



**Central Maine**  
COMMUNITY COLLEGE

**Catalog**  
**2007 ~ 2008**



# GENERAL INFORMATION

### ***A Message from the President***

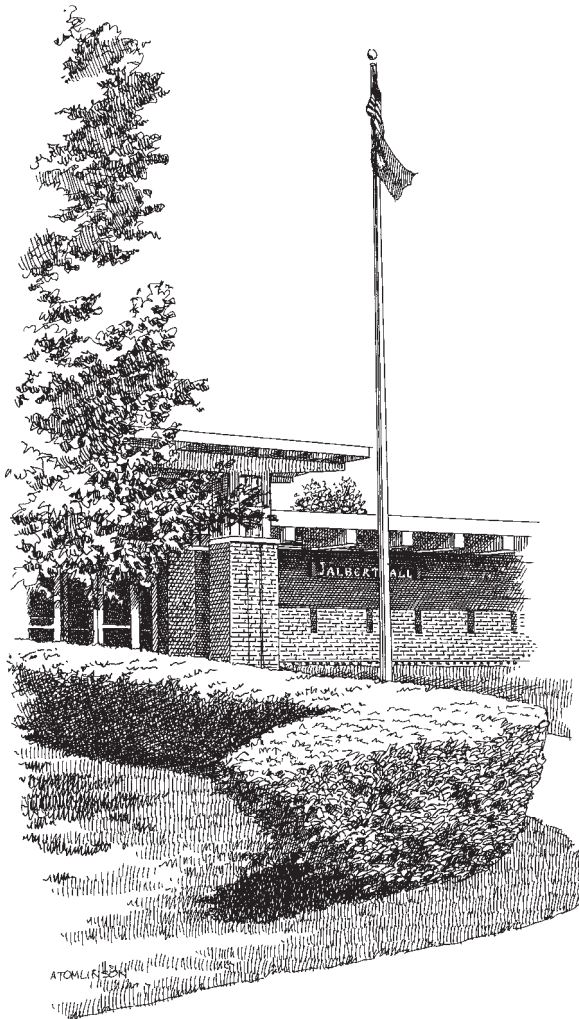
We appreciate this opportunity to show you Central Maine Community College. Through the pages in this catalog you can learn more about the programs, courses, and services available to you. While we are proud of the offerings we present to you here, we cannot show you on mere printed pages the human dimension 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. Instructors 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 state-of-the-art 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 Community College is accredited by the New England Association of Schools and Colleges, Inc., a non-governmental, nationally-recognized organization, which certifies public and private colleges and universities throughout New England that meet its standards.

An accredited school or college is one that 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 or 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 the institution's accreditation by the New England Association should be directed to the President of the 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



## About Central Maine Community College

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

### Governance

The Maine Community 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 Community 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, Central Maine Community College 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 the twin goals of providing the highest quality and maintaining the broadest accessibility

### Program Advisory Committees

Each program offered at Central Maine Community College has an advisory committee, the members of which are representative of the community and the 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 educational opportunities and serve as an important communications link with industry and the community.

### CM Education Foundation

The Central Maine Community College Foundation, or CM Education Foundation as it is known, is a community-based, non-profit corporation that has as its sole mission "support for Central Maine Community 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 over \$600,000 to CM for scholarships, program improvements and capital projects.

The Foundation Board of Directors also serves as the Executive Advisory Council, providing a forum for matters that have a broad impact on the College. Specific responsibilities of the 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.

### Transfer Programs and Agreements

Most Central Maine Community College credit courses are accepted for transfer at other colleges and universities, although they may not apply to a

specific program of interest. In addition, Central Maine Community College has agreements with several institutions which allow graduates of some College Associate Degree programs to transfer with advanced standing in specific baccalaureate programs. In order to ensure optimal transfer of credits to upper division programs, students should work collaboratively with their academic advisor and the Director of Transfer/Advising 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. A complete listing of transfer agreements may be found on the College website at: [https://www.cmcc.edu/admissions/transfer\\_programs.asp](https://www.cmcc.edu/admissions/transfer_programs.asp).

### History and Growth of Central Maine Community College

Central Maine Community 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. On July 1, 2003, CMTC became Central Maine Community College, offering transfer degrees in the arts and sciences as well as career and technical programs.

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 more than 2100 students enrolled in Central Maine Community College courses. In addition, 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. The students are served by approximately 150 faculty and staff members. Each year more than 350 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, certificates, and diplomas are designed to prepare students for direct entry into the workplace. All graduates are expected to have a set of core 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.

### **Accreditation and Program Certifications**

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 Central Maine Community College 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 the College 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. The Graphic Arts/Printing Technology program first earned national accreditation

in 1993 and meets the PrintEd accreditation standards of the Graphic Arts Education and Research Foundation (GAERF), 1899 Preston White Drive, Reston, Virginia 20191-4367 - telephone - (703) 264-7200. The program was reaccredited in January 2006.

The Technology Accreditation Commission of ABET, Inc., 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012 - telephone, (410) 347-7700, granted initial accreditation to the Architectural and Civil Engineering Technology Associate Degree program in 1984. The Program was reaccredited in August 2004.

In 1986, the Automotive Technology program first received continuing full Master Certification in all eight specialty areas from the National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175 - telephone (703) 669-6650, making it the first program in New England to be so recognized. Continued certification was awarded in 2004.

In 2003, the Ford ASSET program received continuing continued Master Certification in all eight specialty areas from the National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175 - telephone - (703) 669-6650.

The Nursing program is approved by the Maine State Board of Nursing, 158 State House Station, 161 Capital Street, Augusta, Maine 04333-0158, telephone - (207) 287-1133. In addition, the Associate Degree option was granted continuing accreditation in 1996 by the Associate Degree Nursing program was granted initial accreditation by the National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York City, NY 10006 - telephone - (212) 363-5555. The Program was reaccredited in July 2004.

In 1996, the Business program was granted accreditation status by the Association of Collegiate Business Schools and Programs (ACBSP), 7007 College Boulevard, Suite 420, Overland Park, Kansas 66211 - telephone - (913) 339-9356. The College remains an active member of the Association.

The Clinical Laboratory Science Associate Degree program was awarded initial accreditation in April, 1997 by the National Accrediting Agency for Clinical Laboratory Sciences (NACLS), 8410 West Bryn Mawr Avenue, Suite 670 in Chicago, Illinois, 60631 - telephone - (773) 714-8880. The program was reaccredited in 2002.

The Occupational Health and Safety program received initial accreditation in 2002 by the Applied Science Accreditation Commission (ASAC) of ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone - (410) - 347-7700. The Program was reaccredited in August 2004.

The Machine Tool Technology Program was granted initial accreditation in 2003 by the National Institute for Metalworking Skills (NIMS), 10565 Fairfax Boulevard, Suite 203, Fairfax, VA 22030 - telephone - (703) 352-4971.

Central Maine Community College 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.

### **Campus Growth**

Central Maine Community College'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 use. 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.

To accommodate the demand for additional on-campus housing, CM has constructed a new residence hall which will be ready for occupancy in the fall of 2007.

### **Location**

Located in Auburn at 1250 Turner Street just two miles from the center of the city, Central Maine Community 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, Central Maine Community College offers residence halls on campus that provide housing for 260 students (starting in the fall of 2007.) 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 telephone and computer.

Non-residents have access to a lounges, dining facilities that are open from 7:15 in the morning until 8:00 in the evening during the week and for brunch on weekends, vending machines and recreational areas. The campus also has an athletic field for baseball, softball and soccer games.

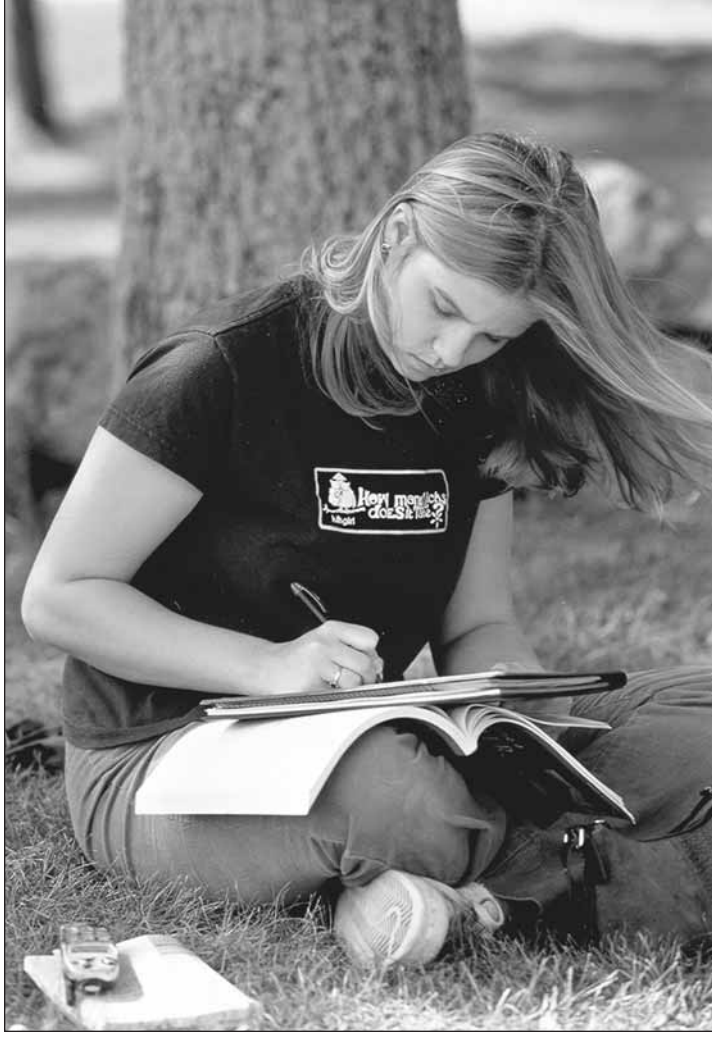
Trails through nearby woods offer excellent cross-country running and skiing opportunities, depending on the season. Lake Auburn provides good sailing, boating, and fishing, although swimming is not permitted.







*The College on the Lake ~ Education at a Beautiful Place*



# ADMISSIONS



## Admissions

Central Maine Community 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. Central Maine Community College works in active partnership with regional and statewide high schools and adult education centers in order to help students prepare for college requirements.

Central Maine Community College 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 September. 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.

*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 Central Maine Community College 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**

Official 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.
4. For Nursing Program applicants only: results of the Nurse Entrance Test (NET) must be submitted to the Admissions Office by the January 31 application deadline.

### Course Registration/ Enrollment

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

1. Official Scholastic Aptitude Test (SAT I) scores. Applicants are strongly encouraged to take SATs, especially if their educational goals may include transferring to a four-year institution after Central Maine Community College **or**

Central Maine Community College 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 Central Maine Community College 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.

2. If applicable, all college transcripts from previously attended colleges.

3. 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 Central Maine Community College education.

### Admissions Prerequisites

All Central Maine Community College 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 - grade C or better in Algebra I & II, Geometry, Physics, basic computer skills

Automotive (Ford ASSET)-Algebra I

Building Construction Technology  
Algebra I & Geometry

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

Computer Technology -Algebra I, basic computer software skills

Early Childhood Education - basic computer skills

Electromechanical Technology -Algebra I, (Algebra II preferred)

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

Nursing - Algebra I, Chemistry with laboratory, Biology with laboratory, completed application process and results of the Nurse Entrance Test (NET) by January 31st each year for competitive review process.

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

Radiologic Technology - Acceptance to Central Maine Medical Center (CMMC) School of Radiology, "C" or better in Algebra I and another college preparatory math, "C" or better in college preparatory Biology with laboratory and Chemistry with laboratory. Submit a completed application and required testing by December 31st each year to both CMMC and Central Maine Community College for competitive review process.

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

### ***Tour & Campus Interviews***

All applicants are strongly encouraged to contact the Admissions Office for a campus tour or for an individual meeting with an admissions representative. The primary purpose of the visit 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***

Central Maine Community College 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 Central Maine Community College 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 Community 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.

### ***Transfer Students***

Admission procedures for transfer students are the same as those for students with no previous college work. In addition, transfer students are encouraged to submit official college transcripts from all colleges attended for both placement and transfer credit purposes.

### ***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 Services, Educational Testing Service, P.O. 6151, Princeton, NJ 08541-6151, USA or online at [www.ets.org](http://www.ets.org) or via e-mail at [toefl@ets.org](mailto:toefl@ets.org). 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 (with supporting bank statements), verifying that funds will be available for all educational expenses while studying in the United States.

### ***Admission Categories***

Central Maine Community 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 and submit 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. The tuition deposit may be submitted online at [www.cmcc.edu/admissions/tuition\\_deposit/](http://www.cmcc.edu/admissions/tuition_deposit/).
- A Central Maine Community College 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 Central Maine Community College 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. The deposit may be submitted online at [www.cmcc.edu/admissions/tuition\\_deposit/](http://www.cmcc.edu/admissions/tuition_deposit/).

### **After Acceptance to the College**

Financial Aid award packages will be processed and communicated to students by the Central Maine Community College 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 Central Maine Community College 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**

Central Maine Community College 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 Central Maine Community College catalog program and registered for courses before the Tech Prep transfer credit is posted on their transcripts. As this catalog goes to press, Central Maine Community College has advanced credit agreements with the following 48 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

Central Maine Community College Admissions Office and/or their high school guidance counselors for complete details.

### **BATH ADULT EDUCATION**

Medical Terminology

### **BATH REGIONAL VOCATIONAL CENTER**

Automotive Technology, Business Administration & Management, Culinary Arts, Building Trades, Drafting

### **BIDDEFORD REGIONAL CENTER OF TECHNOLOGY**

Automotive Technology

### **BONNY EAGLE HIGH SCHOOL**

Automotive Technology

### **BUCKFIELD HIGH SCHOOL**

Accounting

### **CAPITAL AREA TECHNICAL CENTER, AUGUSTA**

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

### **CARIBOU REGIONAL TECHNOLOGY CENTER**

Automotive Technology, Building Trades

### **CONY HIGH SCHOOL, AUGUSTA**

Accounting

### **EDWARD LITTLE HIGH SCHOOL**

Technical Physics

### **KENNETH FOSTER APPLIED TECHNOLOGY CENTER, FARMINGTON**

Automotive Technology, Business Administration & Management, Computer Technology, Building Trades

### **HANCOCK COUNTY TECHNICAL CENTER, ELLSWORTH**

Automotive Technology, Culinary Arts, Building Trades

### **JAY HIGH SCHOOL**

Accounting

### **LAKE REGION VOCATIONAL CENTER, BRIDGTON**

Accounting, Automotive Technology, Culinary Arts, Building Trades

### **LEAVITT AREA HIGH SCHOOL**

Computer Technology



**LEWISTON REGIONAL  
TECHNICAL CENTER**

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

**LEWISTON ADULT EDUCATION**  
Business Administration, Accounting**LIVERMORE FALL HIGH  
SCHOOL**

Accounting, Computer Technology

**MAINE VOCATIONAL REGION  
#10, BRUNSWICK**

Automotive Technology, Building Trades, Culinary Arts, Early Childhood Education, Building Trades

**MID COAST SCHOOL OF  
TECHNOLOGY, MVR #8,  
ROCKLAND**

Automotive Technology, Computer Technology, Culinary Arts

**MID-MAINE TECHNICAL  
CENTER, WATERVILLE**

Automotive Technology, Culinary Arts, Machine Tool Technology, Building Trades, Graphics

**NORTHERN PENOBSCOT  
TECHNOLOGY CENTER**

Automotive Technology

**OXFORD HILLS TECHNICAL  
SCHOOL**

Automotive Technology, Business Administration & Management, Computer Technology, Culinary Arts, Building Trades, Graphics

**OXFORD HILLS ADULT  
EDUCATION**

Accounting, Business Administration & Management

**PORTLAND ARTS &  
TECHNOLOGY HIGH SCHOOL,  
PORTLAND**

Automotive Technology, Culinary Arts, Electromechanical Technology, Building Trades

**PRESQUE ISLE REGIONAL  
TECHNOLOGY CENTER**

Automotive Technology, Building Trades, Computer Technology, Business Administration & Management

**SANFORD REGIONAL  
VOCATIONAL CENTER**

Automotive Technology, Machine Tool

Technology, Computer Technology, Building Trades

**SCHOOL OF APPLIED  
TECHNOLOGY, REGION 9,  
RUMFORD**

Computer Technology, Machine Tool Technology, Building Trades

**SKOWHEGAN REGIONAL  
VOCATIONAL CENTER**

Automotive Technology, Building Trades, Computer Technology

**ST. JOHN VALLEY  
TECHNOLOGY CENTER**

Automotive Technology

**TRI-COUNTY TECHNICAL  
CENTER, DEXTER**

Automotive Technology, Culinary Arts, Building Trades, Machine Tool

**UNITED TECHNOLOGIES  
CENTER, MVR #4, BANGOR**

Automotive Technology, Building Trades

**WALDO COUNTY TECHNICAL  
CENTER**

Automotive Technology, Culinary Arts, Building Trades

**WESTBROOK REGIONAL  
VOCATIONAL CENTER**

Automotive Technology, Early Childhood Education, Building Trades

**WISCASSET HIGH SCHOOL**

Accounting, Business Administration & Management

*Out-of-State***HVOT TECHNICAL CENTER,  
LACONIA, NH**

Automotive Technology, Culinary Arts, Building Trades

**SHAWSHEEN VALLEY  
TECHNICAL CENTER,  
BILLERICA, MA**

Automotive Technology, Culinary Arts, Building Trades, Machine Tool Technology, Graphics

**NORTH SHORE TECHNICAL  
CENTER, MIDDLETON, MA**

Automotive Technology, Culinary Arts, Building Trades, Machine Tool Technology

**GREATER LAWRENCE  
TECHNICAL CENTER,  
LAWRENCE, MA**

Automotive Technology, Culinary

Arts, Building Trades, Machine Tool Technology

**GREATER LOWELL  
TECHNICAL CENTER,  
LOWELL, MA**

Automotive Technology, Culinary Arts, Building Trades, Machine Tool Technology, Graphics

**NASHOBA VALLEY TECHNICAL  
CENTER, WESTFORD, MA**

Automotive Technology, Culinary Arts, Building Trades, Machine Tool Technology, Graphics

