra I (C or better) and minimum 40th percentiles on Arithmetic and Algebra Assessment & Placement Tests, or Math SAT 480

MAT 101

Business Mathematics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to develop the computational and vocabulary skills necessary for: retailing, marketing, accounting, finance and business management. Topics studied include: interest, banking, depreciation systems, payroll, statistics and graphics. It includes expanded application of algebraic principles through the study of quadratics and linear equations to business problems including standard of deviation and co-efficient of variation to quality control problems.

Prerequisite: MAT 030 or HS Algebra I (C or better) and minimum 40th percentile on Arithmetic and 20th

percentile on Algebra Assessment & Placement Tests, or Math SAT 480

MAT 102

Numbers and Logic

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course explores: (1) various number systems -- conversions between them and the arithmetic used in them; (2) Sets-description of sets and operations involving sets; (3) Logic-statements, symbols, decision tables and applications; (4) Mathematical systems--clock arithmetic, modular systems and applications and finite systems; (5) Counting--ways or counting, sequences, combinations and permutations; (6) Probability--finite and conditional probability; (7) Proportion and variation.

Prerequisite: MAT 050 or HS Algebra I (C or better) and minimum 40th percentiles on Arithmetic and Algebra Assessment & Placement Tests, or Math SAT 480

MAT 105

Geometry and Trigonometry

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will begin with a review of the techniques for solving linear equations in one and two unknowns, formulas, quadratic equations, and proportions. The course will cover the U.S. and International units of measurement, geometry of some common geometric shapes and the Pythagorean Theorem. Also included will be right triangle trigonometry, trigonometry of any angle and vector addition.

Prerequisite: MAT 100 or Algebra I & II (C or better) and minimum 50th percentiles on Arithmetic and Algebra Assessment and Placements Tests, or Math SAT 480.

MAT 122

College Algebra

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will begin with a review of basic algebraic operations including solving equations and formulas. Functions and the graphing of functions are included. Trigonometry is

limited to the basic trigonometric functions, the Pythagorean Theorem, and the solutions to right triangle problems. The course will include solving systems of linear equations, factoring and rational expressions, solving rational equations, and solving of quadratic equations. Exponents and radicals, exponential and logarithmic functions and basic statistics will also be covered.

Prerequisite(s): MAT 100 or minimum 50th percentiles on Arithmetic and Algebra Assessment & Placement Tests, and Algebra I & II (C or better), or Math SAT 480

MAT 130

Technical Mathematics I

4 class hrs., 0 lab hrs., 15 wks., (4 cr)

A mathematics course designed to prepare students for solving problems in the telecommunications field. Topics included are: number systems, a review of algebra, linear equations and dimensional analysis, functions and graphs, geometry, trigonometry, vectors and complex numbers. Also included will be the use of a scientific calculator and P.C. based math software.

Prerequisites: TTVE matriculant and ACT Math 34

MAT 132

Pre-Calculus

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will begin with a review of the trigonometric functions and solving problems involving right triangles. The course will include the geometry of common geometric figures (including perimeter, area, and volume), trigonometric functions of any angle, vectors, and graphing of trigonometric functions. Complex numbers, additional topics in trigonometry, plane analytic geometry and a review of functions will complete the course.

Prerequisite: MAT 122 (C or better)

**MAT 135
Statistics**

3 class hrs., 0 lab hrs., 15 wks., 3 cr)

This is an introductory course in statistics. No previous experience in the understanding or use of statistics is assumed. Topics of study include: descriptive statistics, probability and probability distributions, sample sizes and hypothesis testing, dependent and independent samples, correlation and regression and analysis of variation. Other topics such as statistical process control may be included as time permits. Some computer literacy is assumed.

Prerequisite(s): MAT 100 or minimum 50th percentiles on Arithmetic and Algebra Assessment & Placement Tests, and Algebra I & II (C or better), or Math SAT 480

**MAT 230
Technical Mathematics II**

4 class hrs., 0 lab hrs., 15 wks., (4 cr)

A continuation of MAT 130. Topics included are: oblique triangles, trigonometric equations and identities, exponents and radicals, complex numbers, exponential and logarithmic functions, statistics, analytic geometry, and an introduction to calculus.

Prerequisite: MAT 130 or Faculty approval

**MAT 280
Calculus**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course includes an investigation of limits and the derivative, applied problems in differentiation, i.e. analytical geometry, trigonometry, other related rates, maxima, minima and integration. In addition an investigation of various applications of the integral, including numerical integration, areas and volumes by integration and the trapezoidal rule.

Prerequisite: MAT 132

Prerequisites For Mathematics Courses 2003-04

Prerequisite courses from CMTC or other institutions must be at a grade of "C" (not C-) or higher. A mathematics SAT score of 480 or higher will serve as a prerequisite for any CMTC math course and takes the place of all prerequisites below. If an SAT score or prior CMTC course are not on record, both the applicable high school course(s) AND the CMTC Assessment and Placement percentiles in arithmetic and algebra must be met. These prerequisites may only be waived by full time Mathematics/Science faculty.

Course Number & Title	CMTC Course Prerequisites		All equivalents are required		
			High School Course Equivalents	CMTC Assessment and Placement Tests Minimum Percentiles	
				Arithmetic	Algebra
MAT 030 Basic Math	LER 015	- Or -		30%ile	
MAT 050 Algebra I	MAT 030	- Or -		40%ile	20%ile
MAT 100 Intermediate Algebra	MAT 050	- Or -	Algebra I	40%ile	40%ile
MAT 101 Business Math	MAT 030	- Or -	Algebra I	40%ile	
MAT 102 Numbers and Logic	MAT 050	- Or -	Algebra 1	40%ile	40%ile
MAT 105 Geometry & Trigonometry	MAT 100	- Or -	Algebra I Algebra II	50%ile	50%ile
MAT 122 College Algebra	MAT 100	- Or -	Algebra I Algebra II	50%ile	50%ile
MAT 130 Technical Mathematics I	TTV Matriculant			(ACT Math34)	
MAT 132 Pre-Calculus	MAT 122				
MAT 135 Statistics	MAT 100	- Or -	Algebra I Algebra II	50%ile	50%ile
MAT 230 Technical Mathematics II	MAT 130				
MAT 280 Calculus	MAT 132				

Mechanical Engineering Technology (MECT)

MECT 103

Print Reading and Sketching

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to teach the fundamentals of print reading and sketching. Throughout the course assignments students will adhere to current ASME or ANSI standards. The students will be taught the basics of orthographic projection, pictorial sketching, and print reading through a combination of sketching and textbook assignments.

MECT 111

Computer Assisted Mechanical Drafting I

3 class hrs., 2 lab hrs., 15 wks., (4 cr)

The course provides the students with an extensive knowledge of the fundamentals of engineering drawings. Computer Assisted Design/Drafting (CAD) and sketching will both be utilized. Students will learn the skills required to produce drawings that comply with current industry standards. Topics introduced will include: CAD fundamentals, AutoCAD commands, sketching, lettering, geometric construction, orthographic projection, sectional views, dimensioning, tolerancing, and geometric dimensioning and tolerancing. Assignments will meet current American National Standards Institute (ANSI) and American Society of Manufacturing Engineers (ASME) requirements for engineering drawings.

Pre or corequisites: MECT 103 or Faculty approval

MECT 142

Computer Assisted Mechanical Drafting II

3 class hrs., 2 lab hrs., 15 wks., (4 cr)

This course provides the students with the skills required to develop drawings of increasing complexity. Emphasis will be placed upon creating drawings

using CMTC's current CAD system. Topics introduced will include: Advanced AutoCAD commands, auxiliary views, pictorial views, assembly drawings, fasteners, dimensioning, tolerancing, and geometric dimensioning and tolerancing. AutoCAD's 3-dimensional environment and use will be introduced. All assignments will meet current American National Standards Institute (ANSI) and American Society of Manufacturing Engineers (ASME) requirements for engineering drawings.

Prerequisites: MECT 111 or Faculty approval

MECT 151

Statics and Strengths of Materials

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

An introductory course that examines the forces that act upon rigid bodies in equilibrium. The effects that these forces have on the material that make up the rigid bodies will also be examined. Topics covered in this class include: mechanical and physical properties of materials, centroids, center of gravity, internal stresses, strain, and linear expansion. Techniques for developing solutions for beams, shafts, flanges, columns, and welded structures will be introduced.

Prerequisites: MAT 122 or Faculty approval; corequisite: PHY 142 or Faculty approval

MECT 211

Introduction to Design

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Design requirements for many different types of mechanical components will be developed throughout this course. Solutions to problems will be developed for: fasteners, rivets, keys, shafts, belts, chains, gears, cams, and springs will be included in this course. Both analytical and graphical solution methods will be utilized in this class.