**WALTHAM HIGH SCHOOL,  
WALTHAM, MA**

Automotive Technology, Building Trades, Graphics

**GREEN MOUNTAIN TECHNICAL  
CAREER CENTER,  
HYDE PARK, VT**

Automotive Technology

**NORTH COUNTY CAREER  
CENTER, NEWPORT, VT**

Automotive Technology, Culinary Arts, Building Trades, Computer Technology

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

Automotive Technology, Culinary Arts, Building Trades

**SOMERSWORTH REGIONAL  
VOCATIONAL CENTER,  
SOMERSWORTH, NH**

Automotive Technology

**WHITTIER REGIONAL  
VOCATIONAL HIGH SCHOOL,  
HAVERHILL, MA**

Automotive Technology, Business Administration/Management, Computer Technology, Machine Tool Technology, Graphics

**ASSABET VALLEY REGIONAL  
VOCATIONAL SCHOOL,  
MARLBORO, MA**

Automotive Technology, Culinary Arts, Building Trades, Machine Tool Technology, Graphics

**BAY PATH REGIONAL  
VOCATIONAL HIGH SCHOOL,  
CHARLTON, MA**

Automotive Technology, Machine Tool Technology, Building Trades, Culinary Arts

**MASCENIC REGIONAL HIGH SCHOOL, NEW IPSWICH, NH**

Automotive Technology

**MANCHESTER SCHOOL OF TECHNOLOGY,  
MANCHESTER, NH**

Automotive Technology

**NORTHWEST TECHNICAL CENTER, ST. ALBANS, VT**  
Automotive Technology, Building Trades, Culinary Arts**RINDGE SCHOOL OF TECHNOLOGY ARTS,  
CAMBRIDGE, MA**

Automotive Technology, Building Trades, Culinary Arts, Graphics

**SMITH VOCATIONAL/ AGRICULTURAL HIGH SCHOOL,  
NORTHHAMPTON, MA**

Graphics,

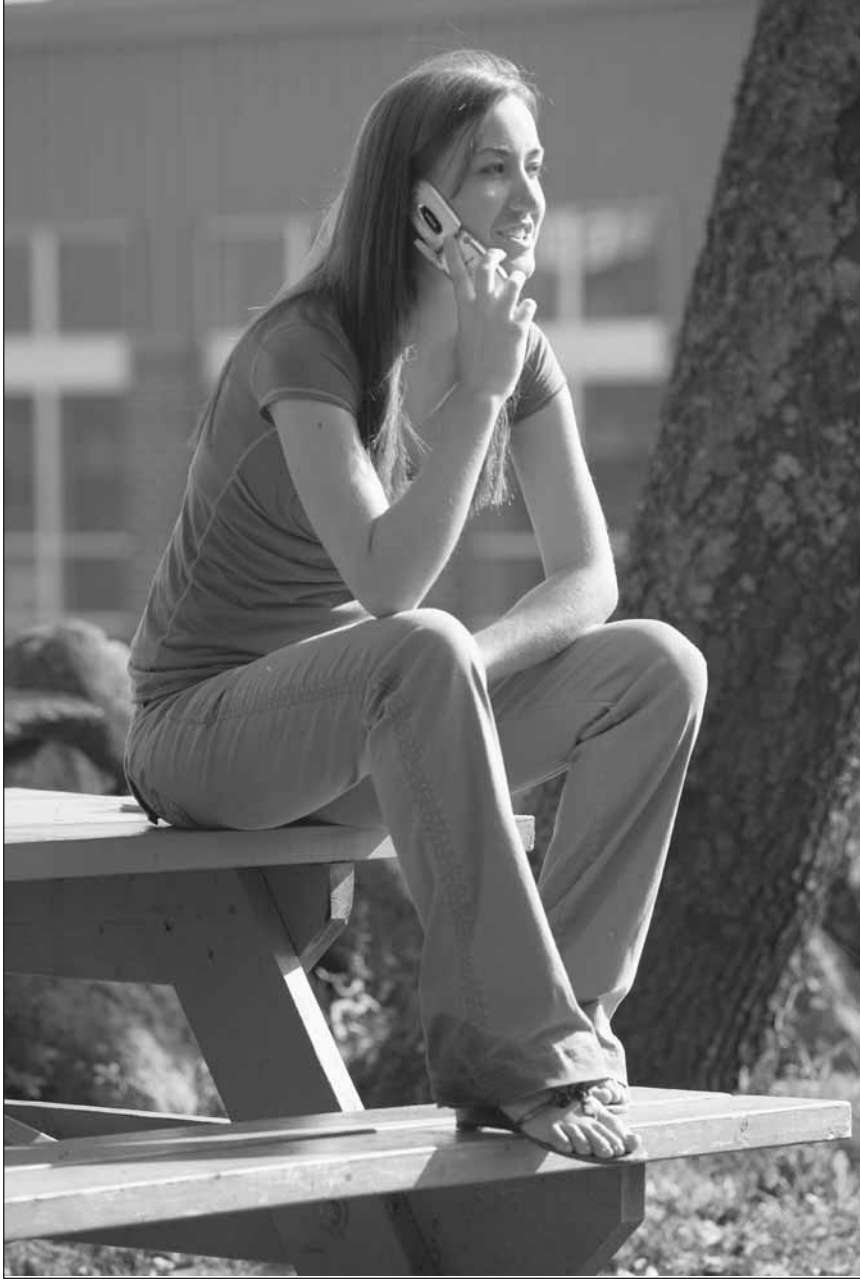
**ST. JOHNSBURY ACADEMY,  
ST. JOHNSBURY, VT**

Automotive Technology

**C.H. McCANN TECHNICAL HIGH SCHOOL,  
NORTH ADAMS, MA**

Automotive Technology, Culinary Arts, Building Trades, Machine Tool Technology





## TUITION & FEES



## Tuition & Fees

### *Estimated Costs, 2007-2008 (Subject to Change Without Notice)*

The following table summarizes estimated expenses for Central Maine Community College students during the 2007-2008 academic year. Because charges are subject to change, applicants are advised to inquire about charges beyond the 2007-2008 academic year.

**Application Fee** (non refundable) \$ 20.00

#### **Tuition:**

Maine Residents	78.00 per credit hour
New England RSP Participants	117.00 per credit hour
Non-Resident	159.00 per credit hour

#### **Room & Board:**

**All Programs (except Ford ASSET)** 6,376.00 - 7,376.00 full academic yr.

#### **Other Fees:**

Comprehensive Fee	7.80 per credit hour
Student Services Fee	7.00 per credit hour
Accident Insurance	30.00 per year
(Required of students carrying 12 or more credit hours)	
Technical Course Fees	15.60 per credit hour
Non-technical Course Fees	7.80 per credit hour
Culinary Arts Fee	50.00 per semester
Key and Damage Deposit	200.00
(Required for Resident Students)	
Residential/Communications Fee	185.00 per semester
(Required for Resident Students)	
* Tool Box Rental	50.00/semester
* Tool Deposit	100.00
*(Required of Machine Tool, Automotive and Parts & Services Management majors)	
Liability Insurance	15.00
(Required for ECE, CLS, HUS, MEA and NUR majors)	
Health & Accident Insurance	165.00
(Extended Coverage) - Optional	
Books ~ Prices range from 25.00 to 150.00 per book	
Tools, uniforms, etc. ~ Some programs require tools and/or uniforms.	

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 Central Maine Community College Financial Aid Office (755-5269).

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

Tuition for coursework is seventy-eight dollars (\$78.00) 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 three hundred and forty dollars (\$2,340) 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 Central Maine Community College programs through the New England Regional Student Program is established at 150% of the tuition charged to Maine residents. For 2007-2008, the amount is \$117.00 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 \$7.80 per credit provides for up to 10 transcripts, graduation registration, security orientation, etc.

#### ***Student Services Fee***

A student services fee of \$7.00 per credit covers student activities and parking.

#### ***Course Fees***

Course fees are charged on a credit basis. Technical courses at \$15.60 per credit and non-technical courses at \$7.80 per credit.

### **Costs of Books and Tools**

The cost of textbooks and course supplies/tools varies according to the program, but averages about \$750-\$1200 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 Central Maine Community College course challenge examinations are sometimes utilized in the administration of Central Maine Community College Associate Degree programs.

Central Maine Community College 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 (\$78.00)

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 \$25.00 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. Central Maine Community College 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 Community 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.

*\* Students receiving Federal Financial Aid Funds are subject to mandated federal refund procedures upon withdrawal from the college. Please see page 19 for details.*

### **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.*

*Central Maine Community College 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



## Financial Aid

Central Maine Community College is committed to assisting students finance their education. A basic principle of financial aid programs is that the student and his/her family are expected to contribute, when able, from income and assets to meet college costs. However, approximately two thirds of our students receive financial assistance to help them meet these costs in the form of grants, scholarships, loans and work opportunities. The Office of Student Financial Aid exists to advise and assist students. Counselors are available to help with financial aid problems. Students are encouraged to make use of the office whether or not they are receiving direct financial aid assistance. If funds are not available from Central Maine Community College, the Office of Student Financial Aid helps students explore other potential sources of aid.

### ELIGIBILITY

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, Central Maine Community College 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. The majority of financial assistance provided by the college is awarded on the basis of financial need. Students apply for financial aid by submitting a Free Application for Federal Student Aid (FAFSA) electronically through the web site at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or they may pick up a FAFSA paper application from the financial aid office. Students are encouraged to apply for the FAFSA over the web due to its ease of use and faster response time.

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 EARLY CANNOT BE OVER EMPHASIZED. THE FAFSA SERVES AS THE BASIS FOR ALL FINANCIAL AID DECISIONS MADE AT THE COLLEGE.

It is recommended that students apply by May 1st prior to the fall semester of entry, to allow sufficient time for processing.

### PRIORITY DEADLINE:

May 1st

### FINANCIAL AID APPLICATION DEADLINE:

\*August 1st

\* Student who do not meet this deadline may be required to arrange a payment plan with the Business Office.

### Satisfactory Academic Progress

In order to receive financial aid under Title IV of the Higher Education Act as amended, a student must maintain satisfactory academic progress (SAP) in her or his course of study according to the standards and practices of the College. Student academic records will be reviewed at the end of each semester to determine that each student is making satisfactory academic progress. Two measures will be used, each bearing equal weight in determining the student's status.

### Qualitative Measure:

This is a measure of the student's grade point average. This measure is reviewed at the conclusion of each semester. Qualitative measure is not affected by full or part-time enrollment status. Students will be placed on financial aid probation for one semester if they do not meet the following cumulative GPA requirements. Students who fail to regain satisfactory academic status for a subsequent semester will be placed on financial aid suspension and lose their financial aid.

### Financial Aid Probation:

No probationary status assigned for 1-11 attempted credit hours;

Cumulative GPA of 1.51 to 1.74 for 12 to 23 attempted credit hours;

Cumulative GPA of 1.75 to 1.90 for 24 to 35 attempted credit hours;

Cumulative GPA of 1.91 to 1.99 for 36 or more attempted credit hours.

### Financial Aid Suspension:

Cumulative GPA of 1.50 or less for 12 to 23 attempted credit hours;

Cumulative GPA of 1.74 or less for 24 to 35 attempted credit hours;

Cumulative GPA of 1.90 or less for 36 to 47 attempted credit hours;

Cumulative GPA of 1.99 or less for 48 attempted credit hours to the end of the degree program.

### Quantitative Measure:

The maximum time for matriculated students to complete a program and receive financial aid must be no more than 150% of the length of their academic program and falls into one of the following categories:

Certificate (15-45 credit hrs.)

3 semesters

Associate Degree (15-90 credit hrs.)

6 semesters

Students who continually withdraw from classes after the drop period may be negatively impacted by this measure. If a student plans to drop a class they should do so during the drop period as published in the academic calendar.

Students will be evaluated at the end of each semester to determine if they are making satisfactory academic progress (SAP). SAP will be applied to all students, regardless of full-time or part-time status. A credit is defined as attempted when it is on the student's enrollment schedule at the end of the official Add/Drop period.

Transfer credits, advanced placement credits and credit by examination will be included in the cumulative quantitative total calculations when the credits are officially transferred to fulfill the College's requirements. These credits do not carry quality points and are not included in the qualitative analysis of SAP. An "incomplete" grade will be monitored by the SAP process once a letter grade has been established. Remedial work in developmental courses may qualify for financial aid if the courses are measured in credit hours and required as part of the student's planned program.

Students failing to meet the College's satisfactory academic standards do have the right to appeal based on mitigating circumstances such as:

- Death in the family
- Injury or illness to the student
- Family emergency

The Financial Aid Office reserves the right to accept or reject any appeal for continued financial aid assistance.

*NOTE: If a student withdraws from the College in an academic term during which they are ineligible for financial aid due to not maintaining satisfactory academic progress, they remain ineligible for financial aid until such time that they once again make SAP. In other words, you may not re-enter the College with new financial aid eligibility if at the time you withdrew you were not meeting SAP requirements.*

## **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 \$4,310, 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 \$300 per academic year.

### **Federal Work-Study Program (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 State Grant Program is designed to provide financial assistance to undergraduate Maine students.

Eligible students will receive up to \$1,200 for the 2007-2008 academic year. All Maine students should apply annually by submitting the Free Application for Federal Student Aid (FAFSA) prior to the May 1 deadline.

### **Central Maine Community College Foundation Scholarships**

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

### **Bernard Osher Foundation Scholarships**

Scholarship awards ranging from \$500 to \$1,000 for eligible students enrolled in the General Studies Associate in Arts degree program.

### **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 Community College System allocates scholarship funds from biennial legislative appropriations to each Community College. During the 2007-2008 academic year, eligible students will receive awards in amounts ranging from \$100 to \$500.

### **Native American Program**

Central Maine Community College will waive tuition for qualified Native Americans residing in Maine. An applicant must meet the academic qualifications of the program, apply for federal financial aid, and 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**

Central Maine Community College will waive tuition, fees and room and board charges for qualifying students.

### **Canada Student Loan Program**

Central Maine Community College has been approved for designation as a specified institution under the Canada Student Loans Program.

### **Veteran's Administration Assistance Program**

Central Maine Community College 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 Central Maine Community College or call 1-888-442-4551 (1-888-GIBILL-1) or visit their web site at [www.GIBILL.VA.GOV](http://www.GIBILL.VA.GOV)

### **Veteran's Dependents & 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 is initially reviewed for financial aid by the College's 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 \$3,500 in their first year of study and up to \$4500 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.

### **Federal Parent Loans (PLUS)**

This program allows parent(s) to secure relatively low-cost loans. Contact the Financial Aid office for assistance.

## **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 the College. 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

## Student Services

Realizing that education consists of more than what occurs in classrooms and laboratories, Central Maine Community College 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 Central Maine Community College 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, copies of which are available in the Student Services office and online at [www.cmcc.edu](http://www.cmcc.edu). 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 Central Maine Community College and each other, an orientation program is held before the start of each fall and spring semester. At that time, students confirm their 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 Central Maine Community College 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 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 (18) 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**

Four residence halls provide on-campus accommodations for Central Maine Community College students. Our newest building, opening in the fall of 2007, will accommodate over 150 students in a double-room format with a private bathroom. Fortin Hall accommodates 60 students and contains dormitory rooms for double occupancy; the other two halls contain apartment units, each consisting of four single 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 Central Maine Community College 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 Directors live on-campus and are available to assist student residents.

### **Food Service**

The Central Maine Community College 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. A 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 Central Maine Community College.

### **Disability Services**

Central Maine Community College is committed to providing the means to enable equal access to education for students with disabilities. Pursuant to federal law (section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990) individuals with disabilities (those defined as having "a physical or mental impairment that substantially limits one or more of the major life

activities of such individual, a record of such impairment, or being regarded as having such an impairment") who are otherwise qualified, may be eligible to receive academic support and/or accommodation(s). Eligibility is based on documentation that establishes that the individual has a disability and the current functional impact of the disability as it relates to our school environment. Reasonable academic accommodations are provided on an individual, case-by-case basis to an admitted or enrolled student. Essential components of any course of study may not be eliminated or circumvented. These accommodations are intended to promote equal access, not special privilege.

It is the student's responsibility to make the Disabilities Coordinator aware of his/her disability and possible need for accommodation. The Disabilities Coordinator may be reached by calling 755-5277, or by appointment. Please refer to more detailed information on the website at [www.cmcc.edu/student\\_resources](http://www.cmcc.edu/student_resources) or in the student handbook.

### **Insurance**

Two plans of insurance are available to Central Maine Community College 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 Central Maine Community College. 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, Medical Assistant and Nursing, are required to purchase professional liability insurance through Central Maine Community College, 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 Central Maine Community College 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 Student Services.

### **Student Activities**

Many major activities and events on campus are initiated by Central Maine Community College'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 Student Services office, commuting and residential students at Central Maine Community College may organize activities and events. Scheduled events are announced on Central Maine Community College's electronic bulletin board, which can be found in most campus buildings. The College provides students with free memberships to 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: an Outing Club; Lakeside Players (Central Maine Community College'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 Central Maine Community College Chapter of the Phi Theta Kappa Society, an international honor society serving two-year colleges offering associate degree programs. Central Maine Community College 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. We offer women's softball and basketball; for men, there are baseball and basketball. 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. For parking regulations please see the Student Handbook online at: [www.cmcc.edu/student\\_resources](http://www.cmcc.edu/student_resources).

### **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



advising. The 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 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.

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 for all of the above mentioned services as well as assistance in developing a resume, cover letter, or preparing for a job interview, and can be accessed through Student Services 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 college website, [www.cmcc.edu](http://www.cmcc.edu).

### ***Gender Equity Coordination***

Central Maine Community College 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 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 Central Maine Community College. Central Maine Community College 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 Central Maine Community College application form or notifying the Registrar's office in writing.

### ***Transfer of Credit from Central Maine Community College***

Because the New England Association of Schools and Colleges, Inc. accredits Central Maine Community College, 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 Community 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.

Please refer to the College refund policy on page 15.







# ACADEMIC AFFAIRS

## Policies and Procedures

### **Matriculation Policy**

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 Central Maine Community College course work must be successfully completed each calendar year or an application for re-admission must be filed with the Admissions Office.