Prerequisites: MECT 142 & MECT 151 or Faculty approval

MECT 221

Manufacturing Technology

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course examines the process of manufacturing. Included in the course is the study of process planning, quality control, plant layout and other topics that affect the manufacturing process. Advances in manufacturing, such as CAD/CAM and finite element analysis (FEA) will also be examined.

Prerequisites: BCA 120, & MECT 142 or Faculty approval

MECT 241

Mechanical Design Projects

1 class hr., 4 lab hrs., 15 wks., (3 cr)

In this course, the students take a project from conception to completion by utilizing the material presented in prior classes. The students are required to work in groups. A typical project requires that students contact potential vendors, visit local professionals, develop rough sketches, perform calculations, and build a virtual model of the project using the College's 3-D CAD system.

Prerequisites: MECT 211; corequisite: CAD 292 or Faculty approval

MECT 251

Applied Dynamics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course consists of the study of kinematic and dynamic analysis of basic mechanisms. The material presented will build upon the concepts and knowledge utilized in MET 211, Introduction to Design. Solutions to problems involving rectilinear, angular and plane motion will be among the material discussed. Both analytical and graphical solution methods will be utilized throughout the course.

Prerequisites: MAT 132, MECT 211 & PHY 242 or Faculty approval

Medical Assistant (MEA)

MEA 200

Medical Administrative Procedures

4 class hrs., 0 lab hrs., (4 cr)

This course will focus on the administrative procedures of a medical office. Competencies include: performing clerical functions; performing bookkeeping procedures; preparing special accounting entries; processing insurance claims; communicating with patients, verbally and written; understanding legal concepts; explaining general office policies; performing various operational functions; and maintaining a level of professionalism.

Prerequisites MET 111, BCA 120.

MEA 210

Insurance Coding/Claims Processing

3 class hrs., 0 lab hrs., (3 cr)

This course will focus on the insurance and claims processing duties of the medical office professional. The student will gain an understanding of the health care industry; medical coding; insurance claims procedures; and several major health insurance programs. The course will explore the legal aspects of insurance billing, ICD-9-CM coding, HCPCS coding, various medical claims forms, Electronic Data Interchange (EDI), Managed Care, Blue Cross/Blue Shield, Medicare, Medicaid, and Workers' Compensation. A billing simulation will be completed as a final evaluation.

Prerequisites MEA 200.

MEA 220

Medical Clinical Procedures I

2 class hrs., 0 lab hrs., (2 cr)

This course begins as an introductory course and continues into preparing the student for Medical Assisting with some basic skills. The student will receive an introductory look at the profession to include managing the clinical environment, learning communication and patient teaching

skills, and taking health history and vital signs. Students will continue by learning infection control, safety, sterilization, instrument preparation, the process of a general patient exam, minor office surgery, emergencies, first aid, CPR, diet, nutrition, pharmacology and the administration of medications.

Co-requisite MEA 221.

MEA 221

Medical Clinical Procedures I Lab

0 class hrs., 4 lab hrs. (2 cr)

These labs will follow the lecture as much as possible and include the practice to perform procedures and skills efficiently in the medical assisting setting.

Co-requisite MEA 220.

MEA 230

Advanced Medical Clinical Procedures II

3 class hrs., 0 lab hrs. (3 cr)

This course will continue presenting clinical skills needed for the medical assistant in a medical setting. During this course the student will learn basic laboratory testing procedures, and phlebotomy. A basic treatment of microbiology, urology, and diagnostic imaging will be presented. The student will also be introduced to the different specialties of a medical practice: Gynecology, Obstetrics, Pediatrics, Neurology, Psychiatry, Orthopedics, Rehabilitation, Cardiology, Pulmonology, Gastroenterology, Dermatology, Ophthalmology, Otolaryngology, Endocrinology, Oncology, Immunology and Allergy.

Co-requisite MEA 230.

MEA 231

Advanced Medical Clinical Procedures II Lab

0 class hrs., 4 lab hrs., (2 cr)

The labs will follow the lecture as much as possible and include the practice to perform procedures and skills efficiently in the medical assisting setting.

MEA 260

Medical Assistant Externship I

0 class hrs., 8 lab hrs, 10 wks., (2 cr)

Prerequisite: Satisfactory completion of MEA 230 and MEA 231. Co-requisite: the prescribed third semester courses, a GPA of 2.0 and a "C" or better in medical assisting and office procedure courses.

Following coordinator's approval, the student will spend one day a week for ten weeks during the fall semester in local physician's offices or hospitals observing and participating in basic procedures used in the operation of the clinical, laboratory, and secretarial areas.

MEA 261

Medical Assistant Externship II

0 class hrs., 8 lab hrs. 10 wks., (2cr)

Prerequisite: Satisfactory completion of MEA 260. Co-requisite: the prescribed third semester courses, a GPA of 2.0 and a "C" or better in medical assisting and office procedure courses.

Following the coordinator's approval, the student will spend one day a week for ten weeks during the spring semester in local physician's offices or hospitals observing and participating in basic procedures used in the operation of the clinical, laboratory, and secretarial areas.

Medical Transcription (MET)

MET 101

Medical Transcription I

4 class hrs., 0 lab hrs., 15wks., (4 cr)

This is an entry level transcription course designed to introduce students to basic transcription technology. The student will become familiar with applying medical terminology through the use of tapes in the computer lab.

Prerequisite: MET 111, BCA 101 or permission of instructor; Corequisite: MET 150

MET 102**Medical Transcription II**

4 class hrs., 0 lab hrs., 15 wks., (4 cr)

This course will familiarize students with the various resources available to the medical transcriptionist including chart structures and styles, available technology, and the business perspective of the transcription industry. This course will also focus on medical transcription specialties such as those used by an emergency department, operating room, psychiatry, neurology, orthopedics, ophthalmology, etc.

Prerequisite: MET 101; *Co-requisite:* MET 151 or permission of instructor

MET 111**Medical Terminology**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This is an entry level medical terminology course designed to introduce the student to terms and language commonly found in the medical and health care professions. The student builds vocabulary through the study of word structure by learning prefixes, suffixes and root words.

MET 150**Medical Specialties I**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will prepare the student for the role transition from the classroom to the practicum setting of Medical Specialties II. The focus will be on the pathophysiology of disease, pharmacology, and understanding the various settings in which medical transcription is used.

MET 151**Medical Specialties II**

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will complete those systems for pathophysiology of disease not covered in MET 150 (Medical Specialties I). This course will require a term paper on psychiatric terminology, pathophysiology and procedure. There will be an introduction to the types of settings where medical transcriptionists are

employed. Site visits will be arranged as available.

Prerequisite: MET 150

Nursing (NUR)

Note to Nursing Program Applicants: Students for this program are selected on a competitive basis once per year, to begin each fall semester. Application materials are accepted between September 1st and January 31st, and selection decisions are made in February.

NUR 110**Role Transition**

3 class hrs., 0 lab hrs., 5 wks., (1 cr)

This course is designed to assist the student with the role transition from a Licensed Practical Nurse to an Associate Degree Nurse. Issues, expectations and the concept of the individual's Basic Human Needs will be presented and discussed. Particular emphasis is placed on the various roles of the associate degree nurse in assessing and meeting these basic human needs. This course is only open to those individuals licensed as practical nurses.

Prerequisites: Admission to the program; successful completion of challenge exam, if applicable.

NUR 112**Foundations of****Nursing/Nursing Care of Adults**

5 class hrs., 12 lab/clinical hrs.,

15 wks., (9 cr)

This is the first nursing course in the sequence which introduces the student to CMTC's organizing framework that emphasizes the individual's basic human needs, growth and development, health care delivery system, and the nursing system along with the role of the ADN and LPN. The nursing process is used to help students meet basic human needs through a beginning nurse/patient relationship. Theoretical and clinical experiences focus on fundamental nursing skills applied to the adult patient in the first

half of the semester progressing to incorporation of the nursing process in the second half of the semester. These nursing skills are emphasized as necessary for a beginning nursing student to recognize and respond to human needs. Supervised clinical experiences take place on adult nursing units within a variety of structured health care settings.

Prerequisite: Admission to the Nursing Program; *Corequisites:* BIO 117, 118; ENG 101

NUR 121**Nursing Across the Life Span I**

6 class hrs., 12 lab hrs., 15 wks., (10 cr)

This course was formally listed as NUR 122 & NUR 123. NUR 121 expands upon the students knowledge gained in the first semester and aims to develop the skills necessary to assess and provide nursing care to individuals across the life span. Use of the nursing process as well as maternal child health/pediatric principles helps identify the basic human needs of the individual and family during the childbearing/childrearing state of the life span. The nursing process is also used to provide nursing care to individuals of any age who are experiencing altered needs as a result of a common well-defined health problem. Growth and development, adaptation, basic human needs, teaching/learning, nurse/patient relationship and the role of the LPN and RN continue to be emphasized. Supervised clinical experiences take place on nursing units such as maternity, pediatrics, and medical surgical and within the community.

Prerequisites: NUR 110 (for LPN's only) NUR 111, ENG 101; *Corequisites:* BIO 115, 116; PSY 101

NUR 134**Clinical Practicum**

8 class hrs., 18 lab hrs., 1 wk.; 0 class hrs., 26 lab hrs., 2 wks.; (2 cr)

This course is designed for those students exiting at the first year (1st level). The course is a clinical

practicum aimed at helping the student to synthesize freshman academic year theory and clinical nursing practice. Issues pertaining to the role of the LPN in the work setting are particularly emphasized. The offering of this course is contingent upon sufficient registrations.

Prerequisites: NUR 112; NUR 121; ENG 101, BIO 117, 118; PSY 101

NUR 212

Nursing Across the Life Span II

5 class hrs., 12 lab hrs., 15 wks., (9 cr)
This course emphasizes the assessment of the individual's responses to acute and chronic alterations that result in complex bio-psycho-social needs of all age groups. Major emphasis is placed on the ADN role and responsibilities in meeting the complex needs of these individuals in a variety of settings through the use of the nursing process.

Prerequisites: All Level I (1st year) courses except NUR 134. LPN advanced placement students must complete NUR 110 and challenge exam if applicable; *Corequisites:* BIO 211, 212, PSY 111

NUR 213

Nursing Across the Life Span III

5 class hrs., 12 lab hrs., 15 wks., (9 cr)
This course continues to emphasize the assessment of the individual's responses to acute and chronic alterations that result in multiple complex needs at all ages of the life cycle. Integration of previous theoretical course content allows students to manage the nursing care of these individuals. Students examine the RN's responsibility in delivering nursing care to individuals who require the resources of a variety of health team members.

Prerequisites: NUR 212, BIO 211, 212, PSY 111; *Corequisites:* SPE 101, Humanities Elective, General Education Elective

Occupational Health and Safety (OHS)

OHS 100

Introduction to Occupational Health & Safety

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This course is designed to introduce students in disciplines other than Occupational Health and Safety to the fundamentals of workplace health and safety. Development of workplace health and safety programs, concepts of health and safety hazards and their control and the legal framework of occupational health and safety will be covered.

Note: This course is designed for new OHS majors and not applicable to either the Certificate or the Associate Degree in Occupational Health and Safety.

OHS 101

Basic Principles of Occupational Health

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This survey course introduces students to basic principles of occupational health including the identification of common workplace health hazards, the effects of those hazards on the human body, methods of controlling exposures to health hazards and abatement procedures.

OHS 102

Occupational Health & Safety

1 class hr., 0 lab hrs., 15 wks., (1 cr)
This one credit course is designed to introduce students in disciplines other than Occupational Health and Safety to the fundamentals of workplace health and safety. Concepts of health and safety hazards and their control and the legal framework of occupational health and safety will be covered. Students will receive a 10 hour card from the OSHA Training Institute in addition to academic credit.

Note: This course is not applicable to either the Certificate or the Associate Degree in Occupational Health and Safety.

OHS 106

Basic Principles of Occupational Safety

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This survey course will introduce the student to basic principles of occupational safety including identification of safety hazards, risk reduction measures, personal protection and safety attitudes and training. The course is based upon the standards for safety adopted by the Occupational Safety and Health Administration.

OHS 115

Basic Principles of Construction Safety & Health

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This course will introduce the student to principles of safety and health in the construction industry. The course will include identification of safety and health hazards, risk reduction measures, personal protection and safety attitudes and training. Standards under the Occupational Safety and Health Administration will be the basis of the course.

OHS 126 Legal Rights and Responsibilities for Workplace H&S

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This course will introduce the student to the laws and regulations which set out the rights and responsibilities of employers and employees for occupational health and safety. Legislative and legal processes will also be covered.

OHS 140

Asbestos, Lead and HAZWOPER Certification

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This course is designed to provide the OHS Associate Degree student with the training required by regulation for three important certifications; Asbestos Abatement Project Supervisor; Lead-Based Paint (LBP) Supervisor; and Hazardous Waste Operations & Emergency Response (HAZWOPER). This course does not meet once per week, but rather is

composed of three individual modules of three one week, 40-hour sessions as prescribed by regulations.

OHS 141 Asbestos Supervisor Certification

(1 cr)

This course is designed to provide the OHS Associate Degree student with the training required by Maine Department of Environmental Protection (DEP) regulation for the important certification of Asbestos Abatement Project Supervisor. This course does not meet once per week, but rather is composed of a 40-hour session as prescribed by regulations.

OHS 142

Lead Supervisor Certification

(1 cr)

This course is designed to provide the OHS Associate Degree student with the training required by Maine Department of Human Services, Maine Lead Poisoning Prevention Program, and up-coming Maine Department of Environmental Protection (DEP) regulations for the important certification of Lead Abatement Supervisor. This course does not meet once per week, but rather is composed of a 40-hour session as prescribed by regulations.

OHS 143

HAZWOPER Certification

(1 cr)

This course is designed to provide the OHS Associate Degree student with the training required by U.S. Department of Labor, Occupational Safety & Health Administration (OSHA) and U.S. Environmental Protection Agency (EPA) regulations for the important certification of Hazardous Waste Operations & Emergency Response (HAZWOPER) Technician. This course does not meet once per week, but rather is composed of a 40-hour session as prescribed by regulations.

OHS 155

Risk Management (Risk Analysis)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course, one of five in the Associate in Loss Control Management (ALCM) sequence, provides the student with methods of managing losses due to work-related illnesses and injuries. Workers' Compensation costs and costs due to lost productivity will be covered. The course will introduce concepts of statistical analysis to assist in the analysis of costs related to work-related illnesses and injury. Property conservation will also be addressed.

Prerequisite: MAT 122 or Faculty approval

OHS 185

Fire Prevention & Suppression

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course, one of five in the Associate in Loss Control Management (ALCM) sequence, builds on the Emergency Planning and Response methods introduced in OHS 121 and focuses on fire prevention and suppression techniques. In-house fire brigades will be discussed. Training and readiness activities will also be covered.

Prerequisite: OHS 121

OHS 200

Practicum I in Occupational Health & Safety

(3 cr)

This course is designed to provide the student with field experience in an actual workplace under the supervision of a practicing occupational health and safety professional. Sites for this practical experience in the manufacturing, construction, insurance industries, consulting or and governmental agencies must be arranged prior to course registration. Special note: Students choosing Practicums in Health Care Settings may have to meet the Immunization Requirements for Allied Health Students.

Prerequisites: OHS 101, OHS 106, ENG 101, (Basic computer skills) and Faculty approval

OHS 210

Practicum II in Occupational Health & Safety

(3 cr)

This course is designed to provide the student with additional field experience in the workplace under the continuing supervision of a practicing occupational health and safety professional. Special note: Students choosing Practicums in Health Care Settings may have to meet the Immunization Requirements for Allied Health Students.

Prerequisite: OHS 200 and Faculty approval

OHS 215

Technologist Exam Preparation

15 class hrs., 0 lab hrs., 8 wks., (1 cr)

This course is designed to assist the student in preparation for the Occupational Health and Safety Technologist exam, which is administered by the American Board of Industrial Hygiene and the Board of Certified Safety Professionals. This course will capstone the curriculum of the OHS program, including Physics, Chemistry, Mathematics, as well as the courses in Occupational Health and Safety.

Corequisite: OHS 195 or Faculty approval

OHS 216

Worksite Evaluation

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course covers methods of inspecting and evaluating health and safety hazards at a worksite including analysis of specific job assignments. It also introduces the student to accident investigation techniques. The course will include hands-on worksite evaluation.

Prerequisites: OHS 101 and 106, or Faculty approval

OHS 220

Directed Study

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides students the opportunity to pursue a special new

course project within the field of occupational health & safety or pursue a third practicum. Specific goals and objectives are determined in conjunction with the faculty supervisor. *An Advisor approved proposal is a necessary pre-requisite to registration.*

OHS 221
Emergency Planning & Response

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This course will introduce the student to planning and response considerations for common workplace emergencies including fire, hazardous materials incidents, and causes for evacuation.