Central Maine Community College 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 Community College offers the Associate in Arts, Associate in Science, and the Associate in Applied Science degrees as well as certificates. To be eligible to receive an associate degree or certificate, students must complete all the requirements of the college-designated and Maine Community 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, and Certificate) require that a minimum of twenty five percent (25%) of their program course requirements be completed at Central Maine Community College.

### **Graduation Procedure:**

1) In order to officially graduate from Central Maine Community College, students must complete an application to graduate. The forms are available from the Registrar's office. Central Maine Community College holds one Graduation Ceremony per year in May. Students wishing to participate in the Graduation Ceremony *must have completed and submitted their Application to Graduate* to the Registrar's Office no later than the last Friday in March. 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**

Central Maine Community College 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**

Central Maine Community College 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), Central Maine Community College 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 Central Maine Community College program in order to earn credit through these procedures. In addition, students who are admitted to Central Maine Community College programs must earn a minimum of 25% of their program course requirements from Central Maine Community College, in order to be awarded a degree from the College. Students should also realize that college credit earned through any of these options will count



toward Degree/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***

Central Maine Community College 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 Central Maine Community College 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 Central Maine Community College's Registrar's Office.

### **Challenge Examinations**

Central Maine Community College 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, academic credit is awarded but grade points are not calculated in the grade point average. A "P" will appear on the transcript.

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 Central Maine Community College Registrar for information about CLEP exams. Students must make their own arrangements to take the exam(s) and have the scores sent directly to Central Maine Community College. 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, knowledge and competencies for which Central Maine Community College 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, Central Maine Community College 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 Central Maine Community College Admissions Office.

### **Transfer Credit from Colleges and Universities**

Students may transfer credits from other regionally accredited colleges into a Central Maine Community College catalog program provided they earn a grade of "C" (not C-) or better, and that the credits are relevant to the Central Maine Community College degree program. To apply, students must contact other colleges they have attended and arrange for official transcripts and course descriptions to be sent to Central Maine Community College's Director of Registration and Records. Students who are transferring courses within Central Maine Community College 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, Department Head and the Director of Registration and Records will work with the student to ensure 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 Central Maine Community College. 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 Head, to which application is being made, will make the final determination. When students are granted academic amnesty, all grades from Central Maine Community College 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 or Degree program at Central Maine Community College. Previous credit coursework at Central Maine Community College 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 prerequisites and attends a class to acquire knowledge, but not to earn credit or a grade. Audited courses do not count toward completing Certificate 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.

### **Central Maine Community College Course Numbering**

001-050 Developmental courses credit may not be applied towards a Certificate or Degree (the one exception is that MAT 050 may meet the math requirement for the OHS Certificate program); 051-099 limited to Certificate credit; 100-299 Certificate and Associate Degree credit.

*Note: Students pursuing an Associate Degree should not register for courses with numbers less than 100 unless meeting prerequisite 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 Chair 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 Central Maine Community College 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 toward total degree credit hours required but will not be figured in the student's cumulative grade point average. See the Registrar for details.

Upon registration, each student's name is placed on the official class list for each class for which he or she registers. The student's name remains on the list, and he/she assumes financial obligation for the course, **unless** the course is officially "dropped" in accordance with the "Add/Drop" procedure.

### **Add/Drop Policies (for Catalog Courses)**

**Adding a course:** Courses may be Added only during the first 10 class days of a semester. (First 5 days during the summer session).

**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 Withdrawal ("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 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 page 15).***

***Please Note: Central Maine Community College 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, 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 (rm. 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.

### **Academic Progress Reports**

During the semester, when faculty deems it appropriate, notice is issued 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 Head, or Program Administrator, if still unresolved,
3. the matter may be appealed to the Dean of Academic Affairs for a final decision.

Appeal procedures have also been developed for resolving conflicts relating to affirmative action and discipline matters.

### **Non-Academic Conflict Resolution/Grievance Procedures**

Whenever a Non-Academic question or difference arises between a CMCC employee and a student, the following procedure will be followed:

1. the student will discuss the issues with the CMCC employee; if unresolved,
2. the matter may be discussed with the employee's supervisor, if still unresolved,
3. the matter may be appealed to the Dean of Student Services for a final decision.



### Grade Reports

Printed grade reports are not mailed to students unless specifically requested. As of the spring 2004 semester, students can login to view and print their grades. Students who want to access their academic transcript should go to [www.cmcc.edu](http://www.cmcc.edu). Once there, click on "MyCM/Student login". This will bring you to the log in screen where the transcript can be accessed. For logon problems contact the Registrar's Office @ 207-755-5292. 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.

**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 Head, 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 Central Maine Community College 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.
- R** 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.



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 Community College or at other institutions, to be applied for credit at Central Maine Community College without permission of the Dean. Academic suspensions are imposed for a length of one academic semester.

### **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.

### **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

**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

of significant academic improvement to the Dean of Academic Affairs. Such evidence would normally include high quality academic course work at another institution.

### **Academic Appeal**

Students wishing to appeal an Academic Suspension or Dismissal must make the appeal, in writing, to the Dean of Academic Affairs. 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 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 (*please also refer to the College Refund Policy on page 15*).

### **Non-Matriculated Students**

Non-matriculated students (not formally admitted to a catalog program) may

register during open registration periods for scheduled catalog courses providing the student meets the pre-requisites for the course. Such registration should be completed through the Registrar's 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 or Certificate). While the college provides academic advisors as resource personnel for students, the student, not the academic advisor, is responsible for the schedule of courses, and ultimately responsible for meeting the degree requirements of the selected program of study.

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 Central Maine Community College 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 Heads 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 Heads or the Dean of Academic Affairs and written notification made to the Registrar.

Central Maine Community College reserves the right to cancel courses due to insufficient enrollment. The College also reserves the right to make changes in course offerings and charges without formal notice.

### Learning Assistance

Central Maine Community College 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, Central Maine Community College has developed programs designed to assist students with time management, study skills and basic academic competence. These programs include the TRiO program, the Success Center and Developmental Studies. The TRiO program provides a wide variety of resources for under-prepared students including admissions testing, tutoring, placement, advising and individual academic support. The TRiO program participants must meet certain eligibility guidelines before participating in the Program. The Success Center (room J-415) is a quiet study area open to all Central Maine Community College 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.

### Testing Services

Applicants who do not have SAT scores of 480 or better 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.

Central Maine Community College evaluates basic academic skills using the College Board's Accuplacer® computer based test series. The tests evaluate basic skills in reading, writing, mathematics, and elementary algebra, using a series of standardized examinations presented in a PC environment. The number and type of tests vary with each student's unique academic history and the results are reported using percentile scores. The scores, along with

other academic information are used in advising, course selection and for other academic purposes.

Scores from the various tests are used to assess a student's basic academic skills and assist with academic advising 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 Learning Resources 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 Central Maine Community College 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 021, ENG 030, ENG 050, MAT 030, MAT 050 and LER 010, LER 011, 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 Community 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 Web. Some courses may require a textbook and/or materials on CD.

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 supplemental individualized instruction to students working on writing assignments for any Central Maine Community College 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.

### **The Center for Retention and Transfer**

The Center for Retention and Transfer, located in Jalbert 409, offers students enrolled in General and Liberal Studies a variety of support services. For first year students, the Center offers a 3-hour, non-credit course in the Fall, "The First Year Connection," as well as peer mentoring, tutoring referral, academic advising, and personal support services. For students interested in transferring to other programs, colleges or institutions, the Center offers resources to identify academic programs, articulation agreements to guide course selection, assistance in the application process and opportunities to network with representatives of four-year institutions.

Students interested in learning more about the First Year Experience program should contact its Coordinator, Rita Pare, at (207) 755-5355, or [rpape@cmcc.edu](mailto:rpape@cmcc.edu). For those interested

Central Maine Community College uses the following guidelines for academic advisement and placement:

<b>Test</b>	<b>Score</b>	<b>Placement Recommendation</b>
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	A score of 7 or better	ENG 101
Writing	A score of 6 or less	ENG 021
LOEP	Combined score of 196-279	Level I ESL
LOEP	Combined score of 280-326	Level II ESL
(LOEP = Level of English Proficiency)		
Mathematics	4th percentile or less	Basic Mathematics - Adult Education
<i>Placement guidelines for Mathematics courses are located on page 126 in the Course Descriptions section of this catalog.</i>		

in learning more about transfer options, students contact the Director of Transfer, Liz Oken, at (207) 755-5239, [eoken@cmcc.edu](mailto:eoken@cmcc.edu). For general information about the Center, please contact the Center's Director, Linda Gallahan, Assistant Dean of Academic Affairs at (207) 755-7286, [lgallahan@cmcc.edu](mailto:lgallahan@cmcc.edu), or visit the Center for Retention and Transfer in Jalbert Hall, Suite 409.

### **Transfer Agreements (from Central Maine Community College to Other Colleges and Universities)**

Because Central Maine Community College 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.

Central Maine Community College 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, Franklin University, University of Maine at Farmington, University of Maine at Fort Kent, Embry-Riddle Aeronautical University and other Maine Community Colleges.

Central Maine Community College also participates in AdvantageU, a transfer agreement for graduates of the Liberal Studies program to any of Maine's public universities. These agreements facilitate transfer of graduates from Central Maine Community College to the senior institutions and assures that students will be accepted with advanced standing and that their Central Maine Community College degree course work will apply toward the Baccalaureate Degree. For specific information regarding transfer of credit, the student should consult the Center for Retention and Transfer and with representatives at the institution to which he/she wishes to transfer. Existing direct transfer agreements are described below.

### **Central Maine Community College 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 Central Maine Community College students transferring to specific USM programs, as long



as they enter a bachelor's degree program at USM within six years of admission and enrollment at Central Maine Community College.

This agreement builds on and encompasses some previous focused agreements between Central Maine Community College 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 Center for Retention and Transfer.

***Central Maine Community College and the University of Maine (in Orono)***

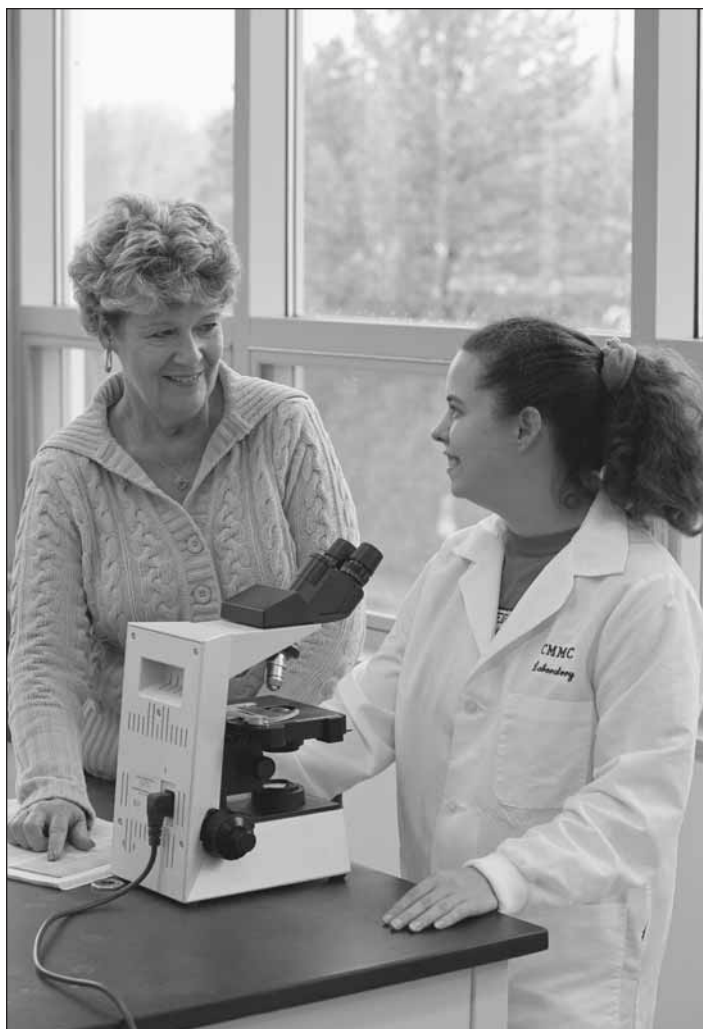
A formal agreement has been established that provides a career ladder for qualified students in Central Maine Community College's Architectural and Civil Engineering Technology program. These students will be accepted as degree candidates with advanced standing in the University's baccalaureate program, 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 Center for Retention and Transfer for details and assistance.

***Corporate and Community Services Division***

Corporate & Community Services at Central Maine Community 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 Coalition of Advanced Technology Centers, the Division offers a commitment of people and resources in an effort to reach, enhance and add value to business. We bring 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

## Programs of Study

Central Maine Community College offers numerous programs of study that lead to the Associate Degree and 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 Central Maine Community College 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.

### Central Maine Community College believes that the educated person possesses the following competencies:

- 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

Communications Electives - COM 100, 101, 121; ENG 131, 201, 211, 220, 221.

Humanities Electives - ART, ASL, COM, ENG, ESL, FRE, HUM, INS, LER, MUS, PHI, SPA, WST

Social Science Electives - ECO, GEY, HIS, POS, PSY, SOC, SSC

Math/Science Electives- AST, BIO, CHY, GEO, 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 Maine Community College System 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 Community 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.

AA =	Associate in Art	HUM =	Humanities
AAS =	Associate in Applied Science	HUS =	Human Services
AS =	Associate in Science	INS =	Interdisciplinary Studies
ACC =	Accounting	LER =	Learning Resources
ACET =	Architectural & Civil Engineering Technology	LS =	Liberal Studies
ART =	Art	MAT =	Mathematics
ASL =	American Sign Language	MCO =	Medical Coding
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	MUS =	Music
BIO =	Biology	NUR =	Nursing
BUS =	Business (Administration and Management)	OHS =	Occupational Health & Safety
CAD =	Computer Aided Drafting	PHI =	Philosophy
CHY =	Chemistry	PHY =	Physics
CLS =	Clinical Laboratory Science	POS =	Political Science
COM =	Communication	PSM =	Parts & Service Management (Automotive)
CPT =	Computer Technology	PSY =	Psychology
CRJ =	Criminal Justice	RAT =	Radiologic Technology
CSH =	Construction Safety	REE =	Real Estate
CUA =	Culinary Arts	SCI =	Science
ECE =	Early Childhood Education	SOC =	Sociology
ECO =	Economics	SPA =	Spanish
EDU =	Education	SSC =	Social Science
ELT =	Electromechanical Technology	SPE =	Speech
ENG =	English	TET =	Telecommunications Technology
ESL =	English as a Second Language	TTO =	Trade and Technical Occupations
FOA =	Ford ASSET (Automotive Technology)	TTV =	Telecommunications Technology (Verizon)
FRE =	French	WST =	Women's Studies
GAT =	Graphic Arts/Printing Technology		
GEO =	Geology		
GEY =	Human Geography		
GS =	General Studies		
HIS =	History		

*Attention: located on the following pages are the program descriptions and matrices. Prospective students are advised to also check individual program prerequisites in the Admissions section of the catalog located on pages 8 and 9.*

## Accounting (ACC)

### Program Description

The Accounting program provides individuals with broad exposure to general business activities and practices and an in-depth understanding of fundamental 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 Principles (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.
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.

### Associate in Science Degree Requirements

<b>Semester I</b>		<b>Credit Hours</b>
ACC 210	Principles of Accounting I	3
BUS 100	Understanding Business	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.		
<b>Semester II</b>		
ACC 212	Principles of Accounting II	3
BUS 110	Principles of Supervision	3
COM 100	Public Speaking	3
MAT 122	College Algebra	3
PSY 101	Introduction to Psychology	3
<b>Semester III</b>		
ACC 240	Intermediate Accounting I	3
ACC 244	Computerized Accounting	3
ENG 220	Business Communication**	3
MAT 135	Statistics	3
— —	Elective: Humanities -Advisor approved	3
<b>Semester IV</b>		
ACC 242	Intermediate Accounting II	3
ACC 246	Tax Accounting (Individual)	3
ECO 201	Intro to Macroeconomics	3
PHI 101	Critical Thinking	3
— —	Elective - Mathematics/Science - Advisor approved	3-4
<b>Total Credit Hour Requirements</b>		<b>60 - 61</b>

**\*\*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.

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

*Humanities and Social Sciences - 21 (35%)*

COM 100, ECO 201, ENG 101, ENG 220, PHI 101, PSY 101, and one Humanities elective.

*Mathematics and/or Science - 12 (20%)*

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

*Concentration -27 (45%)*

ACC 210, 212, 240, 242, 244, 246, BUS 100, 110, 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 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 his/her 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 Educational Outcomes:

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

1. Communicate clearly using written and verbal means.
2. Use interpersonal and analytical skills to solve problems that could affect the outcomes of specific projects in the work place.
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 Requirements

*Humanities and Social Sciences - 16 (24%)*

COM 100 or COM 101, ENG 101, 201, ENG 296; Social Science elective, Humanities elective.

*Mathematics and/or Science - 9 (13.4%)*

Two MAT electives, one Science elective.

*Concentration - 39 (58.2%)*

ATS 199, BCA elective, OHS elective, and three electives

*Elective - General Education elective - 3 (4.4%)*

### Associate in Applied Science Degree Requirements

<b>Concentration</b>		<b>Credit Hours</b>
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 <u>one</u> of the following: COM 100 Public Speaking COM 101 Interpersonal Communication	3
— —	Elective: Humanities - Advisor approved	3
— —*	Electives: Mathematics (100 or higher) - 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.		
<b>Related Courses</b>		
— —	Elective: BCA Advisor approved	3
— —	Elective: OHS Advisor approved	3
— —	Electives:	9
Selected from catalog courses provided that prerequisites are met and Advisor approval is obtained.		
<b>Total Credit Hour Requirements</b>		<b>67-68</b>

# Architectural & Civil Engineering Technology (ACET)

## Program Description

The Architectural and Civil Engineering Technology Program prepares individuals to become technicians who are capable of translating the innovative concepts of the professional designer or engineer into functioning systems and structures. In this translation the language of codes, working drawings, specifications, and construction are used. Through a combination of classroom study, assigned projects in the CAD lab and field activities, students become skilled in the Architectural and Civil Engineering Technology field. Focusing upon commercial structures and industrial buildings, students develop a familiarity with materials and the basic concepts of structural design, mechanical systems for buildings, cost estimating and surveying. The application of computers to the design field is an integral part of the curriculum.

The Architectural & Civil Engineering Technology Program provides students with the opportunity to earn an Associate in Applied Science Degree.

The Architectural & Civil Engineering Technology Program is accredited by the Technology Accreditation Commission of ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - Telephone 410-347-7700 and has been since the initial accreditation in 1984.

## 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

<b>Semester I</b>		<b>Credit Hours</b>
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
*Course placement determined by assessment test scores and/or prior college coursework.		
<b>Semester II</b>		
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
<b>Semester III</b>		
ACET 132	Surveying II	3
ACET 204	Building Systems	3
ACET 261	Civil Technology	3
ACET 285	Civil Site Design CAD	3
PHY 242	Physics II (Lec.)	3
—	Elective: Social Science - Advisor approved	3
<b>Semester IV</b>		
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
<b>Total Credit Hour Requirements</b>		<b>70</b>

## 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 - 39 (56%)*

ACET 113, 114, 115, 121, 122, 131, 132, 204, 234, 242, 261, 262, 274, 285.

*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 the National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175 - telephone (703) 669-6650. Continued certification was awarded in 2004.

You can now choose between two program options to better match your specific needs. Our traditional *In House Campus Concentration* option coordinates student learning in the classroom and automotive labs to perform a variety of 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. Our all new *Dealer Tract* option 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. Automotive *Dealer Tract* is a joint effort between regional automotive dealers or major independent repair facilities and Central Maine Community College. Graduates of either program are awarded an Associate in Applied Science degree.

Students have the opportunity to earn a 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.

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.

### 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 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.

*(Continued next page)*



## Automotive Technology (AUT)

<b>Semester I</b>	<b>Credits</b>
AUT 100 Introduction to Automotive Technology	1
AUT 110 Brakes	2
AUT 120 Suspension & Steering I	2
AUT 150 Electric Systems I	3
AUT 170 Engine Performance I	3
ENG 101* College Writing	3
MAT 100* Intermediate Algebra	3

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

**Select an area of Specialization (Advisor approved)**

### ***In-House Campus Concentration***

<b>Semester II</b>		
AUT 130	Introduction to Engine Repair (Lec.)	1
AUT 131	Engine Repair (Lab)	3
AUT 155	Electric Systems II (Lec.)	1
AUT 156	Electric Systems II (Lab)	4
AUT 160	Air Conditioning	1
AUT 175	Alternate Fuels	1
MAT 105	Geometry and Trigonometry	3
— —	Elective: Humanities-Advisor approved	3
<b>Semester III</b>		
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
<b>Semester IV</b>		
AUT 245	Manual Drive Train/Axles	4
AUT 275	Engine Performance III	3
AUT 290	Advanced Chassis Systems (Lec)	1
AUT 291	Advanced Chassis Systems (Lab)	3
— —	Elective: Advisor approved	3
— —	Elective: Social Science-Advisor approved	3
<b>Total Credit Hour Requirements</b>		<b>69</b>

### ***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, 200, 290, 291, 240, 245, 270, 275.

*Elective - 3 (4.3%)*

### ***Dealer Tract Concentration***

<b>Semester II</b>		
AUT 180	Field Experience	4
AUT 159	Auto Electronic and HVAC	5
MAT 105	Geometry and Trigonometry	3
ENG 201	Technical Writing	3
<b>Summer Session</b>		
AUT 181	Field Experience	2
AUT 130	Introduction to Engine Repair (Lec.)	1
AUT 131	Engine Repair (Lab)	3
— —	Elective: Humanities-Advisor approved	3
<b>Semester III</b>		
AUT 182	Field Experience	4
AUT 271	Engine Performance, Electronics	5
— —	Elective: Advisor approved	3
— —	Elective: Social Science-Advisor approved	3
<b>Semester IV</b>		
AUT 184	Field Experience	4
AUT 241	Automatic/Manual Transmission	5
PHY 121	Technical Physics I (Lec.)	3
PHY 122	Technical Physics I (Lab)	1
<b>Total Credit Hour Requirements</b>		<b>69</b>

### ***Distribution of A.A.S. Credit Hour Requirements***

*Humanities and Social Sciences - 12 (17%)*

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

*Mathematics, Science - 10 (15%)*

MAT 100, 105, PHY 121, 122.

*Concentration - 45 (64%)*

AUT 100, 110, 120, 130, 131, 150, 159, 170, 180, 181, 182, 184, 241, 271.

*Elective - 3 (4%)*



## 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 Community 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, micro-electronics, complex pneumatic systems, composite materials, and hydraulics. In 2003, the Ford ASSET program received continued full Master Certification in all eight specialty areas from the National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175 - telephone - (703) 669-6650.

### Program 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.

### Associate in Applied Science Degree Requirements

#### Semester I Credit Hours

ENG 101*	College Writing	3
FOA 150	Auto Service/Auto Electrical/Electronics	5
FOA 151	Field Experience	5
MAT 100*	Intermediate Algebra	3

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

#### Semester II

ENG 201	Technical Writing	3
FOA 190	Brakes, Steering & Suspension & Drivelines	5
FOA 191	Field Experience	5
— —	Elective: Advisor approved	3

#### Summer Session

FOA 130	Engine Repair/Climate Control	4
FOA 131	Field Experience	2
— —	Elective: Social Science -Advisor approved	3

#### Semester III

FOA 232	Field Experience	4
FOA 270	Computer Controlled Systems, Engine Performance, Fuels & Emissions	5
MAT 105	Geometry & Trigonometry	3
— —	Elective: Humanities - Advisor approved	3

#### Semester IV

FOA 240	Automatic/Manual Transmissions	5
FOA 271	Field Experience	5
PHY 121	Technical Physics I (Lec.)	3
PHY 122	Technical Physics I (Lab)	1

**Total Credit Hour Requirements 70**

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

*Humanities and Social Sciences - 12 (17.3%)*

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

*Mathematics and/or Science - 10 (14.4%)*

MAT 100, 105, PHY 121, 122.

*Concentration - 45 (64.3%)*

FOA 130, 131, 150, 151, 190, 191, 232, 240, 270, 271.

*Elective - 3 (4%)*

# Automotive Technology-Parts & 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 Central Maine Community College 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.

(Continued on following page)

## Associate in Applied Science Degree Requirements

### Suggested Sequence of Courses

#### Semester I

		Credit Hours
AUT 100	Introduction to Automotive	1
AUT 110	Brakes	2
AUT 120	Suspension & Alignment	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	3
PSM 131	Engine Lab (for AUT 130)	1
PSM 156	Electrical Lab II (for AUT 155)	1
— —	Elective: BUS - select <u>one</u> of the following:3	
	BUS 100 Understanding Business	
	BUS 101 Small Business Mgmt	
— —	Elective: Mathematics - Advisor approved	3

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

#### Semester III

ENG 220	Business Communication	3
PSM 200	Parts/Service Management	3
	Field Experience	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	
	COM 100 Public Speaking	
	COM 101 Interpersonal Communication	
— —	Elective: Social Science - Advisor approved	3

#### Semester IV

ACC 210	Accounting I	3
BUS 122	Business Law	3
BUS 155	Retail/Merchandising	3
PSM 205	Parts/Service Management	3
	Field Experience	3
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 & 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%)*

COM 100 or COM 101, ENG 101, 220, 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%)*

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

## **Certificate Requirements**

*Suggested Sequence of Courses*

<b>Semester I</b>		<b>Credit Hours</b>
AUT 100	Introduction to Automotive	1
AUT 110	Brakes I	2
AUT 120	Suspension & Alignment	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
<b>Semester II</b>		
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 <b>one</b> 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)

### **Building Construction Technology**

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.

### **Career Opportunities**

Graduates of this program typically accept employment with residential contractors, 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.

### **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%)*

BCA 120, BCT 101, 106, 107, 108, 126, 127, 128, 133, 134, 135, 136, 138, 202, 203, 235, 236, 237, 240, OHS 115

*Elective - 3 (5%)*

### **Associate in Applied Science Degree Requirements**

*Note: Students must successfully complete BCT 101 prior to participation in any other BCT course.*

#### **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 126	Construction Site Surveying	2
BCT 127	Introduction to Residential CAD	3
MAT 100*	Intermediate Algebra	3

#### **Semester II**

BCT 128	Basic Strength of Materials	2
BCT 133	Roofing	1
BCT 134	Siding	1
BCT 135	Roof Framing	2
BCT 136	Exterior Roof Trim	2
BCT 138	Doors and Windows	2
BCT 240	Construction Drafting	3
MAT 105	Geometry and Trigonometry	3

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

#### **Semester III**

BCT 202	Construction Estimating	3
BCT 203	Interior Trim	2
ENG 101	College Writing	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** **66-67**



## Building Construction Technology (BCT)

### Certificate Requirements

#### *Suggested Sequence of Courses*

**Note:** Students must successfully complete BCT 101 prior to participation in any other BCT course.

<b>Semester I</b>	<b>Credit Hours</b>
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 126 Construction Site Surveying	2
BCT 127 Introduction to Residential CAD	3
MAT 100* Intermediate Algebra	3

### **Semester II**

BCT 128 Basic Strength of Materials	2
BCT 133 Roofing	1
BCT 134 Siding	1
BCT 135 Roof Framing	2
BCT 136 Exterior Roof Trim	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 34**



## 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. Concentrations are offered in Business Administration, Supervision & Management, Sales Administration & Management, Sports Management and Hospitality Management (See Page 52). *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.

In 1996, the Business program was granted accreditation status by the Association of Collegiate Business Schools and Programs (ACBSP), 7007 College Boulevard, Suite 420, Overland Park, Kansas 66211 - telephone - (913) 339-9356. The College remains an active member of the Association.

### 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

### Associate in Applied Science Degree

#### 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
— — Elective: Business - select <u>one</u> of the following:	3
BUS 120 Employment Law	
BUS 122 Business Law	
ENG 101* College Writing**	3
Semester III	
ACC — Concentration course (see below)	3
BUS 215 Principles of Marketing	3
ENG 220 Business Communications**	3
MAT 122 College Algebra	3
— — Elective: Business related - Advisor approved	3

Semester II	Credit Hours
BUS 150 Effective Customer Relations	3
MAT 101* Business Mathematics	3
— — Elective: Communication - select <u>one</u> of the following:	
COM 100, COM 101 or COM 121	3
— — Concentration course (see below)	3
— — Elective: Humanities - Advisor approved	3
Semester IV	
— — Concentration course (see below)	3
— — Concentration course (see below)	3
ECO 201 Introduction to Macroeconomics	3
— — Elective: Social Science - Advisor approved	3
— — Elective: Mathematics/Science - Advisor approved	3-4

**\*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) and, if applicable, Business Communication (ENG 220) in order to meet Certificate or Associate Degree requirements of this program.**

### Concentrations (approved by Advisor)

**In addition to the core requirements, students must complete all courses in the concentration prior to graduation.**

	Credit Hours
Supervision & Management	
ACC 208 Financial Accounting	3
BCA — Elective - Advisor approved	3
BUS 115 Leadership & Interpersonal Relations	3
BUS 220 Managing People & Organizations	3
Sales Administration & Management	
ACC 208 Financial Accounting	3
BCA — Elective - Advisor approved	3
BUS 155 Retail Merchandising Mgmt	3
BUS 160 Introduction to Sales & Sales Mgmt	3

	Credit Hours
Sports Management	
ACC 208 Financial Accounting	3
BUS 140 Introduction to Sports Management	3
BUS 145 Facilities Management	3
BUS 230 Internship (see advisor)	3
(fulfills one of the BCA electives listed above)	
Business Administration & Management	
ACC 210 Principles of Accounting I	3
ACC 212 Principles of Accounting II	3
BCA — Elective - Advisor approved	3
BUS 260 Finance	3

**Total Credit Hour Requirements**

**60-61**

## Business Administration and Management (BUS)

(Continued from previous page)

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.

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 B.S. degree.

### **Certificate Requirements Suggested Sequence of Courses**

<b>Semester I</b>		<b>Credit Hours</b>
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 <u>one</u> of the following:	3
	BUS 120 Employment Law	
	BUS 122 Business Law	
<b>Semester II</b>		
BUS 115	Leadership & Interpersonal Relations	3
BUS 150	Effective Customer Relations	3
BUS 180	Managing Office Procedures	3
MAT 101*	Business Mathematics	3
<b>Total Credit Hour Requirements</b>		<b>27</b>

\*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.

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

*Humanities and Social Science - 18 (30%)*

COM 100, 101 or 121; ECO 201; ENG 101, ENG 220, one Social Science elective and one Humanities elective.

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

MAT 101, 122 and one Math/Science elective

*Specialty/Concentration - 33 (55%)*

ACC 210, 212; BCA 120 and one BCA elective; BUS 100, 110, 120 or 122, 150, 215, 260 and one business related elective.

# Business Administration and Management (BUS)

## Hospitality Management Concentration

### Program Description

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%)*

COM 100, ENG 101, 220, 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%)*

ACC 208, BCA 120, BUS 110, 150, 270, CUA 101, 111, 121, 153, 163, 171, 179.

### Associate in Applied Science Degree Requirements

#### Suggested Sequence of Courses

<b>Semester I</b>		<b>Credit Hours</b>
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
<b>Semester II</b>		
CUA 153	Quantity Food Production	5
CUA 163	Desserts and Pastries	5
CUA 171	Nutrition and Food Quality	3
CUA 179	Food Purchasing	1
MAT 101*	Business Mathematics	3

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

#### Semester III

ACC 208	Financial Accounting	3
BCA 120	Introduction to Computer Applications	3
BUS 110	Principles of Supervision	3
COM 100	Public Speaking	3
MAT 122	College Algebra	3

#### Semester IV

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-time 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 to complete 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, and administrative assistants or in software sales in business, industry and government. Additional education and experience can lead the graduate to advanced administrative and supervisory positions.

### 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. Central Maine Community College will be pleased to help under prepared applicants develop a plan to meet admission requirements.

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

*Humanities and Social Sciences - 15 (25%)*

COM 100, ENG 101, 220, 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%)*

ACC 208, BCA 120, 121, 125, 241, 246, 250 BUS 100, 110, 150, 180 and 255; and one BUS related elective

### 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

BCA 121	Word Processing	3
BCA 125	Navigating the Net	3
BUS 150	Effective Customer Relations	3
COM 100	Public Speaking	3
MAT 122	College Algebra	3

#### Semester III

ACC 208	Financial Accounting	3
BCA 241	Spreadsheet	3
— —	Elective: Business related or Applied Visual Basic- Advisor approved	3
BUS 255	E Commerce	3
ENG 220	Business Communication**	3

#### Semester IV

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.*

## Business and Computer Applications (BCA)

### 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.
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 B.S. degree.

### 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

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

*\*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), otherwise referred to as a Medical Laboratory Technician (MLT). The Clinical Laboratory Technician 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.

The Clinical Laboratory Science Associate Degree program was awarded initial accreditation in April, 1997 by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670 in Chicago, Illinois, 60631. The telephone number is (773)714-8880. The program was reaccredited in 2002.

### 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.

### 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 <u>one</u> of the following:	3
	MAT 100* Intermediate Algebra	
	MAT 122* College Algebra	
	MAT 132* Pre-Calculus	
	MAT 135* Statistics	
	MAT 280* Calculus	

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

#### 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 <u>one</u> of the following:	3
	ENG 201 Technical Writing	
	COM 100 Public Speaking	
— —	Elective: Humanities - Advisor approved	3

#### Summer Session

BIO 211	Microbiology (Lec.)	3
BIO 212	Microbiology (Lab)	1
CLS 104	Clinical Chemistry for Laboratory Science	3
CLS 105	Clinical Hemostasis for Laboratory Science	2
— —	Elective: Social Science - select <u>one</u> of the following:	3
	PSY 101 Introduction to Psychology	
	SOC 101 Introduction to Sociology	

#### Semester III

CLS 201	Clinical Laboratory Science Affiliation I <i>or</i>	12
CLS 202	Clinical Laboratory Science Affiliation II	

#### Semester IV

CLS 202	Clinical Laboratory Science Affiliation II <i>or</i>	12
CLS 201	Clinical Laboratory Science Affiliation I	

**Total Credit Hour Requirements                      72**

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## Clinical Laboratory Science (CLS)

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. Evaluate his/her continuing education needs in relation to professional growth.

### 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 Central Maine Community College 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 Central Maine Community College 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.

**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.*

- 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 Central Maine Community College 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, CHY, MAT and CLS course is required in order to progress from one CLS course to another.

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

*Humanities and Social Sciences - 12 (17%)*

COM 100, ENG 101, ENG 201, one Humanities and one Social Science elective.

*Mathematics and/or Science - 23 (32%)*

BIO 115, 116, 117, 118, 211, 212; CHY 101, 102, 111, 112, and one Math elective.

*Concentration - 37 (51%)*

CLS 101, 102, 104, 105, 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.

## 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 (COM 101), and all CPT core courses in order to meet the degree requirements of this program.