OHS 250
Safety and Health Program Management

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This course is designed to introduce the student to approaches which can be used to develop, implement, evaluate and manage a health and safety program for a workplace. The course will stress team building and ownership as critical elements of a successful workplace health and safety program. A sample safety and health program will be drafted by each student.

Prerequisites: OHS 116 and ENG 101 or Faculty approval

OHS 260
Ergonomics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)
This course will deal with the issue that is most often associated with the lower back and upper body injuries that account for a large part of the lost-time work-related injuries in Maine. Ergonomics is the study of the relationship between the human body and the work that it does.

Prerequisites: OHS 101 and MAT 050, or Faculty approval

OHS 265
Introduction to Industrial Hygiene (Lec.)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

OHS 266
Introduction to Industrial Hygiene (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

These courses (to be taken concurrently) are designed to build upon the Basic Principles of Occupational Health presented in OHS 101 by giving the student the techniques for anticipating, evaluating, and abating the effects of workplace health hazards.

Prerequisites: OHS 101, MAT 122, CHY 101 and 102

OHS 293
Construction Safety & Health Management

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is designed to provide the student with the education and skills to develop, implement, and manage a comprehensive health and safety program in the construction industry. The student will understand the roles and responsibilities of a "competent person" prescribed by the Occupational Safety and Health Administration (OSHA). This course will use the models developed by OSHA for construction.

OHS 295
Basic Principles of Safety Engineering

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course covers methods available to the health and safety professional to predict unsafe conditions and eliminate or reduce them at the design and construction stage and through the use of engineering controls.

Prerequisites: MAT 122 and OHS 106

**Automotive
Technology
Parts and Service
Management
(PSM)**

PSM 100
Parts/Service Management I

1 class hr., 6 lab hrs., 15 wks., (3 cr)

This course is the first in a series of automotive related management

courses. The operation of parts counters and service operations will be studied. A practical field experience at a cooperative business will complement the classroom theory.

Prerequisite: Automotive Core Requirement

PSM 131
Engine Lab

0 class hrs., 5 lab hrs., 6 wks., (1 cr)

This course teaches the identification and location of all engine system components. The systems will include but not be limited to: cylinder heads, valve train, engine block, crankcase, cooling passages and lubrication. This lab will require students to remove, disassemble and reassemble a lab engine.

Corequisite: AUT 130 Engine Repair I

PSM 156
Electric Lab II

0 class hrs., 5 lab hrs., 6 wks., (1 cr)

This course teaches identification and location of the electronic control system for accessory and body components. The systems will include but not be limited to electronic feedback systems, heat/cooling ventilation, interior accessories, and body electrical components.

Corequisite: AUT 155 Electrical Systems II

PSM 200
Parts/Service Management II

1 class hr., 3 lab hrs., 15 wks., (2 cr)

This course is the second in a series of automotive related management courses. The relationship between parts and service operations will be studied. Parts computer systems and service scheduling will be examined and further explored at the co-op site. A practical field experience at a cooperative business will complement the classroom theory.

Prerequisite: PSM 100 Parts/Service Management I

PSM 205
Parts/Service Management III

0 class hrs., 9 lab hrs., 15 wks., (3 cr)

This course is the final component in a series of automotive related man-

agement courses. Compliance with applicable agencies and a safe work environment will be reinforced. The effective use of human resources will finalize the classroom portion of the PSM courses. A practical internship at a cooperative business will complement the classroom theory.

Prerequisite: PSM 200 Parts/Service Management II

PSM 240

Automatic Transmission

6 class hrs., 0 lab hrs., 3 wks., (1 cr)

This course teaches theory and practice devoted to all types of automatic transmissions/transaxles. Disassembly, assembly of pumps, converters, gear train, shafts, bushings, case friction and reaction units will provide practical experience for students.

PSM 245

Manual Drive Train and Axles

3 class hrs., 0 lab hrs., 5 wks., (1 cr)

This course will cover transmission theory and power flow from the engine to the drive axle. Identification and location of clutch, transmission, transaxle, drive shaft, ring/pinion, axle shaft, differential case, and four-wheel drive components will be included.

PSM 260

Air Conditioning/Alternative Fuels

6 class hrs., 0 lab hrs., 3 wks., (1 cr)

This course introduces the refrigeration circuit and air conditioning, diesel and other alternative fuels, and electric fuel cell system. A practical lab will help students with component identification and location of all related parts associated with these miscellaneous systems.

PSM 270

Engine Performance II

6 class hrs., 0 lab hrs., 3 wks., (1 cr)

This course will use on-board diagnostics as well as modern test equipment to ensure the proper function of computer, fuel and emission systems. *Prerequisite: AUT 170 Engine Performance I*

Philosophy (PHI)

PHI 101

Critical Thinking

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces the student to the principles of critical thinking and provides practice in applying these principles to everyday decision making. The student will learn to distinguish between rational thoughts and feelings, evaluate arguments, identify assumptions, examine evidence, clarify by asking questions, fair-mindedly analyze multiple viewpoints, and make reasonable judgments.

Prerequisite: ENG 101

PHI 111

Introduction to Ethics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides the students with an introduction to ethics, or moral reasoning. The value of studying ethics will be examined, and common ethical principles will be discussed and applied to everyday ethical decisions. A methodology for making sound ethical choices based on moral principles and likely outcomes will be introduced and practiced in class. Students will have an opportunity to examine specific ethical problems in a number of disciplines including law, business, medicine, and science, the overall emphasis of the course will be on practical ethical decision making.

PHI 151

Introduction to Philosophy

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces the student to some of the great philosophical ideas from the perspective of the three main classifications of philosophical thought: epistemology, metaphysics and ethics. Topics covered in the course will include some great philosophical ideas such as truth, goodness, beauty, liberty, equality, and justice, along with enduring questions concerning the existence of God, the nature of love, cultural relativism, and free will vs. Determinism.

Students will be expected to do a considerable amount of reading and writing for this course.

Physics (PHY)

PHY 121

Technical Physics I (Lec.)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will cover physical measurements, motion, vectors, concurrent forces, work and energy, rotational motion, gears and pulleys and non-concurrent forces.

Corequisite: PHY 122 Lab; Prerequisite: MAT 105 or MAT 122 with a grade of C or better.

PHY 122

Technical Physics I (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

Experiments designed to support the subjects being introduced in Technical Physics I.

Corequisite: PHY 121

PHY 130

Physics for Communication Technology

4 class hrs., 0 lab hrs., 15 wks., (4 cr)

Basics of Classical Mechanics are investigated; including forces, the laws of motion, work and energy, vibrations and waves and sound. Also included will be Heat and Thermal expansion, Electricity and Magnetism, and Light and Optics. This course will also include laboratories associated with the lecture topics as listed below.

Prerequisites are MAT 130 and MAT 230 or Faculty approval.

PHY 142

Physics I (Lec.)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Basics of statics and dynamics are investigated; including Forces, velocity and acceleration, dynamics of falling bodies, energy and work, momentum and impulse, circular motion and rotational dynamics.

Prerequisite: MAT 122 with a grade of C or better, and HS Physics. Corequisites: MAT 132 and PHY 143 (lab)

PHY 143
Physics I (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

Experiments designed to support the subjects being introduced in PHY 142 (theory).

Corequisite: PHY 142

PHY 221
Technical Physics II (Lec.)

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is a continuation of Technical Physics I and includes: Strength of Materials, Fluid Systems, heat and temperature and thermal expansion of materials, the gas laws, electricity and magnetism and simple circuits.

Prerequisite: PHY 121 with a grade of C or better; Corequisite: PHY 222 Lab

PHY 222
Technical Physics II (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

Experiments designed to support the subjects being introduced in Technical Physics II.

Co-requisite: PHY 221

PHY 242
Physics II

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

A continuation of Physics I. Course content includes solids and fluids, temperature, heat and thermal expansion. Also introduced are Thermodynamics, vibrations and waves, sound, light and electricity.

Prerequisites: PHY 142, 143 with a grade of C or better

PHY 296
Physics Directed Study

variable credit (1-4 cr)

This course is intended to meet the needs of students interested in expanding their knowledge of physics or advanced mathematical concepts. Topics will be based on need and interest. Performance contract is developed by student and faculty.

Prerequisites: PHY 121, 122 or PHY 142, 143 with a grade of C or better

Political Science
(POS)

POS 150
Introduction to American Politics

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will introduce the student to the fundamentals of American politics. Students will study and analyze the many different aspects of United States politics, including political culture, the founding period, the constitution, the federal system, public opinion and the mass media, campaigns and elections, political parties, interest groups, Congress, the presidency, the bureaucracy, the judiciary, public policies, civil liberties, civil rights and international and defense policies. In addition, the student will study and analyze how power operates as a part of political culture, various institutions and important actors within American politics.