**\* Note to Electives:** Electives offered vary year by year; please see your advisor for the most current list.

### Other Department Electives

BUS 101	Small Business Management
ELT 111	Electricity I
ELT 153	Digital Logic
ELT 167	Data Telecommunications
GAT 108	Introduction to Acrobat Professional
GAT 176	Photoshop I
GAT 177	Photoshop II
LER 150	Information Technology

### Computer Technology Electives (Con't)

CPT 271	Network Security
CPT 272	Exchange/IIS
CPT 285	Senior Networking Capstone Project
CPT 296	Topics in Information Technology

## Associate in Science Degree Requirements

### Semester I

		Credit Hours
BCA 152	Integrated Software Applications	3
CPT 147	Introduction to PC Repair/OS	3
ENG 101*	College Writing	3
MAT 102	Numbers and Logic	3
MAT ___*	Select <b>one</b> of the following:	3
	MAT 122 College Algebra	
	MAT 125 Finite Mathematics	

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

### Semester II

CPT 130	Introduction to Visual BASIC	3
CPT 201	Linux	3
CPT 235	Introduction to Networking	3
ENG 201	Technical Writing	3
PHI 101	Critical Thinking	3

### Semester III

CPT 225	Advanced PC Repair	3
CPT 266	Server Administration	3
INS 101	Technology and Society	3
MAT 135	Statistics	3
___ ___	Elective: CPT or other Dept. - Advisor approved	3

### Semester IV

BCA 246	Database Management	3
COM ___	Select <b>one</b> of the following:	3
	COM 101 Interpersonal Communication	
	COM 121 Group Process	
___ ___	Electives: CPT or other Dept.(choose from list below) - Advisor approved	3
___ ___	Electives: CPT or other Dept.(choose from list below) - Advisor approved	3
___ ___	Elective: Mathematics/Science - Advisor approved	3-4
___ ___	Elective: Social Science - Advisor approved	3

### Total Credit Hours

**63-64**

### Computer Technology Electives

CPT 166	Fundamentals of Structured Query Language
CPT 202	Advanced Linux
CPT 208	Routers for Beginners
CPT 210-213	Cisco Articulation Agreements
CPT 230	Field Experience (Internship)
CPT 236	Introduction to TCP/IP
CPT 238	Network Support & Trouble Shooting
CPT 240	Advanced Visual Basic
CPT 245	Introduction to Java Programming
CPT 248	Introduction to PERL/CGI Programming
CPT 250	Programming in "C"
CPT 253	Advanced Web Development
CPT 256	Introduction to Game Level Design
CPT 257	Advanced Level Design

## Computer Technology (CPT)

(Continued from previous page)

### 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 - 18 (29%)*

COM 101 or 121, ENG 101, 201; INS 101; PHI 101, and one Social Science elective.

*Mathematics/Science - 12 (19%)*

MAT 102, 122 or 125, 135 and one elective.

*Concentration - 33 (52%)*

BCA 152, 246; CPT 130, 147, 201, 225, 235, 252, 266 and three CPT/other department electives

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

*Humanities and Social Science - 15 (24%)*

COM 101 or 121; ENG 101, 201; HUM elective, and one Social Science elective.

*Mathematics/Science - 9 (15%)*

MAT 102, 122, or 125 and one Math or Science Elective.

*Concentration - 39 (61%)*

BCA 152; CPT 130, 147, 201, 236, 266, 272 and five CPT/other department electives.

#### Other Department Electives

BCA 246	Database Management
BUS 101	Small Business Management
ELT 111	Electricity I
ELT 153	Digital Logic
ELT 167	Data Telecommunications
GAT 108	Introduction to Acrobat Professional
GAT 176	Photoshop I
GAT 177	Photoshop II
LER 150	Information Technology
PHI 101	Critical Thinking

#### Computer Technology Electives (Con't.)

CPT 253	Advanced Web Development
CPT 256	Introduction to Game Level Design
CPT 257	Advanced Game Level Design
CPT 271	Network Security
CPT 285	Senior Networking Capstone Project
CPT 296	Topics in Information Technology

### Associate in Applied Science Degree Requirements

#### Semester I

BCA 152	Integrated Software Applications	3
COM ____	Select <b>one</b> of the following:	3
	COM 101 Interpersonal Communication	
	COM 121 Group Process	
CPT 147	Introduction to PC Repair/OS	3
CPT 252	Web Development	3
ENG 101*	College Writing**	3

#### Semester II

CPT 130	Introduction to Visual BASIC	3
CPT 201	Linux	3
CPT 235	Introduction to Networking	3
MAT 102*	Numbers and Logic	3
____ ____	Elective: CPT or other Dept. (choose from list below) - Advisor approved	3

#### Semester III

CPT 266	Server Administration	3
ENG 201	Technical Writing	3
MAT ____	Select <b>one</b> of the following:	3
	MAT 122* College Algebra	
	MAT 125 Finite Mathematics	
____ ____	Elective: CPT or other Dept. - Advisor approved	3
____ ____	Elective: CPT or other Dept. - Advisor approved	3

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

#### Semester IV

CPT 272	MS Exchange/IIS	3
____ ____	Electives: CPT or other Dept. (choose from list below) - Advisor approved	3
____ ____	Electives: CPT or other Dept. (choose from list below) - Advisor approved	3
____ ____	Elective: Humanities - Advisor approved	3
____ ____	Elective: Mathematics/Science - Advisor approved	3
____ ____	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 (COM 101), and all CPT core courses in order to meet the degree requirements of this program.*

#### Computer Technology Electives

CPT 166	Fundamentals of Structured Query Language
CPT 202	Advanced Linux
CPT 208	Routers for Beginners
CPT 210-213:	Cisco Articulation Agreements
CPT 230	Field Experience (Internship)
CPT 236	Introduction to TCP/IP
CPT 238	Network Support & Trouble Shooting
CPT 240	Advanced Visual Basic
CPT 245	Introduction to Java Programming
CPT 248	Introduction to PERL/CGI Programming
CPT 250	Programming in "C"

## Construction Safety & Health (CHS)

### Program Description

The certificate program in Construction Safety and Health will prepare graduates for employment in the construction safety and health field. These graduates will work independently or as part of a team to make the construction workplace safer and healthier by identifying workplace hazards and possible ways to address these hazards through engineering solutions, administrative work practices, and the training and education of workers in safe and healthy work practices.

### Career Opportunities

Employment opportunities are also found in areas such as insurance companies, government agencies, as well as with consulting firms.

### Certificate Requirements

#### Semester I Credit Hours

ENG 101*	College Writing	3
OHS 101	Basic Principles of Occupational Health	3
OHS 115	Basic Principles of Construction Safety & Health	3

#### Semester II

OHS 126	Legal Rights & Responsibilities	3
OHS 216	Worksite Evaluation	3
— —	Elective: Mathematics	3
	MAT 050* - Algebra I or	
	MAT 122* - College Algebra or Advisor approved	

#### Semester III

OHS 221	Emergency Planning & Response	3
— —	Elective: Advisor approved	3

#### Semester IV

OHS 293	Construction Safety & Health Mgmt.	3
— —	Elective: Advisor approved	3

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

**Total Credit Hour Requirements 30**



## Culinary Arts (CUA)

### Program Description

The Culinary Arts Program is a one year Certificate program that prepares students for employment in a variety of commercial food preparation positions in the food service, resort or hospitality industries. Through a combination of classroom instruction and assigned experiences in the program's kitchen and dining room facilities, students acquire fundamental skills in food preparation, kitchen sanitation, food presentation and good service practice. In addition, they gain knowledge about proper nutrition, menu planning, food purchasing and safe food storage techniques.

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 student may need several semesters to complete the program requirements.

Students who successfully complete the CMCC 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 the National Restaurant Association Educational Foundation's (NRAEF) certification examinations.

### 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

<b>Semester I</b>	<b>Credit Hours</b>
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
<b>Semester II</b>	
CUA 153 Quantity Food Production	5
CUA 163 Desserts and Pastries	5
CUA 171 Nutrition and Food Quality	3
CUA 179 Food Purchasing	1
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 prepares 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 combine the understanding and application of theory to practical experiences working directly with young children, ages birth through early school age. Students in degree programs must successfully complete supervised practicum 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 DOL 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.

Successful completion of the ECE degree requires students to complete practicums in licensed facilities. The Department of Health and Human Services, Division of Child Care Licensing, 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, including criminal and child protective records. Therefore, criminal or child protective history 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.

### **Practicum Requirements:**

In addition to meeting the admission requirements of the College, Early Childhood students must provide the following before the start of their first Practicum course:

1. A signed CMCC Student Disclosure and Consent form.
2. Demonstration of social and emotional stability and maturity.
3. Immunization Record (if born after 1956).
4. Written references documenting ability, character and suitability to work with children may be requested.
5. Arrangements for providing one's own transportation to and from practicum settings that take place in a wide geographic area and in a variety of settings.

## Early Childhood Education (ECE)

### Associate in Science Degree Requirements

#### Semester I

ECE 100	Introduction 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 and Toddler Curriculum	3
ECE 107	Infant and Toddler Practicum	1
ECE 150	Language & Literacy for Young Children	3
PSY 101	Introduction to Psychology	3
— —	Elective: Communication - select one of the following: COM 100 Public Speaking COM 101 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%)*

COM 100 or 101; ENG 101; PSY 101, 114, 210; SOC 220, one Humanities elective

*Mathematics and/or Science - 13-14 (20%)*

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

*Electives -3 (4%)*

### Associate in Applied Science Degree Requirements

#### Semester I

		<b>Credit Hours</b>
BUS 101	Small Business Management	3
ECE 100	Introduction 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 and Literacy for Young Children	3
MAT 101*	Business Mathematics	3
— —	Elective: Communication - Select one of the following: COM 100 Public Speaking COM 101 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 <u>one</u> 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

*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 63-64**

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

*Humanities and Social Science - 15 (24%)*

COM 100 or 111; ENG 101; PSY 101 or SOC 220, PSY 114, 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.

## Early Childhood Education (ECE)

### Certificate Requirements

#### **Semester I** **Credit Hours**

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 <b>one</b> of the following:	3
	PSY 101 Introduction to Psychology	
	SOC 220 Sociology of the Family	
— —	Elective: Communication - select <b>one</b> of the following:	3
	COM 100 Public Speaking	
	COM 101 Interpersonal Communication	
— —	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.*



## Education (EDU)

### Program Description

The Education program at Central Maine Community College is designed to prepare graduates to work in educational support and service positions under the supervision of professional educators. It is also a gateway to a variety of careers which require additional education at the baccalaureate or master's degree levels. The **Associate in Applied Science in Education** prepares graduates for entry and second level employment as Ed Techs I and II (as defined by the State of Maine, Department of Education). Under the supervision of other professionals, graduates will be able to implement, evaluate and modify academic support activities. Graduates will be prepared to recognize and respond appropriately to problems and issues commonly found in schools and other learning environments.

The **Associate in Science in Education** prepares graduates for entry-level educational support positions and transfer opportunities to baccalaureate programs. Graduates will be prepared to work in learning environments supporting professional educators in the teaching/learning process and to continue their education in upper level programs. Under the supervision of other professionals, graduates will be able to implement, evaluate and modify academic support activities and be prepared to recognize and respond appropriately to problems and issues commonly found in learning environments. Academic instruction will prepare graduates to meet the standards of a professional position and authorization requirements.

The **Certificate in Education** prepares graduates for entry level employment as an Ed Tech I (as defined but the State of Maine, Department of Education). Graduates will be prepared to work in learning environments providing limited support to the teaching/learning process. Under the supervision of other professionals, graduates will be able to implement, academic support activities. Graduates will be prepared to recognize and respond appropriately to problems and issues commonly found in schools and other learning environments. Academic instruction will prepare graduates to meet minimum professional standards and authorization requirements.

### Course Requirements

Graduates are required to achieve a grade of "C" or better in all education courses.

### Program Educational Outcomes

Upon successful completion of the Education program graduates will be able to:

1. Describe the role, career path and regulations governing education professionals.
2. Demonstrate the interpersonal and communication skills required for successful employment in education.
3. Analyze data and contextual information to achieve desired educational outcomes.
4. Apply critical thinking and problem solving techniques to educational environments.

### Associate in Science Degree Requirements

<b>Semester I</b>		<b>Credit Hours</b>
EDU 101	Introduction to Education	3
ENG 101*	College Writing	3
— —	Elective: Science - Advisor Approved	3
— —*	Elective: Mathematics - 100 level or higher - Advisor approved	3
PSY 111	Developmental Psychology	3
<i>*Course placement determined by assessment test scores and/or prior college course work</i>		
<b>Semester II</b>		
EDU 155	Psycho/Social Needs of Students	3
EDU 185	Fundamentals of Educating Students with Special Needs	3
PSY 101	Introduction to Psychology	3
— —	General Elective - Advisor approved	3
— —	Elective: Communication - select <u>one</u> of the following:	3
	COM 100 Public Speaking	
	COM 101 Interpersonal Communication	
<b>Semester III</b>		
EDU 161	Technology in Education	3
EDU 261	Fundamentals of Literacy Education	3
— —	General Elective- Advisor approved	3
— —	Elective: Mathematics - Advisor approved	3
— —	Elective: Science (with lab) - Advisor approved	4
<b>Semester IV</b>		
EDU 271	Fundamentals of Mathematics Education	3
EDU 285	The Theory and Practice of Educational Support	3
SOC 200	Issues in Diversity	3
SOC 220	Sociology of the Family	3
— —	Elective: Humanities - Advisor approved	3
<b>Total Credit Hour Requirements</b>		<b>61</b>

### Program Notification

All applicants are advised that graduates seeking employment in this field may be required to meet additional licensing requirements, which may include, but is not limited to, background checks, finger printing and an SBI (State Bureau of Identification) record on file with the employer or appropriate agency.

### Pre-registration Requirements

In addition to meeting the general admission requirements of the College, applicants to this program may be asked to submit three references, written by non-family members, documenting ability, character and suitability to work with children and/or young adults.



## Education (EDU)

### Associate in Applied Science Degree Requirements

<b>Semester I</b>	<b>Credit Hours</b>
BCA 120 Introduction to Computer Applications	3
EDU 101 Introduction to Education	3
ENG 101* College Writing	3
— — Elective: Psychology - select <u>one</u> of the following:	3
PSY 111 Developmental Psychology	
PSY 114 Child Development	
— —* Elective: Mathematics - 100 level or higher - Advisor approved	3
<i>*Course placement determined by assessment test scores and/or prior college course work</i>	
<b>Semester II</b>	
EDU 185 Fundamentals of Educating Students with Special Needs	3
PSY 101 Introduction to Psychology	3
— — General Elective - Advisor approved	3
— — Elective: Communication - select <u>one</u> of the following:	3
COM 100 Public Speaking	
COM 101 Interpersonal Communication	
— — Elective: Mathematics- 100 level or higher - Advisor approved	3
<b>Semester III</b>	
EDU 155 Psycho/Social Needs of Students	3
EDU 261 Fundamentals of Literacy Education	3
PSY 210 Behavior Analysis and Management	3
SOC 200 Issues in Diversity	3
— — Elective: Humanities - Advisor approved	3
<b>Semester IV</b>	
EDU 161 Technology in Education	3
EDU 271 Fundamentals of Mathematics Education	3
EDU 285 The Theory and Practice of Educational Support	3
SOC 220 Sociology of the Family	3
— — Elective: Science - Advisor approved	3 - 4
<b>Total Credit Hour Requirements</b>	<b>60 - 61</b>

### Certificate Requirements

<b>Semester I</b>	<b>Credit Hours</b>
EDU 101 Introduction to Education	3
ENG 101* College Writing	3
EDU 271 Fundamentals of Mathematics Education	3
— —* Elective: Mathematics - 100 level or higher - Advisor approved	3
PSY 111 Developmental Psychology	3
<i>*Course placement determined by assessment test scores and/or prior college course work</i>	
<b>Semester II</b>	
EDU 185 Fundamentals of Educating Students with Special Needs	3
EDU 261 Fundamentals of Literacy Education	3
EDU 285 The Theory and Practice of Educational Support	3
SOC 220 Sociology of the Family	3
— — Elective: Communication - select <u>one</u> of the following:	3
COM 100 Public Speaking	
COM 101 Interpersonal Communication	
<b>Total Credit Hour Requirements</b>	<b>30</b>

### **Distribution of A.S. Degree Credit Hour requirements**

*Humanities and Social Science - 21 (34.4%)*

COM 101 or 111; ENG 101; PSY 101, 111; SOC 200, 220 and one Humanities elective

*Mathematics and/or Science - 13 (21.2%)*

Two Math electives and two Science electives

*Concentration- 21 (34.4%)*

EDU 101, 155, 161, 185, 261, 271 and 285

*Elective - 6 (10%)*

Two General Education electives

### **Distribution of A.A.S. Degree Credit Hour requirements**

*Humanities and Social Science - 21 (35%)*

COM 101 or 111; ENG 101, PSY 101, PSY 111 or 114, 210, SOC 200, 220, and one Humanities elective and one Social Science elective

*Mathematics and/or Science - 12-13 (20%)*

Two Math electives and one Science elective

*Concentration - 24 (40%)*

BCA 120, EDU 101, 155, 161, 185, 261, 271 and 285

*Elective - 3 (5%)*

One Elective

## 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 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 pages that follow). 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.

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.

### 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 ____	MAT 100* Intermediate Algebra <i>or</i> MAT 122 College 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 higher) - 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 or 122, 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.

## Electromechanical Technology (ELT)

### 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.
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.

### Certificate Requirements

#### Core Requirements

BCA 120	Introduction to Computer Applications	3
ELT 111	Electricity I	4
ENG 101*	College Writing	3
MAT 100*	Intermediate Algebra	3
		<b>13</b>

*\*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 Motors	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 (Lec.)	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 for individuals who wish to explore different programs before deciding on a specific field of study. In addition, this program prepares students 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 should work collaboratively with their academic advisor and the Director of Transfer/Advising 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

COM 100 Public Speaking or COM 101 Interpersonal Communication or COM 121 Group Process, ENG 101 College Writing and one of the following: ENG 131 Style and Syntax of American English; ENG 201 Technical Writing; ENG 211 Creative Writing; ENG 220 Business Communication; ENG 221 Advanced Composition and Research.

#### 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 course offerings (other than those listed under Communication) chosen from ART, ASL, ENG, ESL 102, FRE, HUM, INS, MUS, PHI, SPA, or WST. Note: INS 101 Technology & Society meets Humanities or Interdisciplinary requirement.

#### Social Science

#### 9 Credit Hours

Three course offerings listed as : ECO , ESL 103, GEY, HIS, POS, PSY, SOC, SSC.

#### Interdisciplinary

#### 3 Credit Hours

One of the following: INS 101 Technology & Society, INS 211 The Asian Tradition, INS 251 Western Thought and Culture II, INS 296 Interdisciplinary Seminar; MAT 102 Numbers & Logic.

#### 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



## Graphic Arts/Printing Technology (GAT)

### Program Description

Graphic Arts/Printing Technology is a program that offers students the option of earning a Certificate 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. Through the completion of assigned production projects, students become proficient in 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. The Graphic Arts/Printing Technology program first earned national accreditation in 1993 and meets the PrintEd accreditation standards of the Graphic Arts Education and Research Foundation (GAERF), - 1899 Preston White Drive, Reston, VA 20191-4367, telephone - (703) 264-7200. The program was reaccredited in January 2006. Visit our web page at [www.cmcc.edu/gat](http://www.cmcc.edu/gat).

### Career Opportunities

Graduates of this program may pursue careers in design and layout, 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 his/her 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 Outcomes:

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

1. Employ the specific skills and good work habits that are required in today's Printing Industry.
2. Analyze, plan and safely produce quality printed products within a production setting as part of a team approach within the recommended national standards of time, waste and quality.
3. Clearly communicate with customers and other team members utilizing written, verbal and/or electronic means.
4. Participate in continuing education either formally through credit coursework, or through other education opportunities such as in-services or industrial association activities.

### Distribution of A.A.S. Credit Hour Requirements in Prepress Area of Concentration

*Humanities and Social Science - 12 (17.7%)*

COM 100 or ENG 201, ENG 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 (64.7%)*

GAT 100, GAT 104, 105, 111, 113, 131, 155, 176, 281, 285, 292 (or 293), and two GAT electives

*Elective - 3 (4.4%)*

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

*Humanities and Social Science - 12 (17.1%)*

COM 100 or ENG 201, ENG 101 one Humanities and one Social Science elective

*Mathematics and/or Science - 9-10 (12.9%)*

MAT 101, and two Mathematics/Science electives

*Concentration - 46 (65.7%)*

GAT 100, 104, 105, 111, 131, 132, 141 or 151, 281, 286, 233, 234, 235, 293, or 294 and one elective

*Elective: 3 (4.3%)*

## Graphic Arts/Printing Technology (GAT)

### Associate in Applied Science Degree Requirements Prepress Concentration

<b>Semester I</b>	<b>Credit Hours</b>	<b>Semester II</b>	<b>Credit Hours</b>
ENG 101* College Writing	3	GAT 113 Advanced Image Assembly	3
GAT 100 Introduction to Printing	2	GAT 155 Desktop Publishing: QuarkXpress	3
GAT 104 Copy Preparation Techniques	1	GAT 176 Photoshop I	3
GAT 105 Copy Preparation Operations	2	— — Elective: GAT - Advisor	2
GAT 111 Offset Preparation	3	— — Approved	
GAT 131 Duplicator & Finishing Operations	3	— — Elective: Humanities - Advisor approved	3
MAT 101* Business Mathematics	3	— — Elective: Mathematics/Science	3-4
<i>*Course placement determined by assessment test scores and/or prior college coursework.</i>		— — Advisor approved	
<b>Semester III</b>		<b>Semester IV</b>	
GAT 281 Intro to Printing Estimating	3	— — Elective: GAT - Select <u>one</u> of the	12
GAT 285 Production Experience	6	— — following:	
— — Elective: GAT - Advisor	2	— — GAT 292 Industrial Experience (in house)	
— — Approved		— — GAT 293 Industrial Experience (field)	
— — Elective: Communication - select	3	— — Elective: Mathematics/Science -	3-4
— — <u>one</u> of the following:		— — Advisor approved	
— — ENG 201 Technical Writing		— — Elective: Social Science	3
— — COM 100 Public Speaking		— — Advisor approved	
— — Elective: Advisor approved	3	<b>Total Credit Hour Requirements</b>	<b>68-70</b>

### Associate in Applied Science Degree Requirements Press/Bindery Concentration

<b>Semester I</b>	<b>Credit Hours</b>	<b>Semester II</b>	<b>Credit Hours</b>
ENG 101* College Writing	3	GAT 132 Advanced Duplicator Operations	3
GAT 100 Introduction to Printing	2	— — Elective: GAT - select one of the	2
GAT 104 Copy Preparation Techniques	1	— — following:	
GAT 105 Copy Preparation Operations	2	— — GAT 141 Letterpress Printing	
GAT 111 Offset Preparation	3	— — GAT 151 Screen Printing	
GAT 131 Duplicator & Finishing Operations	3	— — Elective: GAT - Advisor approved	3
MAT 101* Business Mathematics	3	— — Elective: Humanities - Advisor approved	3
<i>*Course placement determined by assessment test scores and/or prior college coursework.</i>		— — Elective: Mathematics/Science -	3-4
		— — Advisor approved	
		— — Elective - Advisor approved	3
<b>Semester III</b>		<b>Semester IV</b>	
GAT 233 Litho Printing & Bindery Theory	2	— — Elective: GAT - Select <u>one</u> of the	12
GAT 234 Litho Printing & Bindery Operations	2	— — following:	
GAT 235 Web Press Theory	2	— — GAT 293 Industrial Experience (field)	
GAT 281 Introduction to Printing Estimating	3	— — GAT 294 Industrial Experience (in house)	
GAT 286 Production Experience	6	— — Elective: Mathematics/Science -	3-4
— — Elective: Communication - select <u>one</u> of	3	— — Advisor approved	
— — the following:		— — Elective: Social Science- Advisor approved	3
— — ENG 201 Technical Writing		<b>Total Credit Hour Requirements</b>	<b>70-71</b>
— — COM 100 Public Speaking			

#### GAT Electives

GAT 106 Design & Layout I (3 cr)  
 GAT 108 Introduction to Acrobat Professional (3 cr)  
 GAT 113 Advanced Image Assembly (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 (3 cr)  
 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 Concentration

<b>Semester I</b>	<b>Credit Hours</b>	<b>Semester II</b>	<b>Credit Hours</b>
ENG 101* College Writing	3	GAT 192 Production Experience: Prepress	6
GAT 100 Introduction to Printing	2	GAT 113 Advanced Image Assembly	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		
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 32**

### Certificate Requirements

#### Press/Bindery Concentration

<b>Semester I</b>	<b>Credit Hours</b>	<b>Semester II</b>	<b>Credit Hours</b>
ENG 101* College Writing	3	GAT 193 Production Experience: Press/Bindery	6
GAT 100 Introduction to Printing	2	GAT 132 Advanced Duplicator Operation	3
GAT 104 Copy Preparation Techniques	1	GAT 141 Letterpress Printing	2
GAT 105 Copy Preparation Operations	2	— — Electives: GAT - Advisor approved	4
GAT 111 Offset Preparation	3		
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 32**

### GAT Electives

GAT 106 Design & Layout I (3 cr)  
GAT 108 Introduction to Acrobat Professional (3 cr)  
GAT 113 Advanced Image Assembly (3 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 (3 cr)  
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

*(Please note that currently this program is available only on a part-time basis. Students entering this program should plan on a minimum of a three year commitment).*

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. Upon completion of the nine courses identified by a \*\*double asterisk, students are eligible for certification as a MHRT/C technician (Mental Health Rehabilitation Technician/Community).

**Note:** All applicants are advised that Human Services students are required to complete practicums in social service agencies. Therefore, 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, including criminal and child protective records. Therefore, criminal or child protective history could jeopardize an individual's ability to successfully meet all the requirements of the program.

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

### Pre-Registration Requirements

The following are additional requirements needed prior to registration in the first practicum course. Other programs at Central Maine Community College 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) Professional liability insurance is required.
- 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.



## Human Services (HUS)

### Associate in Applied Science Degree Requirements

*Please note HUS courses must be taken  
in the sequence listed*

<b>Semester I</b>	<b>Credit Hours</b>
BIO 101 General Biology (Lec.)	3
BIO 102 General Biology (Lab)	1
ENG 101* College Writing	3
HUS 112** Introduction to Community Mental Health	3
PSY 101 Introduction to Psychology	3
<b>Semester II</b>	
HUS 155** Case Management	3
SOC 200** Issues in Diversity	3
MAT ___* Elective - 100 level or above	3
<i>*Course placement determined by assessment test scores and/or prior college course work.</i>	
<b>Semester III</b>	
PSY 116** Psychology of Group Dynamics	3
PHI 101 Critical Thinking	3
PSY 151** Interviewing and Counseling	3
<b>Semester IV</b>	
PSY 212** Abuse, Trauma and Recovery	3
PSY 202** Developmental Disabilities and Psychosocial Rehabilitation	3
MAT 135 Statistics	3
<b>Semester V</b>	
PSY 111 Developmental Psychology	3
SOC 201** Sociology of the Aging	3
HUS 153** Substance Abuse	3
HUS 241 Human Services Practicum I	4
<b>Semester VI</b>	
SOC 220 Sociology of the Family	3
COM 100 Public Speaking	3
HUS 251 Human Services Practicum II	4
_____ Elective - Advisor Approved	3
<b>Total Credit Hour Requirements</b>	<b>66</b>

*Upon completion of the nine courses identified by a \*\*double asterisk, students are eligible for certification as a MHRT/C technician (Mental Health Rehabilitation Technician/Community)*

### **Distribution of A.A.S. Credit Hour Requirements**

*Humanities and Social Sciences - 36 (55.6%)*

COM 100, ENG 101, PHI 101, PSY 101, 111, 116, 151, 202, 212, SOC 200, 201, 220.

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

BIO 101, 102, MAT 135 and one math elective

*Concentration - 16 (24.2%)*

HUS 112, 153, 155, 241, and 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 should work collaboratively with their academic advisor and the Director of Transfer/Advising 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 in a variety of contexts.
2. Access, evaluate and utilize a variety of information resources.
3. Articulate and utilize fundamental mathematical concepts.
4. Explain basic general scientific laws, theories, and concepts in either the biological or physical sciences.
5. Apply critical thinking skills and link concepts across a variety of disciplines.
6. Critically examine the values, rituals and beliefs of cultures that are separated in time or space from one's own.

### Admission Requirements

In addition to the general admissions requirements of the College, applicants to this program must have successfully completed 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 Liberal Studies degree.

#### Communication

#### 9 Credit Hours

COM 100 Public Speaking, COM 101 Interpersonal Communication or COM 121 Group Process, ENG 101 College Writing and one of the following: ENG 131 Style and Syntax of American English; ENG 201 Technical Writing; ENG 211 Creative Writing; ENG 220 Business Communication; ENG 221 Advanced Composition and Research.

#### 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 course offerings (other than those listed under Communication) chosen from ART, ASL, ENG, ESL 102, FRE, HUM, MUS, PHI, SPA, or WST. Note: INS 101 Technology & Society meets Humanities or Interdisciplinary requirement.

#### Social Science

#### 9 Credit Hours

Three course offerings listed as : ECO , ESL 103, GEY, HIS, POS, PSY, SOC, SSC.

#### Interdisciplinary

#### 3 Credit Hours

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

#### 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 taken outside of a general education area.

#### Total Credit Hour Requirements

60 - 61

## 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 operate a variety of conventional machine tools, computer numerical control (CNC) machines, read blueprints and use precision measuring and inspection instruments.

Currently there are two MTT program options: Associate in Applied Science 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.

The Machine Tool Technology Program was granted initial accreditation in 2003 by the National Institute for Metalworking Skills (NIMS) - 10565 Fairfax Boulevard, Suite 203, Fairfax, VA 22030 - telephone number - (703) 352-4971.

### 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 ensure 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	Introduction 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	Intro to Computer Numerical Control	2

#### Semester II

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

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

#### 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 & 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
— —	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 (18.2%)

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

Elective - 3 (4.6%)

## Machine Tool Technology (MTT)

### Certificate Requirements

#### Semester I

#### Credit Hours

MAT 100*	Intermediate Algebra	3
MECT103	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	Introduction 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

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

**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

<b>Semester I</b>	<b>Credit Hours</b>
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.

<b>Semester II</b>	<b>Credit Hours</b>
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

<b>Semester III</b>	<b>Credit Hours</b>
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

<b>Semester IV</b>	<b>Credit Hours</b>
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%)*

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

## Mechanical Engineering Technology (MECT)

### Associate in Applied Science Degree Requirements

<b>Semester I</b>		<b>Credit Hours</b>
COM 100	Public Speaking	3
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>		
<b>Semester II</b>		
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
<b>Semester III</b>		
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
<b>Semester IV</b>		
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
<b>Total Credit Hour Requirements</b>		<b>66</b>

### Certificate Requirements

<b>Semester I</b>		<b>Credit Hours</b>
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>		
<b>Semester II</b>		
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 - Advisor approved	3
— —	Elective: Social Science - Advisor approved	3
<b>Total Credit Hour Requirements</b>		<b>35</b>

### Distribution of Credit Hour Requirements (A.A.S.)

*Humanities and Social Sciences - 12 (18%)*

COM 100, ENG 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%)*

CAD 282, 292; MECT 103, 111, 142, 151, 211, 221, 241, 251; 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 Assistant Administrative Procedures, Medical Transcription, and Medical Assistant Clinical Procedures. Also, 120-hour Externships will be required in semesters II and IV.

*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:

- A physical exam performed by a qualified health care professional

*(Continued on next page)*

### Associate in Applied Science Degree Requirements

<b>Semester I</b>		<b>Credit Hours</b>
BCA 101	Computer Keyboarding	3
BCA 120	Introduction to Computer Applications	3
BIO —	Biology - select one of the following:	
	BIO 101 General Biology (Lec)	3
	BIO 102 General Biology (Lab)	1
<b>OR</b>		
	BIO 115* Anatomy & Physiology I (Lec)	3
	BIO 116* Anatomy & Physiology I (Lab)	1
MAT 101**	Business Math	3
MET 111	Medical Terminology I	3
<b>Semester II</b>		
BCA 121	Word Processing	3
BIO —	Biology - select one of the following:	
	BIO 105 Essentials of Anatomy & Physiology	3
<b>OR</b>		
	BIO 117* Anatomy & Physiology II (Lec)	3
	BIO 118* Anatomy & Physiology II (Lab)	1
ENG 101**	College Writing	3
MET 101	Medical Transcription I	4
COM 100	Public Speaking	3
<i>*The BIO 115-118 series is the recommended choice for transfer to a bachelor degree program. Please note course prerequisites.</i>		
<i>**Course placement determined by placement test scores and/or prior college work.</i>		
<b>Semester III</b>		
MEA 200	Medical Administrative Procedures	4
MEA 220	Medical Clinical Procedures I (Lec.)	2
MEA 221	Medical Clinical Procedures I (Lab)	2
MEA 263	Medical Assistant Externship I (120 hrs)	3
PSY 101	Introduction to Psychology	3
<b>Semester IV</b>		
MEA 210	Insurance Coding/Claims Processing	3
MEA 230	Advanced Medical Clinical Procedures II (Lec.)	3
MEA 231	Advanced Medical Clinical Procedures II (Lab)	2
MEA 264	Medical Assistant Externship II (120 hrs)	3
— —	Elective: Humanities - Advisor Approved	3
— —	Elective: BUS or BCA - Advisor Approved	3
<b>Total Credit Hour Requirements</b>		<b>63 - 64</b>

## Medical Assistant (MEA)

*(Continued from previous page)*

- 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
- Professional liability insurance is required.
- All students are advised to purchase their own Health/Accident Insurance
- CPR certification prior to the beginning of the third semester
- The program is designed for a fall start of the MEA courses

*Please Note: Students must provide own transportation to and from the externship sites. All Medical Assistant majors must follow the prescribed course sequence.*

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

*Humanities and Social Sciences - 12 (20%)*

COM 100, ENG 101, Humanities elective and PSY 101

*Mathematics and/or Science - 10-11 (16%)*

MAT 101, BIO 115, 116, 117, 118 (or BIO 101, 102, 105)

*Concentration - 41 (64%)*

BCA 101, 120, 121, MEA 200, 210, 220, 221, 230, 231, 263, 264, MET 101, 111 and one Business elective





## Medical Coding (MEO)

### Program Description

The Certificate in Medical Coding prepares the graduates of this program to perform specialized data entry, classification, and record keeping procedures related to medical diagnostic, treatment, billing, and insurance documentation. Graduates of this program are eligible to sit for the Certification Examination. Upon successful completion of the Certification Examination, the individual is eligible to become a Certified Professional Coder.

Graduates of this program are prepared to work in various healthcare settings, including hospitals, clinics, physician practices, surgery centers, long-term care facilities and home health agencies. Employment opportunities are also found in nontraditional healthcare areas such as insurance companies, government agencies, computer software companies, as well as with consulting firms.

### Course Requirements

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.

### Program Educational Outcomes:

Upon completion of the Certificate in Medical Coding program, the graduate is prepared to:

1. Demonstrate the ability to translate information from the medical record into standardized numerical codes accurately and in an efficient manner.
2. Demonstrate professional conduct and ethical behavior.
3. Demonstrate the ability to work with other members of the health care team.
4. Recognize factors that affect third-party reimbursement.

### Certificate Requirements

#### Semester I

	Credit Hours
MET 111 Medical Terminology	3
BCA 101 Computer Keyboarding	3
ENG 101* College Writing**	3
BCA 120 Introduction to Computer Applications	3

#### Semester II

MET 150 Medical Specialties I	3
MCO 121 Medical Diagnostic Coding (ICD 9)	3
MAT 101* Business Math	3

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

#### Semester III

MET 151 Medical Specialties II	3
MCO 125 Medical Procedural Coding	3
MEA 210 Insurance Coding/Claim Processing	3

**Total Credit Hour Requirements 30**

*\*\* 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.*

## 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 Central Maine Community College.

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 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*

<b>Semester I</b>	<b>Credit Hours</b>
BCA 101 Computer Keyboarding	3
BCA 120 Introduction to Computer Applications	3
ENG 101* College Writing**	3
MET 111 Medical Terminology	3
<b>Semester II</b>	
BCA 121 Word Processing	3
MET 101 Medical Transcription I	4
MET 150 Medical Specialties I	3
<b>Semester III</b>	
MAT 101* Business Mathematics	3
MET 102 Medical Transcription II	4
MET 151 Medical Specialties II	3

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

**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 CMCC 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, 158 State House Station, 24 Stone Street, Augusta, Maine 04333-0158 - telephone - (207) 287-1133. In addition, the Associate Degree option was granted continuing accreditation in 1996 by the National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York City, NY 10006 - telephone - (212) 363-5555. The Program was reaccredited in July 2004.

### 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 or at the University of Maine at Fort Kent.

### 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

- 1) Demonstrate above average proficiency in reading and mathematics as evidenced by the Nurse Entrance Test.
- 2) Submit Visual Acuity exam results two months prior to the start of the first nursing course. Necessary: Visual acuity with corrective lenses to identify cyanosis, absence of respiratory movement in patients; and to read very fine, small print on medication containers, physician's orders, monitors and equipment calibrations.
- 3) Because health care workers are at high risk for certain illnesses, the applicant must submit proof to the Chairperson of the Nursing Program of the following immunizations or immunities two months prior to the start of the first nursing course.