POS 151
American State and Local Government

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is intended to introduce the student to the essentials of sub-national government in the United States. We will study and analyze many different aspects of state and local politics, including: federalism, state constitutions, citizen participation, elections, political parties, interest groups, campaigns, governors, budgeting, the bureaucracy, state legislatures, the judiciary, local government, leadership and governance, economic development, intergovernmental relations, and various public policies. Particular attention will be paid to state and local government within Maine. In addition, the student will study and analyze how power operates as a part of political culture, various institutions and important actors within sub-national government in the United States.

POS 160
Introduction to International Relations

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This introductory course is about the theory and contemporary history of global politics from an international relations perspective. Subjects include: the nature of personal leadership, the environment, power and decision making; causes of terrorism, war, peace, and relations between national security and domestic political stability; economic development and trade management, technology and the global revolution in communications and interdependence and ethnic and religious identities in regional and global politics.

POS 201
Maine State Government

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

An overview of the governing process in Maine and how citizens participate in their government. The local and state processes will be discussed in this course.

Psychology
(PSY)

PSY 101
Introduction to Psychology

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to the study of human behavior and its application to everyday life situations. Among the topics discussed are physiological foundations of behavior, altered states of consciousness, emotion, learning, and thinking. Using these topics as a basis for discussion, students will further explore the following topics: personality, interpersonal communication, conflict, group processes, behavior disorders and therapies, and industrial psychology.

PSY 111
Developmental Psychology

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is a multi-disciplinary study of life span development from

prenatal and postnatal stages through infancy, childhood, adolescence, adulthood, old age, and death. Included will be discussions of genetic, environmental, psychological, and sociological influences of the development of and changes in physical, cognitive and language, and psychosocial domains of individuals.

PSY 114

Child Development

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Development of the young child, from conception to pre-adolescence, will be studied through presentation of theory, observation of children, and review of the current research. This will provide a holistic content for understanding the many variables that influence the on-going growth and development of young children. This course will also provide the basis for creating developmentally appropriate curriculum for children birth through age eight years.

PSY 120

Psychology in the Workplace

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course presents a framework for understanding behaviors and interactions in the workplace. Major topics include communication, structure and function of groups and organizations, employer and employee relations and maintaining physical and mental health in the workplace. Class discussions and projects will focus on helping the student apply the principles to the workplace.

PSY 151

Interviewing and Counseling

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

The purpose of this course will be to present an overview of the major contemporary counseling theories and various techniques of interviewing, kinds of interviewing, and issues relevant to interviewing, such as confidentiality, case recording and nonverbal communication. Students will be actively involved in the integration of theoretical concepts and

practical skills. The course will include practical exercises in the various techniques and methods specifically used in the human services field. *Prerequisites: Completion of Introduction to Human Services, Introduction to Psychology and Introduction to Sociology with a grade of "C" or better.*

PSY 200

Sports Psychology

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will discuss the application of theories of motivation, team work/groups, individual performance, attitudes, learning, and emotions and stress to team sports. Current issues of violence and women and children in sports will be examined.

Prerequisite: PSY 101

PSY 201

Psychosocial Rehabilitation

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to the rehabilitation process of persons with disabilities, including history and background, related legislation, basic principles, and philosophy. Also considered are the steps in the rehabilitation process, historical attitudes toward persons with disabilities, the medical model, and independent living programs. The student will develop the knowledge and basic skills necessary for rehab goal planning, functional assessment, and direct skills teaching along with job development, analysis, matching and retention. Major emphasis is given to the operation of the state vocational/federal system.

Prerequisite or Co-requisite: Developmental Disabilities.

PSY 210

Behavior Analysis and Management

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course presents a framework for observing, analyzing, and managing behavior. The principles of operant conditioning will be discussed,

emphasizing ways the environment can be managed so that the individual's behaviors can be managed within family, school and other social services agencies, and work settings.

Prerequisite: PSY 101

PSY 220

Mental Illness in Modern Society

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will explore the emotions, thoughts, and behaviors associated with mental illness as defined by the DSM IV. Discussions will include contemporary issues of mental illness in society today, including causes, treatment approaches, and integration into society.

Prerequisite: PSY 101

Radiologic Technology (RAT)

RAT 199

Radiologic Technology

Prior Learning - (45 cr)

This catalog listing reflects CMTC's recognition of appropriate, significant and successful prior learning achieved at the Joint Review Committee approved School of Radiologic Technology at the Central Maine Medical Center, Lewiston, Maine.

Real Estate (REE)

REE 100

Introduction to Real Estate

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides the student with an entry level of competency in Real Estate. Topics will include license and contract law, the lifting process, types of mortgages, real estate math, and the closing process. Students who successfully complete this course shall qualify for a "Real Estate Sales Agent" license in the State of Maine. This course is approved by the Real Estate Commission.

Science (SCI)

SCI 125

Hydraulics (Lec.)

1 class hr., 0 lab hrs., 15 wks., (1 cr)

SCI 126

Hydraulics (Lab)

0 hrs., 2 lab hrs., 15 wks., (1 cr)

This course will cover the fundamentals of hydraulics including energy, force, power, and pressure. Applications will employ flow principles, Pascal's Law, and Bernoulli's Principle. Laboratory exercises will be in support of the lecture. This is the first half of SCI 151, 152.

Prerequisite: MAT 126 or Faculty approval

SCI 127

Pneumatics (Lec.)

1 class hr., 0 lab hrs., 15 wks., (1 cr)

SCI 128

Pneumatics (Lab)

0 class hrs., 2 lab hrs., 15 wks., (1 cr)

This course will cover the fundamentals of pneumatics including energy, force, power, and pressure. Applications will employ flow principles, Pascal's Law, and Bernoulli's Principle. Laboratory exercises will be in support of the lecture. This is the second half of SCI 151, 152.

Prerequisite: MAT 126 or Faculty approval

SCI 151

Hydraulics & Pneumatics (Lec.)

2 class hrs., 0 lab hrs., 15 wks., (2 cr)

SCI 152

Hydraulics & Pneumatics (Lab)

0 class hrs., 4 lab hrs., 15 wks., (2 cr)

This course will cover the fundamentals of hydraulic and pneumatics including energy, force, power, and pressure. Applications will employ flow principles, Pascal's Law, and Bernoulli's Principle. Laboratory exercises will be in support of the lecture. *Prerequisite: MAT 126 or Faculty approval*

SCI 270

Fluid Power

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course consists of an overview of fluid power technology and its applications, with emphasis on basic laws and principles, function and application of typical pumps, valves, cylinders, motors, and miscellaneous accessories, symbols and basic circuits. Lecture and laboratory.

Prerequisite: PHY 121 or Faculty approval

Social Science (SSC)

SSC 291

Changing Nature of Work

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course presents a framework for understanding behaviors and interactions in the workplace. Major topics of discussion include communication, structure and function of organizations and teams within, leadership and problem solving, employer and employee relations, labor management relations, the changing nature of work in a modern society, maintaining physical and mental health in the workplace, and application of umbrella competencies. Class discussions and projects will focus on the application of the concepts and principles related to these topics.

SSC 296

Independent Study in Social Science

(3 cr)

This course is designed to allow students to work on a semester long project in one of the social sciences. The project will be developed by the student in conjunction with the instructor of the course. The student will meet with the instructor periodically through the semester to ensure the project objectives are being met. *Prerequisites: The student must have completed (12) credit hours in a catalog program, be in good academic*

standing, be recommended by his or her advisor, and meet with the course instructor.

Sociology (SOC)

SOC 101

Introduction to Sociology

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course is an introduction to the study of influences of social and cultural factors on human behavior. Among topics discussed are culture; conformity/non-conformity; equality/inequality of different races, sexes, and ages; social institutions; group processes; and how change occurs in society.

SOC 200

Issues in Diversity

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will examine issues related to diversity between families, in workplaces and schools, and other societal settings. Topics related to race, age, gender, disability, and cultural background will be explored and how these affect minority and majority relations in the United States. Appreciation for different cultural backgrounds and how the global nature of business is affected by diversity today.

Prerequisite: One social science or one humanities course

SOC 201

Sociology of Aging

3 class hrs., 0 lab hrs., (3 cr)

This course surveys the biological, social psychological, and social aspects of the aging process. Students study aging as a developmental stage and explore current issues such as ageism, mandatory retirement, sex, crime, and intergenerational communications. Topics covered include social conditions, economics, and politics as they affect the aged, as well as community responses to the problems confronting the elder population. Students examine public, voluntary, and self-help (advocacy)

programs and assess their ability to meet the needs of aging adults in such areas as recreation, income maintenance, retirement, housing, transportation, mental and physical health.

SOC 210

Crime and Deviance

3 wks., 0 lab, 15 wks., (3 cr)

This course will examine delinquency and crime in society. Discussions will include critical analysis of theories, causes, and treatment of delinquents and criminal offenders. Crime associated with modern technology and other white collar crime and their effect on society will be explored.

Prerequisite: One social science or one humanities course

SOC 220

Sociology of the Family

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course will examine traditional and current trends in families. The dynamics of social interactions within the family will be presented. The diversity of the modern family will be discussed. Further examination of how this diversity of families affects other social institutions, such as the economy (via business and workplaces) and education (via schools and other community agencies).

Spanish (SPA)

SPA 101

Beginning Spanish

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

An introductory course in Spanish with emphasis on development of listening comprehension, speaking, reading and writing skills. For students who have had no Spanish or one year of high school Spanish.

SPA 102

Beginning Spanish

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

Continuation of Spanish 101. Emphasis on development of listen-

ing comprehension, speaking, reading and writing skills.

Prerequisite: Spanish 101 or 2 years of high school Spanish

Speech (SPE)

SPE 101

Speech and Oral Communication

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course provides the student with training and experience in researching, organizing, and presenting various types of oral presentations. Topics covered include listening, audience analysis, speech organization, delivery techniques, the use of visual aids and collaborative learning activities. The following types of speeches will be required: demonstration, informative, and persuasive. Speeches are videotaped for student review.

SPE 111

Interpersonal Communication

3 class hrs., 0 lab hrs., 15 wks., (3 cr)

This course introduces the student to the elements of interpersonal communication, both in terms of one-on-one encounters and in small group settings. The overall goal of the course is to have students develop more effective communication skills for use in their personal and professional lives. Students will study and practice active listening, deciphering non-verbal forms of communication, providing appropriate and effective feedback, practicing appropriate self-disclosure, resolving conflicts, problem solving in small groups, and facilitating group discussions. Students will be expected to study and understand the communication process.

Telecommunications Technology (TET)

TET 201

Telecommunications I

2 class hrs., 2 lab hrs., 15 wks., (3 cr)

This course will ensure that the student can recognize, construct, analyze, troubleshoot, repair and modify data telecommunications equipment and circuitry. The course starts with the basics of microprocessors then proceeds to terminals, computer IO, data transmission and modems analyzing how electronics circuits accomplish these tasks. The course then continues with the study of ethernet LANs, the OSI reference model, the internet and TCP/IP.

Prerequisite: ELT 153; corequisite: ELT 145

TET 211

Telecommunications II

2 class hrs., 3 lab hrs., 15 wks., (3 cr)

This course will introduce aspects of information science, compression/decompression, data communications, networking, cellular, wireless, fiber optics, satellites and the internet. Topics from information science comes with the study of the effects of noise, bandwidth and attenuation on communications. Compression/decompression includes the concepts of modems, JPEG as well as introduction to digital signal processing. Data communications covers such topics as the ISO reference model, ethernet, token ring and TCP/IP. Networking concepts include LANs, topologies and protocols.

Prerequisite: TET 201

Telecommunications Technology - VERIZON (TTV)

TTV 114

Electrical Circuits

3 class hrs., 1 lab hr.,
15 wks., (4 cr)

In this course students learn to analyze DC and AC passive circuits using Ohm's Law, Kirchhoff's Laws, Thevenin's and Norton's Theorem, and Superposition. RC and RL cir-

uits are analyzed for impedance and resonance. Transformers are used in step-up and step-down configurations. Troubleshooting and analysis by computer simulation using MultiSim is stressed throughout.

Prerequisite: MAT 130

TTV 143 **Electronics I**

3 class hrs., 1 lab hr., 15 wks., (4 cr)

In this course students are trained in the characteristics of diodes, transformers, and rectifier circuits including filtering. Amplifiers using BJTs and FETs are analyzed with respect to Amplification, dB, and input and output impedance. Power amps are introduced with emphasis on the complementary-symmetry class B circuit. The frequency response of passive networks and amplifiers is measured. Operational amplifiers are introduced to build inverting, non-inverting, and specialty amplifiers. Troubleshooting and analysis by computer simulation using MultiSim is stressed throughout.

Prerequisite: TTV 114

TTV 151 **Digital I**

(4 cr)

This course will prepare students to understand, test, troubleshoot, and repair digital electronics circuits as well as work in an engineering environment in a technical capacity. Abstract topics such as systems and codes, logic, functions, and Boolean algebra will serve as a basis for working with applications involving digital integrated circuits. Digital integrated circuits covered will include logic gates; adders and other arithmetic circuits; flip-flops; shift registers; serial/parallel converters; counters; comparators; encoders and decoders; and analog to digital and digital to analog conversion. Students will use equipment such as digital multimeters, oscilloscopes, signal generators and power supplies. Computer simulation using Electronics

Workbench will also be used to enhance understanding.

Prerequisites: TTV 240, MAT 230, PHY 130

TTV 240 **Electronics II**

3 class hrs., 1 lab hr., 15 wks., (4 cr)

Students practice the analysis and application of advanced electronic circuits. Topics include operational amplifiers, frequency response of active filters, oscillators and high frequency amplifiers, phase locked loops, amplitude modulation, frequency modulation, pulse modulation, theoretical and hands-on troubleshooting of test circuits, and analysis by computer simulation.

Prerequisite: TTV 143

TTV 254 **Digital Logic II**

4 class hrs., 0 lab hrs., 15 wks., (4 cr)

This course is designed to train students in the organization, architecture and hardware aspects of digital computer systems. Topics include an introduction to microprocessors, types and characteristics of different chips, microprocessor architecture, introduction to assembly language programming, PC system organization, motherboards, bus structures, memory, I/O interface devices, disk drives, video displays, and printers. Serial and parallel buses are discussed. Applications include the interfacing of peripherals, data communications between computers, and a team project.

Prerequisite: TTV 151

TTV 281 **Telecommunications I** **(Introduction to Voice Data)**

3 class hrs., 1 lab hr., 15 wks., (4 cr)

An introduction to the techniques, principles, and terminology of voice telecommunications will be presented. Public and private telecommunications networks will be examined. Telecommunications equipment, switching and transmission technology will be demonstrated. The frequency spec-

trum, modulation schemes and multiplexing techniques will be explored. Lectures, interactive learning and demonstrations will be employed. Laboratory exercises will be required.

Prerequisites: TTV 240; corequisite: TTV 151

TTV 283 **Telecommunications II** **(Data Communications)**

3 class hrs., 1 lab hr., 15 wks., (4 cr)

An introduction to the techniques, principles and terminology of data communications will be presented. Public and private networks will be examined. Data communication equipment, multiplexing, and interactive learning demonstrations will be employed. Laboratory exercises will be required.

Prerequisite: TTV 281

TTV 285 **Telecommunications III**

3 class hrs., 2 lab hrs., 15 wks., (4 cr)

This course is designed to train students in the organization, architecture, setup, maintenance, hardware and software aspects of computer networks. Topics include: introduction to networks; types and characteristics of different network architectures (LAN to WAN); network topologies and cabling; intra and inter-network devices; network operating systems; peer-to-peer and client/server environments; LAN setup and maintenance; inter-network communications including connecting a LAN to the Internet; remote network access; network printing; network security; World Wide Web Server setup and administration. A hands-on approach will be taken, with team projects throughout.

Prerequisite: TTV 283

TTV 287 **Telecommunications IV**

3 class hrs., 2 lab hrs., 15 wks., (4 cr)

A survey of current and emerging technologies in Telecommunications

will be presented. Lectures, interactive learning, demonstrations, and site visits will be employed.

Prerequisite: TTV 285 or permission of the instructor

Trade and Technical Occupations (TTO)

TTO 199

Apprenticeship (Prior Learning)

(variable credit-maximum 24)

This catalog listing reflects CMTC's recognition of appropriate apprenticeship experience and its credit relationship to degree requirements. Credit awards vary and are considered for posting, at the discretion of the College, only after successful completion of the apprenticeship. Documentation of an apprenticeship and its completion are required prior to consideration of credit award. All apprenticeship must be authorized by the Maine Department of Labor, Bureau of Employment Services, Maine State Training and Apprenticeship Council.

Workplace Technology (WOT)

See MCA 199



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Donovan, Frederick P. Jr., *Instructor*
Machine Tool Technology
A.A.S., Southern Maine Technical College;
B.S., University of Southern Maine.

Dostie, Diane, *Dean of Corporate & Community Services*
Corporate & Community Services
B.S., M.Ed., University of Southern Maine.

Drew, H. Leroy, *Department Chairperson*
Business Programs
B.S., Whittenberg University; M.B.A., Indiana University.