#### MMR: Measles, Mumps, Rubella

An official record of an immune titer must be provided for each disease.

#### HBV: Hepatitis B: 3 Doses

An official record of an immune titer must be provided following completion of the series.

#### TD: Adult Tetanus

An official record of immunization within the past 10 years must be provided.

#### PPD: Purified Protein Derivative (TB)

Annual testing is required. If applicant has not been tested within the past year, initial testing must consist of 2 tests not more than three weeks apart. Applicants with a history of a positive skin test should submit evidence of a yearly evaluation by a health care provider.

(Continued from previous page)

### **Varicella (Chicken Pox)**

An official record of an immune titer must be provided.

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) Complete the application process by **January 31st** of the anticipated enrollment year.

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 Department 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 nursing faculty advisor.

### **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.

### **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.

<b>Semester I</b>	<b>Credit Hours</b>
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
NUR 115 Medication Preparation, Administration, and Dosage Calculations	1

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

### **Special Requirement (3 credit hour)**

NUR 116 Role Transition (*this course is required only of Licensed Practical Nurses prior to second year nursing courses*)

### **Semester II**

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 (*for only those pursuing the Diploma award and exiting at the practical nursing level*)

### **Semester III**

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**

NUR 213 Nursing Across the Life Span III	9
COM 100 Public Speaking	3
— — Elective: Humanities - Advisor approved	3
— — Elective: General Education - Advisor approved	3

**Total Credit Hour Requirements 68**

### **Distribution of A.S. Credit Hour Requirements**

*Communication, Humanities and Social Sciences - 15 (22%)*

COM 101, ENG 101, PSY 101, 111 and one elective.

*Mathematics and/or Science - 12 (18%)*

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

*Concentration - 38 (55%)*

NUR 112, 115, 121, 212 and 213

*Elective (General Education) 3 (5%)*



## Occupational Health & Safety (OHS)

### Program Description

The Occupational Health and Safety program prepares individuals who will work independently or as part of a team to make the workplace safer and healthier by identifying potential job-related hazards and possible ways to address them through engineering solutions, administrative practices and the training and education of workers in safe and healthy work practices. 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 of ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - Telephone 410-347-7700.

### 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.

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

*Communication, Humanities and Social Sciences - 12 (18%)*

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

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

CHY 101, 102; MAT 122; PHY 121.

*Concentration - 40 (61%)*

OHS 101, 106, 126, 185, 200, 216, 221, 250, 260, 265, 266, 293, 295 and one OHS elective.

*Electives - 4 (6%)*

PHY 122 or OHS 141, 142, 143, 215 and one 3 credit Advisor approved.

### Associate in Applied Science Degree Requirements

#### Suggested Sequence of Courses

<b>Semester I</b>	<b>Credit Hours</b>
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
OHS 185 Fire Prevention and Suppression	3

*\*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 and Health Program Management	3
— — Elective: OHS - Advisor approved	3
— — 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 Mgm't.	3
OHS 295 Basic Principles of Safety Engineering	3
CHY 111 <sup>1</sup> Principles of Organic and Biological Chemistry (Lec.)	3
CHY 112 <sup>1</sup> Principles of Organic and Biological Chemistry (Lab)	1

#### OR

PHY 121 Technical Physics	3
— — Elective: OHS 141, 142, 143, or 215 or PHY122 <sup>2</sup> or Advisor approved	1

**Total Credit Hour Requirements 66-67<sup>3</sup>**

#### Notes:

<sup>1</sup> Students enrolling in CHY 111/112 may not take the PHY 122 elective.

<sup>2</sup> Only students enrolling in PHY 121 may enroll in PHY 122.

<sup>3</sup> Students enrolling in CHY 111/112 will graduate with one additional credit.

## Occupational Health & Safety (OHS)

### **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.
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 Occupational Health & Safety.

### **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.

### **Certificate Requirements**

#### *Suggested Sequence of Courses*

	<b>Credit Hours</b>
ENG 101* College Writing	3
OHS 101 Basic Principles of Occupational Health	3
OHS 106 Basic Principles of Occupational Safety	3
OHS 126 Legal Rights & Responsibilities	3
OHS 216 Worksite Evaluation	3
OHS 221 Emergency Planning & Response	3
OHS 260 Ergonomics	3
— — Elective: Mathematics	3
MAT 050* - Algebra I or	
MAT 122* - College Algebra or Advisor approved	
— — Electives: Advisor approved	6

*\*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 Community College 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.

Central Maine Community College awards 45 academic credits in recognition of the full two-year, Joint Review Committee on Education in Radiologic Technology accredited CMMC Radiologic Technology program. In addition, Central Maine Community College 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)795-5974, 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 Community 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 Central Maine Community College coursework must be completed in order to earn an Associate in Applied Science Degree (all degree candidates must have completed a minimum of 17 credit hours at Central Maine Community College).

### 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.
3. Employ critical thinking skills in the practice of diagnostic radiologic services to patients in health care settings.

### Associate in Applied Science Degree Requirements

			<i><b>Credit Hours</b></i>
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
COM 100	Public Speaking		3
— —	Electives: Humanities - Advisor approved		3
— —	Elective: Social Science - Advisor approved		3

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

**Total Credit Hour Requirements 68**

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

*Humanities and Social Sciences - 12 (18%)*

COM 100, ENG 101 and two electives.

*Mathematics and/or Science and/or Business - 8 (11%)*

BIO 115, 116, 117, 118

*Concentration - 48 (71%)*

BCA 120; RAT 199

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.

### 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 and Chemistry.
- 4) Complete the application process by December 31st each year for competitive review process.

## Radiologic Technology (RAT)

### **Pre-registration Requirements**

- 1) Demonstrate above average proficiency in reading, writing and mathematics as evidenced by Central Maine Community College assessment.
- 2) Submit medical history and physical exam results to the Radiologic Technology Program at Central Maine Medical Center.
- 3) Because health care workers are at high risk for certain illnesses, the applicant must submit proof of the following immunizations or immunities two months prior to the start of the first Radiologic Technology course.

#### **MMR: Measles, Mumps, Rubella**

An official record of an immune titer must be provided for each disease.

#### **HBV: Hepatitis B: 3 Doses**

An official record of an immune titer must be provided following completion of the series.

#### **TD: Adult Tetanus**

An official record of immunization within the past 10 years must be provided.

#### **PPD: Purified Protein Derivative (TB)**

Annual testing is required. If applicant has not been tested within the past year, initial testing must consist of 2 tests not more than three weeks apart. Applicants with a history of a positive skin test should submit evidence of a yearly evaluation by a health care provider.

#### **Varicella (Chicken Pox)**

An official record of an immune titer must be provided.

*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 - 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.

Central Maine Community College 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 laptop 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 Class of 2010

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 60 credit hours.

*Sequence of Courses:*

<b>Semester 1</b>	<b>Credit Hours</b>
BCA 120 Introduction to Computer Applications	3
LER 011 Orientation Seminar *(a non degree credit, program requirement)	*1
MAT 130 Technical Mathematics I	4
<b>Semester 2</b>	
ENG 107 Intruduction to Writing	3
TTV 160 Digitals Systems for Telecommunications I	4
<b>Semester 3</b>	
MAT 230 Technical Mathematics II	4
TTV 161 Digitals Systems for Telecommunications II	4
<b>Semester 4</b>	
PHY 130 Physics	4
TTV 162 Electrical Circuits	4
<b>Semester 5</b>	
TTV 260 Introduction to Electronics	4
TTV 261 Telecommunications I	4
<b>Semester 6</b>	
TTV 262 Electronic Communications	4
TTV 263 Telecommunications II	4
<b>Semester 7</b>	
ENG 227 English Composition II	3
TTV 264 Telecommunications III	4
<b>Semester 8</b>	
SSC 216 Changing Nature of Work	3
TTV 265 Telecommunications IV	4

*Note: additional class and/or lab hours are conducted via an electronic network.*

**Total Credit Hour Requirements 60**

### **Distribution of A.A.S. Credit Hour Requirements**

*Humanities and Social Science - 9 (15%)*

ENG 107, 227 and SSC 216.

*Mathematics and/or Science - 12 (20%)*

MAT 130, 230; PHY 130.

*Concentration - 39 (65%)*

BCA 120, TTV 160, 161, 162, 260, 261, 262, 263, 264 and 265.

## 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 and individual strengths to make sound career decisions.

### Admission to the Program

Individuals who seek admission to this program should contact the 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 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 Central Maine Community College. 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 - 6-8  
Advisor approved

— — Elective: Communication - Select one of 3  
the following:

COM 100 Public Speaking

COM 101 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 (17.4%)*

COM 100, 101 or ENG 201, ENG 101 and one Social Science elective

*Mathematics and Science - 9-11 (13%)*

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)

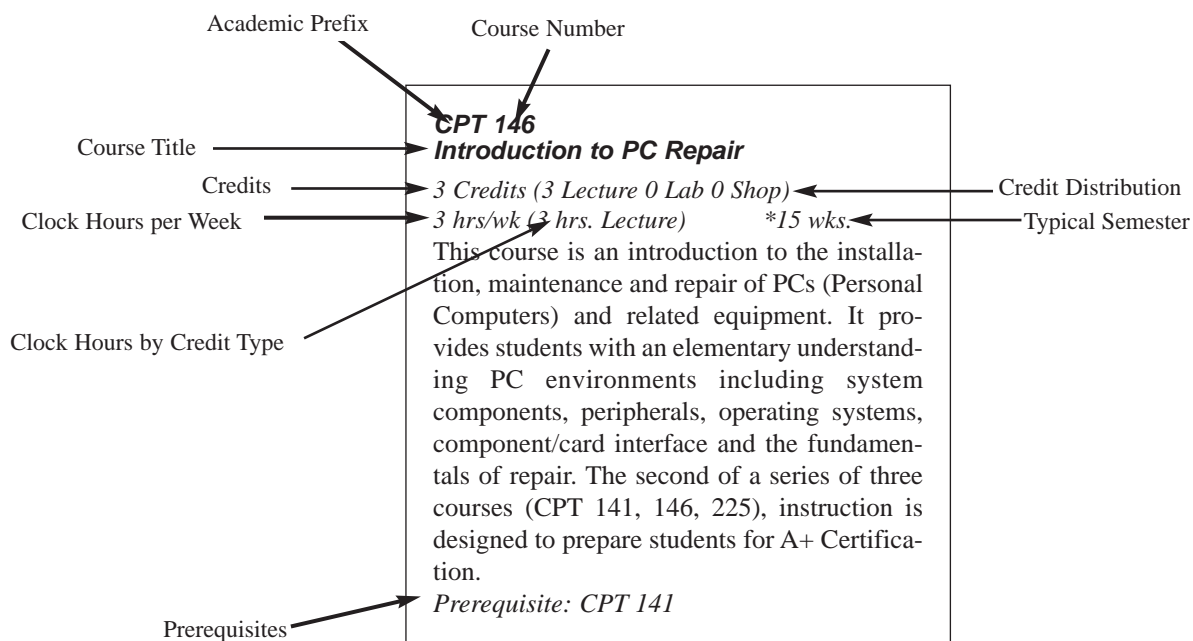




The course listings that follow include descriptions of courses offered by the College to meet curricula requirements. Descriptions are general in nature and are not intended to include all topics which may be part of the course and, in some cases, items in the descriptions may be omitted from the course. Revisions are sometimes necessary to meet changes in course or program objectives.

### Explanation of Course Description Codes

(The clock hour distributions contained in this catalog are based on a "typical" 15 week semester. Consult the current schedule for individual course meeting times. The College reserves the right to modify these and all other elements of a course at its discretion).



**Lecture Hours** - the number of hours per week a particular course meets in an instructor directed classroom situation.

**Lab or Studio Hours** - the number of hours per week a particular course meets in a student and equipment laboratory situation. Field work and small group discussions may also be included in these hours.

**Shop or Clinical or Field Experience or Practicum Hours** - the number of hours per week a particular course meets and where students are in a practical, occupational or applied learning situation.

**Credit Hours** - the number of credit hours awarded to the student who successfully completes a course.

### Definition of Units of Credit -

Central Maine Community College curricula designs are based on the following (Maine Community College System 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.

## Accounting (ACC)

### **ACC 208 Financial Accounting**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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.

### **ACC 210 Principles of Accounting I**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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.

### **ACC 212 Principles of Accounting II**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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: ACC 210 or Faculty approval.*

### **ACC 240 Intermediate Accounting I**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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 Accounting 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: ACC 212 with a grade of "C" or better or Faculty approval*

### **ACC 242 Intermediate Accounting II**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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: ACC 240 with a grade of "C" or better or Faculty approval.*

### **ACC 244 Computerized Accounting**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

This course utilizes QuickBooks 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 QuickBooks applications. The necessity of an audit trail will be emphasized. *Prerequisites: ACC 210 or Faculty approval.*

### **ACC 246 Tax Accounting (Individual)**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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: ACC 210 or Faculty approval.*

### **ACC 265 Managerial Accounting**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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.

## American Sign Language (ASL)

### **ASL 101 American Sign Language I**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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; and Deaf/deaf culture in North America. *Prerequisite: Fluency in English strongly recommended.*

### **ASL 102 American Sign Language II**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

This course continues the study and practice of basic skills initiated in ASL 101. Emphasizes comprehending, signing, developing receptive skills, and using the glossing system for written ASL. Interactive and extracurricular activities increase understanding of ASL and the deaf culture. *Prerequisite: ASL 101 or equivalent.*

*\*Please refer to Explanation of Courses on page 94*

## Applied Technical Studies (ATS)

### ATS 199 Prior Learning 15 wks.

*Variable Credit (maximum 24)*

This catalog listing reflects Central Maine Community College'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

3 Credits (1 Lecture 2 Lab 0 Shop)

5 hrs/wk (1 Hr. Lecture 4 Hrs. Lab) \*15 wks

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 and Materials

4 Credits (2 Hrs. Lecture 2 Lab 0 Shop)

6 hrs/wk (2 Hrs. Lecture 4 Hrs. Lab)

\*15 wks.

Students will research design and construction processes, materials, and methods to design a commercial masonry steel frame building, components 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 and ACET 115.*

*\*Please refer to Explanation of Courses on page 94*

### ACET 115 Building and Site Pre-design

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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, professional 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 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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 high-way curves.

### ACET 132 Surveying II

3 Credits (1 Lecture 2 Lab 0 Shop)

5 hrs/wk (1 Hr. Lecture 4 Hrs. Lab)

\*15 wks

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

3 Credits (1 Lecture 2 Lab 0 Shop)

5 hrs/wk (1 Hr. Lecture 4 Hrs. Lab)

\*15 wks

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 142, ACET 114.*

### ACET 234 Legal Aspects of Surveying

3 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

This course looks at the U.S. Legal System, the role of the surveyor, deed descriptions, and how land use regulations are used to prepare a land subdivision plan. *Prerequisite: ACET 131 or Faculty approval.*

### ACET 242 Independent Project

1 Credit

*Number of hours per week to be determined by Advisor*

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 Credits (3 Lecture 0 Lab 0 Shop)

3 hrs/wk (3 Hrs. Lecture) \*15 wks

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 Credit (.33 Lecture .66 Lab 0 Shop)

1.65 hrs/wk (.33 Hr. Lecture 1.32 Hrs.

Lab) \*15 wks

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**

3 Credits (1 Lecture 2 Lab 0 Shop)  
5 hrs/wk (1 Hr. Lecture 4 Hrs. Lab)  
\*15 wks

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.*

### **ACET 285 Civil Site Design CAD**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 hrs/wk (3 Hr. Lecture) \*15 wks  
This is an advanced level CAD course utilizing building - site design oriented CAD based software. The course introduces the student to Land Development Desktop and how this software is used towards site design and documentation towards the creation of industry standard drawings. The focus of the course will be on creation of drawings/presentations widely accepted within the construction - design industry utilizing LDT. *Prerequisite: Faculty approval - ACET 113 - 114 - 115.*

## **Art (ART)**

### **ART 101 Introduction to 2-D Design**

3 Credits (1 Lecture 2 Studio 0 Shop)  
5 hrs/wk (1 Hr. Lecture 4 Hrs. Studio)  
\*15 wks

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 Principles of 3-D Design**

3 Credits (1 Lecture 2 Studio 0 Shop)  
5 hrs/wk (1 Hr. Lecture 4 Hrs. Studio)  
\*15 wks

This course will expand the knowledge gained in ART 101 (2-D Design) and will emphasize theoretical and practical problem solving experience relating to the elements of art and the principles of design in the context of 3-D form creation. The course employs lecture, in-class workshops, and outside assignments to help students create and evaluate a variety of problem solving 3-D projects that involve mass, volume, closed and open form, plane, texture, multiples, and site-specific installation. *Prerequisite: ART 101 or permission of the instructor.*

### **ART 125 Twentieth Century American Crafts**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 hrs/wk (3 Hr. Lecture) \*15 wks  
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, 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.

### **ART 150 Approaches to Art**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 hrs/wk (3 Hr. Lecture) \*15 wks  
The overall purpose of this course is to provide the student with a basic understanding of the visual arts. The course deals with the nature of art, the evaluation of art, and the principles, processes, and materials of art. Specifically, we examine the formal elements of design and look at a wide variety of both two and three dimensional art to learn about the process and tools involved in art creation.