Dyer, Ronald C., *Department Chairperson*
Graphic Arts/Printing Technology
A.A.S., Central Maine Technical College;
B.S., University of Southern Maine.

Ferrante, Valerie V., *Department Chairperson*
Clinical Laboratory Science
B.A., University of Maine;
M.S. University of Southern Maine; MT, ASCP.

Fleury, Philip, *Department Chairperson*
Computer Technology
A.S., Quinsigamond Community College; B.S., University
of Maine at Farmington; Certified Novell Administrator,
Certified Netware Engineer.

Fontaine, Charles E., *Instructor*
Graphic Arts/Printing Technology
Lithographic Technician;
Diploma, Central Maine Technical College.

Fraye, William J., *Instructor*
Humanities
B.A., Brown University;
M.S., University of Southern Maine.

Frost, Judith G., *Director*
Library Services
B.A., Colby College; M.A., University of Denver; M.A.,
Cleveland State University.

Gagnon, Paul H., *Department Chairperson*

Automotive Technology

A.A.S., Central Maine Technical College; B.S., University of Southern Maine; ASE, Master Certified, Automobile, Track and Engine Machinist, L1 and L2 Advanced Gas and Diesel Engine performance, CNG Alternate Fuels.

Gilbert, Yvon L., *Instructor*

Machine Tool Technology

Diploma, Southern Maine Technical College;

B.S., University of Southern Maine.

Gonyea, David, *Director of Housing & Residential**Life/Athletic Director*

Student Services

A.A., University of Southern Maine.

Green, Arnold E., *Instructor*

Business Administration & Management

B.A., Yale University; M.B.A., New York University.

Groman, Marlene, *Director*

Management Information Systems

B.S., University of New Hampshire; M.S., Pace University.

Hakala, Anita, *Instructor*

Nursing

Diploma, Central Maine Technical College;

M.S.N., University of Southern Maine; Registered Nurse.

Hansen, Judith L., *Public Service Librarian*

Library Services

B.A., St. Michael's College; M.L.I.S., University of South Carolina.

Harrison, Kathleen, *Gender Equity Coordinator*

Student Services

B.S., M.S., Southern Connecticut State University.

Hinkley, Carl G., *Instructor*

Automotive Technology

Line Technician Training, General Motors; E.P.A. Auto Emission Trainer; University of Southern Maine; ASE Master Certified, Automotive, L1 Advanced Engine Performance.

Holt, Frankie, *Instructor*

Social Science

B.A., University of Illinois; M.A., Western Illinois University; M.S., Indiana State University.

Ireland, Rebecca, *Alcohol & Drug Prevention Coordinator*

Student Services

B.S., Plymouth State College.

Kelley, Tracey L., *Instructor*

Business Computer Applications

B.S., University of Maine at Machias; M.S., Husson College.

Kirchherr, Robert E., *Associate Dean*

Academic Affairs

Assessment & Placement Testing, Success Center, Student Support Services (TRIO), Developmental Studies, Learning Resources, Trade & Technical Occupations

B.S., M.S., Northern Illinois University.

Knapp, Scott E., *President*

Administration

B.A., The University of Wisconsin; M.A., Kutztown University of Pennsylvania; Ed.D., Temple University.

Latendresse, Kevin A., *Instructor*

Electromechanical Technology

B.A., M.A. University of Maine; M.A. Indiana University.

Lavers, Susan D., *Corporate Training Coordinator*

Corporate & Community Services

B.A. University of Maine at Orono.

Lefebvre, Michelle T., *Corporate Training Coordinator*

Corporate & Community Services

B.S., University of Maine at Augusta;

M.B.A., New Hampshire College.

Livingston, Barbara, *Publications & Marketing Assistant*

Planning, Development & Public Relations

University of Maryland, Central Maine Technical College.

Luthy, James A., *Instructor*

Mathematics & Science

B.A., University of Oregon; M.S., Iowa State University; Ph.D., Texas A&M University.

Maguire, John D., *Instructor*

Business & Computer Applications

B.S., University of Southern Maine; M.S., Plymouth State College.

Maheu, Marc N., *Instructor*

Mechanical Engineering Technology

A.A.S., Vermont Technical College; B.S., University of Southern Maine.

Maxwell, Dennis E., *Director of Placement Services*

Student Services

B.A., St. Joseph's College

McCann, Beverly, *Instructor*

Nursing

Diploma, Central Maine General Hospital; B.S., St. Joseph's College; M.Ed., University of Southern Maine; M.S.N., University of Southern Maine; Registered Nurse.

McManus, Kathleen Banaitis, *Instructor*

Nursing

B.S.N., M.S.N., University of Southern Maine; Registered Nurse.

Moreau, Pauline A., *Admissions Representative*

Student Services

B.S., University of Southern Maine

Moreno, Daniel C., *Instructor*

Architectural & Civil Engineering Technology

A.A.S., Central Maine Technical College;

Registered/Licensed Architect, ME, VT.

Nadeau, Maurice J., *Department Chairperson*

Electromechanical & Telecommunications Programs

A.A.S., Central Maine Technical College; B.S., University of Southern Maine; Licensed Journeyman Electrician, State of Maine.

O'Brien, Paula, *Director*

Student Support Services/TRIO

B.A., St. Joseph's College; M.S., New Hampshire College.

Oken, Elizabeth, *Director of Admissions*

Student Services

B.A., M.Ed., American International College.

Ordway, Lester S., *Instructor*

Automotive Technology - Ford ASSET

A.S.E. Master Certified, Automotive, L1 Advanced Engine Performance; E.P.A. Automotive Emissions Trainer; A.S.E. Air Conditioning Certification; FMC Master Technician.

Owen, Barbera, *Executive Associate to the**President/Coordinator of Human Resources*

Administration

Perreault, Philip T., *Instructor*

Development Studies/Learning Resources

B.S., University of Maine at Farmington; M.S., University of Southern Maine.

Pulsifer, Lloyd D., *Department Chairperson*

Machine Tool Technology

Diploma, Central Maine Technical College; University of Southern Maine.

Purrington, Deborah., *Instructor*

Computer Technology

A.S. Central Maine Technical College; B.S. University of Maine; P.E., Mechanical Engineering; A+ Certified.

Rattray, Gary, *Department Chairperson*

Mathematics & Science

B.A., University of Maine; M.S., Air Force Institute of Technology.

Record, Bradley A., *Instructor*

Machine Tool Technology

Diploma, Central Maine Technical College.

Richards, Patricia, *Instructor*

Nursing

B.S.N., University of Maine; M.S., Boston University, Registered Nurse.

Ridlon, Walter, *Director*

Tech Prep

B.S., M.Ed., University of Southern Maine.

Rossignol, Donald J., *Department Chairperson*

Culinary Arts

Diploma, Southern Maine Technical College; Certified, The Educational Foundation of The National Restaurant Association.

Roy, Michael J., *Interim Director of Financial Aid*

Student Services

A.S., B.S., Embry-Riddle Aeronautical University.

Ryan, Thomas F., *Department Chairperson*

Occupational Health & Safety

B.A., Siena College; M.B.A., Thomas College; M.S., University of Massachusetts-Lowell; Certified Safety Professional (Comprehensive Construction, Ergonomics), Certified Occupational Health and Safety Technologist, Certified Construction Health and Safety Technologist.

Santos, Elizabeth, *Academic & Transfer Advisor*

Student Support Services/TRIO

B.A., Westfield State College.

Schuettinger, Anne M., *Department Chairperson*

Nursing/Radiologic Technology

B.S., Hunter College; M.S., Adelphi University; Registered Nurse, Certified.

Schofield, Debra, *Early Childhood Specialist*

Early Childhood Education

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Stair, Dale, *Director of Career and Support Services*

Student Services

B.S. Bates College; M.Ed., University of Maine.

Stead, Kathryn, *Department Chairperson*

Early Childhood Education

B.S. Westfield State College; M.S. Wheelock College.

Stone, David P., *Instructor*

Electromechanical Technology

A.A.S., Portsmouth Vocational Technical College; B.S.,

M.S., New Hampshire College; Journeyman, Marine

Electrician.

Tara, Annee H., *Director*

Planning, Development and Public Relations

B.A., University of California-Riverside; J.D., University

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Trautman, Karl G., *Department Chairperson*

Social Science

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A.S., State University of New York-Farmingdale; B.S.,

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Diploma, Central Maine General Hospital; B.S., M.S.,

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Webber, Gary M., *Director*

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Automotive Technology

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Certified, Automotive and Truck, L1 Advanced Engine

Performance.

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Graphic Arts/Printing Technology

B.S., Fitchburg State College; M.S., University of

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Albert, James

Machine Tool Technology

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Bolstridge, Darcie Ann

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Kathy Boothby

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Bourgoin, Emil

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A.A.S., Auburn Maine School of Commerce; B.S., Uni-

versity of Palm Beach; M.S., University of Maine

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B.S., M.S., Minnesota State University; M.A., University

of Wisconsin; M.S.Ed., University of Southern Maine.

Cochrane, Paul

Humanities

B.A., Tufts University; M.A. Pennsylvania State University.

Cook, David S.

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B.S., M.A., University of Maine.

Côté, Louise Y.

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B.A., University of Maine; M.S., University of Southern Maine; Certified Medical Technologist, Certified Specialist in Microbiology, (ASCP).

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Computer Technology

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Medical Transcription

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Frechette, Michael

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Early Childhood Education

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B.S., University of Southern Maine.

Hunter, Heather A.

Business Administration & Management

B.S., University of Southern Maine.

Jamison, Susan

Nursing/Medical Transcription

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Landry, Daniel

Machine Tool Technology

Diploma, King Philip Regional High School.

Levy, Elliott

Business Administration & Management

B.A., University of Miami; M.A., Bridgewater State College.

Maguire, Valarie

Mathematics & Business Computer Applications

B.A., University of Southern Maine; M.E., Plymouth State College.

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Business Computer Applications
B.S., Thomas College; M.E., University of New England

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B.A., Brown University; M.J., University of Michigan.

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B.S., University of Southern Maine; M.S., University of Southern Maine.

Rodeffer, Ronnie L.

Electromechanical Technology
A.A.S., Central Maine Technical College; B.S., University of Southern Maine.

Rossi, Dawn E.

Early Childhood Education
A.A., University of Maine at Augusta; B.S., University of Maine at Farmington; M.S., Nova University.

Snow, Brian

Business Computer Applications
B.S., University of Maine.

Strout, Deborah E., C.P.A.

Accounting
B.S., Thomas College.

Talbot, Donald

Humanities
A.A.S., Haywood Community College; B.S., St. Mary's Seminar College; M.A., The Catholic University of America; M.A., University of Cincinnati.

Tannenbaum, Laurie

Humanities
B.A., Curry College; M.S., Simmons College.

Thatcher, Jim G.

Humanities
B.A., State University of New York; M.A., Lehigh University; M.F.A., Vermont College.

Thomas, Mitchell Clyde

Humanities
B.A., University of Maine at Farmington; M.P.A., University of Maine.

Trebilcock, Caroline M.

Humanities/Writing Center
B.S., St. Joseph's College; M.S., University of Maine.

Varney, Donald C.

Building Construction Technology
Diploma, Central Maine Technical College

Verrill, Timothy

University of New Hampshire (Thompson School of Applied Science), Central Maine Technical College.

Waters, Cherri

Computer Technology
B.S., Husson College.

Worden, Timothy

Business Administration & Management
B.S., University of New Hampshire

Zink, Julie

Humanities
B.A., University of Mississippi; M.A., Ph.D., University of South Carolina.

Affiliated Faculty

(Guest Lecturers and/or Preceptors who Contribute Instructional Services to Our Programs)

Bridgton Hospital**(Central Maine Health Care), Bridgton**

Susan L. Dube, MT (ASCP); Barbara Gately, MT (ASCP) BB.

Central Maine Medical Center, Lewiston

Stephanie Anderson, MT (ASCP); Tami Andrews, MT (ASCP), Donna Beaulieu, MT (ASCP) BB; Donna Gagnon, MT (ASCP); Beverly Leavitt, MT (ASCP); Douglas Pohl, MD; Amy Marchesseault, MT (ASCP); Mona Murphy, MT (ASCP); Matthew Twomey, MT (ASCP).

Coral Blood Services, Scarborough

Kathy Carmichael, MT (ASAP).

Franklin Memorial Hospital, Farmington

Charlotte Woodcock, MT (ASCP); Deborah Sealey, (ASCP), (HEW), (CLT); Suzanne O'Brien, AMT.

NorDx, Scarborough

Kathy Dragoni, MT (ASCP).

Parkview Memorial Hospital, Brunswick

Anita Cady, (ASCP); Steven Stockford, (ASCP), AMT.

St. Joseph Hospital, Bangor

Marilyn Kenyon, MT (ASCP).

St. Mary's Regional Medical Center, Lewiston

Doris Boyle, (ASCP); Karen Hobson, (ASCP) (CLT); Marjorie Lachance, (ASCP) (CLT); Anne Levesque, (ASCP); Linda Snow, MT (ASCP); Joan Tardif, Lab Manager.

School of Radiologic Technology, Central Maine Medical Center

Judith M. Ripley, R.T.R.

Southern Maine Medical Center, Biddeford

Patricia Burner MT (ASCP); Marc Dube, MT (ASCP); Brenda Gower, MT (ASCP); Judy Perry, MT; Steve Hunt, MT (ASCP) Diane Petrin, Denise St. Pierre, MT.

Stephens Memorial Hospital, Norway

Janice Cardoza, MT (ASCP); Coleen Skeffinton, MT (ASCP); Leah Stevens, MLT (ASCP).



College Support Staff

Priscilla Beedy, *Project Assistant*
TRIO

Todd Bergeron, *Electrician*
Maintenance Department

Gerald Berube, *Custodian*
Maintenance Department

Donald L. Blaisdell, *Custodian*
Maintenance Department

Gina M. Blanchard, *Personnel/ Payroll*
Business Office

Daniel J. Boulet, *Mechanic*
Maintenance Department

Karla Bransford, *Office Assistant*
Registrar's Office

Nancy Carr, *Bookstore*
CMTC Bookstore

Lenore Charest, *Information System Support Specialist*
Information Technology Services

Nancy Couture, *Teacher Aide*
Culinary Arts

Susan Crossley, *Manager*
Bookstore

Robert H. Daigle, *Manager*
Food Service Department

Kevin Drake, *Information System Support Specialist/Web Master*

Kate Dumais, *Assistant to the Registrar*
Registrar's Office

Richard Eastman, *Custodian*
Maintenance Department

Gail Edwards, *Receptionist*
Administration

Tracey L. Farmer, *Accounts Receivable*
Business Office

Betty A. Foster, *Manager*
Business Office

James Foy, *Custodian*
Maintenance Department

Linda French, *Secretary*
Tech Prep/MCA

Patricia Grondin, *Secretary*
Student Services

David Guimond, *Custodian*
Maintenance Department

Michelle Hawley, *Cook*
Food Service Department

Jane E. Hinkley, *Food Service*
Food Service Department

Eugene Lynch, *Custodian*
Maintenance Department

Jennifer Lyons, *Secretary*
Corporate and Community Services

Raymond L. Masse, *Director*
Maintenance Department

Christine Morin, *Accounts Payable/Purchasing*
Business Office

Liette Morin, *Cook*
Food Service Department

Joan I. Nichols, *Admissions Assistant*
Student Services

Monique B. Schreiber, *Financial Aid Assistant*
Financial Aid Office

Deborah Strout, *Accountant*
Business Office

Kelly Tardif, *Food Service*
Food Service Department

Cara Virostko, *Secretary*
Allied Health Programs

Irene G. Ward, *Secretary*
Office of Academic Affairs

Richard D. Whalen, *Cook*
Food Service Department

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AN INVITATION

CMTC welcomes visits to its campus by prospective applicants. Visits may be arranged by calling or writing to the Admissions Office several days in advance. Group tours can be scheduled by special appointment.

Central Maine
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Please note: The provisions of this catalog are not to be regarded as an irrevocable contract between the student and the College. CMTC reserves the right to make changes affecting admission procedures, tuition, fees, courses of instruction, programs of study, faculty and staff listings, and general regulations.

Directions to Central Maine Technical College

From Maine Turnpike Exit 12, Auburn:

From the exit turn left on to Route 4 following signs toward Auburn (and directional signs for CMTC). Go north for about 6 miles which takes you to Center Street. Continue on Center Street through town, past fast food restaurants, etc. Just under the overpass and before the Auburn Mall, turn left at the signal on to Mt. Auburn Avenue. At the next traffic light bear right on to Turner Street and CMTC is 1.3 miles on your left.

From Maine Turnpike Exit 13, Lewiston:

Go toward Lewiston on Lisbon Street 1.2 miles to the 4th light and turn right on to East Avenue. Go about 1.4 miles and turn left at the 4th light on to Russell Street. Continue on Russell Street to the overpass. Take the overpass into Auburn and continue to the first traffic light (do not exit before the end). At the traffic light bear right on to Turner Street and CMTC is 1.3 miles on your left.