## **Astronomy (AST)**

### **AST 101 Astronomy**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 hrs/wk (3 Hrs. Lecture) \*15 wks  
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**

1 Credit (.5 Lecture 0 Lab .5 shop)  
2 hrs/wk(.5 Hr. Lecture 1.5 Hrs. Shop)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 hrs/wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 hrs/wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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**

1 Credit (1 Lecture 0 Lab 0 Shop)  
1 hr/wk (1 Hr. Lecture) \*15 wks  
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**

3 Credits (.75 Lecture 0 Lab 2.25 Shop)  
7.5 hrs/wk (.75 Hrs Lecture 6.75 Hrs. Shop) \*15 wks

This lab will provide the opportunity for students to diagnosis and repair 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**

3 Credits (2 Lecture 0 Lab 1 Shop)  
5 hrs/wk (2 Hrs. Lecture 3 Hrs. Shop) \*15 wks

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**

1 Credit (1 Lecture 0 Lab 0 Shop)  
1 hr/wk (1 Hr. Lecture) \*15 wks

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**

4 Credits (2 Lecture 2 Lab 0 Shop)  
6 hrs/wk (2 Lecture 4 Hrs. Lab) \*15 wks

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. *Co-requisite: AUT 155*

**AUT 159 Auto Electronic and HVAC**

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Lecture 6 Hrs. Shop) \*15 wks

This course teaches the theory of operation, diagnosis and repair of the electronic control systems for accessory and body control components. The systems will include, but not be limited to: electronic feedback systems, heat/cooling ventilation, interior accessories, and body

electrical. 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 160 Air Conditioning**

1 Credit (.5 Lecture .5 Lab 0 Shop)  
1.5 Hr/Wk (.5 Hrs. Lecture 1 Hr. Lab) \*15 wks

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**

3 Credits (2 Lecture 0 Lab 1 Shop)  
5 Hrs/Wk (2 Hrs. Lecture 3 Hrs. Shop) \*15 wks

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**

1 Credit (.5 Lecture .5 Lab 0 Shop)  
1.5 Hrs/Wk (.5 Hrs. Lecture 1 Hr. Lab) \*15 wks

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 180 Field Experience**

4 Credits (0 Lecture 0 Lab 4 Shop)  
12 Hrs/Wk (12 Hrs. Shop) \*15 wks

In AUT 180 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.

**AUT 181 Field Experience**

2 Credits (0 Lecture 0 Lab 2 Shop)  
6 Hrs/Wk (6 Hrs. Shop) \*15 wks

In AUT 181 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. *Prerequisite: Department Chairperson approval and a minimum 2.0 GPA with AUT 155, 156, and 160.*

**AUT 182 Field Experience**

4 Credits (0 Lecture 0 Lab 4 Shop)  
12 Hrs/Wk (12 Hrs. Shop) \*15 wks

In AUT 182 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. *Prerequisite: Department Chairperson approval and a minimum 2.0 GPA with AUT 130 and 131.*

**AUT 184 Field Experience**

4 Credits (0 Lecture 0 Lab 4 Shop)  
12 Hrs/Wk (12 Hrs. Shop) \*15 wks

In AUT 184 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. *Prerequisite: Department Chairperson approval and a minimum 2.0 GPA with AUT 271.*

**AUT 200 State Inspection**

1 Credit (.5 Lecture .5 Lab 0 Shop)  
1.5 Hrs/Wk (.5 Hrs. Lecture 1 Hr. Lab) \*15 wks

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**

6 Credits (3 Lecture 0 Lab 3 Shop)  
12 Hrs/Wk (3 Hrs. Lecture 9 Hrs. Shop) \*15 wks

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 241 Automatic/Manual Transmission**

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Hrs. Lecture 6 Hrs. Shop) \*15 wks

This course will cover transmission theory and power flow from the engine to the drive axle. Removal, disassembly, repair, assembly of pumps, converters, gear

train, shafts, bushings, case friction and reaction units, hydraulic and electronic shift control will be covered. Diagnosis and repair of clutch, transmission, transaxle, drive shaft, ring/pinion, axle shaft, differential case, and four-wheel drive components will be included. *Prerequisite:* AUT 183.

### **AUT 245 Manual Drive Train/Axles**

4 Credits (2.33 Lecture 0 Lab 1.67 Shop)  
7.34 Hrs/Wk (2.33 Hrs. Lecture 5.01 Shop) \*15 wks

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**

4 Credits (3 Lecture 0 Lab 1 Shop)  
6 Hrs/Wk (3 Hrs. Lecture 3 Hrs. Shop) \*15 wks

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 271 Electronic Engine Control**

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Hrs. Lecture 6 Hrs. Shop) \*15 wks

This course will cover all electronic components found in today's automobile. It also deals with engine performance principles as related to electronic feedback systems for fuel control, spark management, emission controls and related systems. Strategy based diagnosis will be emphasized using electronic diagnostic equipment. The student will troubleshoot OBDII drivability faults as they relate to modern emission controlled engines and related systems. Diagnosis will lead to tests and repairs within the trade standards of time and accuracy. *Prerequisite:* AUT 181

### **AUT 275 Engine Performance III**

3 Credits (2 Lecture 0 Lab 1 Shop)  
5 Hrs/Wk (2 Hrs. Lecture 3 Hrs. Shop) \*15 wks

This course will cover all electronic components found in today's automobile. The

student will troubleshoot OBDII drivability 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**

1 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks

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**

3 Credits (0 Lecture 0 Lab 3 Shop)  
9 Hrs/Wk (9 Hrs. Shop) \*15 wks

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.

### **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.

## **Biology (BIO)**

### **BIO 101 General Biology**

3 Credits (3 Lecture 0 Lab 0 Clinical)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

An introduction to the chemical and physical nature of biological processes. Cell structure, metabolism, reproduction, inheritance, and evolution are examined in lecture and laboratory using a wide variety of plants and animals as examples and experimental models. *Prerequisites:* High school biology with lab or Instructor approval.

### **BIO 102 General Biology**

1 Credit (0 Lecture 1 Lab 0 clinical)  
2 Hrs/Wk (2 Hrs. Lab) \*15 wks  
Laboratory experiments designed to support the topics covered in BIO 101. *Corequisite:* BIO 101.

### **BIO 105 Essentials of Human Anatomy and Physiology**

3 Credits (3 Lecture 0 Lab 0 Clinical)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This one semester course is designed to provide the student with rudimentary knowledge of human anatomy and physiology. This is a non-laboratory course that will cover the chemical basis of life, basic cell and tissue structure and all of the organ systems of the human body. Note: This course does not satisfy the requirements for programs such as nursing, clinical lab science, or radiological technology. *Prerequisites:* BIO 101/102 or approval of the instructor.

### **BIO 115 Anatomy & Physiology I**

3 Credits (3 Lecture 0 Lab 0 Clinical)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 116 Anatomy & Physiology I**

1 Credit (0 Lecture 1 Lab 0 Clinical)  
2 Hrs/Wk (2 Hrs. Lab) \*15 wks

Laboratory experiments designed to support the topics covered in BIO 115. *Corequisite:* BIO 115.

### **BIO 117 Anatomy & Physiology II**

3 Credits (3 Lecture 0 Lab 0 Clinical)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 118 Anatomy & Physiology II**

1 Credit (0 Lecture 1 Lab 0 Clinical)  
2 Hrs/Wk (2 Hrs. Lab) \*15 wks

Laboratory experiments designed to support the topics covered in BIO 117. *Corequisite:* BIO 117.

**BIO 121 Nutrition**

3 Credits (3 Lecture 0 Lab 0 Clinical)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

3 Credits (3 Lecture 0 Lab 0 Clinical)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.*

**BIO 212 Microbiology**

1 Credit (0 Lecture 1 Lab 0 Clinical)  
2 Hrs/Wk (2 Hrs. Lab) \*15 wks

Laboratory experiments designed to support the topics covered in BIO 211.

**BIO 222 Genetics**

3 Credits (3 Lecture 0 Lab 0 Clinical)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This introductory course is designed to explore the fundamental concepts of genetics. The first part of the course focuses on the basic principles of classical (Mendelian) genetics; including the nature of hereditary factors and the mechanisms by which they are transmitted and expressed. The latter part of the course covers modern discoveries and techniques that have a foundation in molecular biology. *Prerequisites: Either Biology 101 and 102, General Biology with Laboratory, or BIO 115 and 116 Anatomy and Physiology I with Laboratory or BIO 105 Essentials of Anatomy and Physiology.*

## Building Construction Technology (BCT)

**BCT 101 Introduction to Hand & Power Tool Safety**

1 Credit (.25 Lecture 0 Lab .75 Shop)  
2.5 Hrs/Wk (.25 Hr. Lecture 2.25 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop) \*15 wks

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 126 Construction Site Surveying**

2 Credits (1 Lecture 1 Lab 0 shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab) \*15 wks

Students are introduced to preliminary site development using basic zoning, code, and deed descriptions as they relate to a site plan. Construction site surveying is introduced through the demonstrated use of surveying transits, builder's level, and associated equipment applied directly to Residential Construction.

**BCT 127 Introduction to Residential CAD**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

Students are introduced to residential site design and planning through the use of CAD. Students will start to compile a set of residential blueprints by working on site design, foundation, and basic framing drawings. Students are introduced to preliminary site development using basic zoning, code, and deed descriptions as they relate to a site plan.

**BCT 128 Basic Strength of Materials**

2 Credits (2 Lecture 0 Lab 0 Shop)  
2 Hrs/Wk (2 Hrs. Lecture) \*15 wks

This course is intended to give students a basic understanding of the forces and uniform loads taken into account in designing and building Residential Structures.

**BCT 133 Roofing**

1 Credit (.25 Lecture 0 Lab .75 Shop)  
2.5 Hrs/Wk (.25 Hr. Lecture 2.25 Hrs. Shop) \*15 wks

This course introduces students to common roofing materials and practices. Students will install roofing on a common roof and in a valley. The valley will be shingled by lacing and lapping.

**BCT 134 Siding**

1 Credit (.25 Lecture 0 Lab .75 Shop)  
2.5 Hrs/Wk (.25 Hr. Lecture 2.25 Hrs. Shop) \*15 wks

This course introduces students to common siding materials. Students will apply vinyl, clap boards, and cedar shingles.

**BCT 135 Roof Framing**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop) \*15 wks

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 138 Doors and Windows**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
 5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop)  
 \*15 wks

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**

3 Credits (1 Lecture 2 Lab 0 Shop)  
 5 Hrs/Wk (1 Hr. Lecture 4 Hrs. Lab)  
 \*15 wks

Students will generate a competitive cost analysis of a residential home from a set of blueprints. Materials and labor will be calculated based on standard estimating procedures and building practices specific to this region. A bid summary will be prepared taking into account materials, labor, subcontractor costs, overhead and profit components. Students will be exposed to minimum legal requirements of a construction contract in the State of Maine. *Prerequisite:* 100 level courses or department approval.

**BCT 203 Interior Trim**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
 5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop)  
 \*15 wks

This is a hands on course giving students experience in the fundamental finish skills required to hang and trim an interior door, apply extension jambs and trim to windows, and properly install a profiled baseboard practicing the skill of coped inside corners. Intensive instruction is also given to the safety, use, and field applications of router use including the building of a router table. *Prerequisite:* 100 level courses or department approval.

**BCT 235 Cabinets**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
 5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop)  
 \*15 wks

In this course students study basic kitchen design and layout. Students draft scaled working drawings for the construction of base and wall cabinets. Utilizing plans, working drawings and estimates, students learn to cut stock, assemble cabinets and install hardware. Instruction and demonstration is given on the proper use of shapers and power feeders to produce raised panel cabinet doors. *Prerequisite:* 100 level courses or department approval.

**BCT 236 Finished Stairs**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
 5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop)  
 \*15 wks

Students are introduced to the basic concepts and practices of layout, estimation of materials, and construction of finished stairs. Upon completion of producing scaled drawings, students will build open and closed stairs incorporating skills to properly rout a housed skirt board and install an open balustrade. *Prerequisite:* 100 level courses or department approval.

**BCT 237 Masonry**

2 Credits (.5 Lecture 0 Lab 1.5 Shop)  
 5 Hrs/Wk (.5 Hr. Lecture 4.5 Hrs. Shop)  
 \*15 wks

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**

3 Credits (3 Lecture 0 Lab 0 Shop)  
 3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

In this course students continue their study of AutoCAD by completing the set of Residential blue prints started in BCT 127. AutoCAD file and layer management is stressed along with construction details, building upon all previous BCT course knowledge. *Prerequisites:* BCT 127.

**BCT 296 Independent Study**

Variable Credit (Maximum 3)  
 Number of hours per week to be determined by Advisor

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 Credits (3 Lecture 0 Lab 0 Shop)  
 3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
 3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
 3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
 3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
 3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
 3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.

\*Please refer to Explanation of Courses on page 94



**BUS 125 Total Quality Control***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 215 Principles of Marketing***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 whole-sale vs retail vs direct and industrial marketing, will also be explored.

**BUS 218 Human Resource Management***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 230 Independent Study/ Internship**

*3 Credits- Number of hours per week to be determined by Advisor*

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 248 Money, Banking, and Financial Markets***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 255 Electronic Commerce***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 270 Hospitality Management**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.

## **Business and Computer Applications (BCA)**

### **BCA 101 Computer Keyboarding**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Central Maine Community College programs requiring keyboarding skills.

### **BCA 120 Introduction to Computer Applications**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 wide 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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is intended to instruct entry-level students in the fundamentals of presentation and internet software. It will teach them to do research on the web as well as **design** and maintain web pages. Specific software programs will include Outlook, PowerPoint and Netscape.

### **BCA 152 Integrated Software Applications**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.

### **BCA 241 Spreadsheet**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is intended to introduce skills and build proficiency in database management using Microsoft Access XP. It is designed to develop competencies in various 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.*

### **BCA 250 Applied Visual Basic**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This is an advanced course in Microsoft Office software that will focus on typical office and administrative applications. The student will learn to write macros and small programs in Visual Basic that will enhance and update Excel, Access and Word files. A good understanding of Microsoft Office will be provided. *Prerequisite: BCA 120 or either spreadsheets or database management.*

## **Chemistry (CHY)**

### **CHY 101 Introduction to Chemistry**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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; *Corequisite:* CHY 102.

### **CHY 102 Introduction to Chemistry**

1 Credit (0 Lecture 1 Lab 0 Shop)  
2 Hrs/Wk (2 Hrs. Lab) \*15 wks  
Laboratory experiments designed to support the topics covered in CHY 101. *Corequisite:* CHY 101.

### **CHY 111 Principles of Organic and Biological Chemistry**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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; *Corequisite:* CHY 112.

### **CHY 112 Organic and Biological Chemistry**

1 Credit (0 Lecture 1 Lab 0 Shop)  
2 Hrs/Wk (2 Hrs. Lab) \*15 wks  
Laboratory experiments designed to support the topics covered in CHY 101. *Corequisite:* CHY 111.

## **Clinical Laboratory Science (CLS)**

### **CLS 101 Clinical Laboratory Science I**

4 Credits (2 Lecture 2 Lab 0 Clinical)  
6 Hrs/Wk (2 Hrs. Lecture 4 Hrs. Lab) \*15 wks

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**

4 Credits (2 Lecture 2 Lab 0 Clinical)  
6 Hrs/Wk (2 Hrs. Lecture 4 Hrs. Lab) \*15 wks

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 immunologic diseases. A study of Parasitology covers commonly seen human parasites of the world. *Prerequisite:* CLS 101.

### **CLS 104 Clinical Chemistry for Laboratory Science**

3 Credits (2 Lecture 1 Lab 0 Clinical)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab) \*15 wks

This course will continue to build on the skills learned in CLS 101 and CLS 102. The students will be prepared for their clinical experience by demonstration and use of automated laboratory equipment, performing simple and complex manual analysis, entering data (patient demographics, laboratory results, Quality Assurance and Quality Control data) on Quality Assurance Software. Students will continue practice with manual counts, differentials and identification of cell morphology in peripheral blood smears. Lectures will accompany the lab work and will cover physiology and disease correlations of electrolytes, mineral metabolism, enzymology, endocrinology, therapeutic drugs, and substances of abuse. *Prerequisites:* CLS 101 and CLS 102.

### **CLS 105 Clinical Hemostasis for Laboratory Science**

2 Credits (1 Lecture 1 Lab 0 Clinical)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab) \*15 wks

This course will continue to build on the skills learned in CLS 101, CLS 102, and CLS 104. The students will become familiar with the hemostatic and coagulation process in the human body. Common laboratory testing of platelets, Pro-thrombin Times, Activated Partial Thromboplastin Times and Fibrinogen levels or Fibrin Degradation Products will be performed and studied. These tests will be correlated with various disease conditions associated with coagulation disorders. The students will be prepared for their clinical experience by demonstration and use of automated hemostasis testing equipment performing Quality Assurance and Quality Control on hemostasis data. Students will continue practice with manual counts, differentials and identification of cell morphology in peripheral blood smears. Lectures will accompany the lab work. *Prerequisites:* CLS 101, CLS 102, CLS 104.

### **CLS 201 Clinical Affiliation I**

12 Credits (3 Lecture 0 Lab 9 Clinical)  
30 Hrs/Wk (3 Hrs. Lecture 27 Hrs. Clinical) \*15 wks

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. *Prerequisites:* CLS 104 and 105.

### **CLS 202 Clinical Affiliation II**

12 Credits (3 Lecture 0 Lab 9 Clinical)  
30 Hrs/Wk (3 Hrs. Lecture 27 Hrs. Clinical) \*15 wks

This course provides an integrated, clinically-based rotation which correlates cognitive and technical skills in the selected areas not completed in CLS 201. *Prerequisites:* CLS 104 and 105.

## **Communications (COM)**

### **COM 100 Public Speaking**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course provides the student with training and experience in researching, organizing, and presenting various types of oral presentations. Topics covered include audience analysis, speech organization, delivery techniques, and the use of visual aids, including Power-Point. Narrative, informative/demonstration, persuasive, and group presentations are required. Speeches are videotaped for student review.

### **COM 101 Interpersonal Communication**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course introduces the student to the elements of interpersonal communication. The overall goal of the course is to enable students to improve the effectiveness of their interpersonal communication skills in their personal and professional lives. The course covers the nature of communication, the importance of one's identity, the role of perception and emotions, and the importance of active listening. It examines the nature of language and non-verbal communication and considers gender and cultural differences. It focuses on improving communication in relationships, concentrating on relational dynamics, communication climates, and interpersonal conflict.



**COM 121 Group Process***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course introduces the student to the elements of small group communication. The overall goal of the course is to have students develop more effective communication skills for use in small group situations. Students will practice providing appropriate and effective feedback among group members, resolving conflicts, problem solving in small groups, and participating in and facilitating group discussions. Students will be expected to study group theory and understand the small group communication process while undertaking a worthwhile community action project as a group effort.

**COM 151 Mass Media and Popular Culture***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course introduces the student to the economic, political, and social dimensions of mass media with an emphasis on electronic media. Students will be introduced to a variety of perspectives on contemporary media and will examine the components of media literacy. The overall goal of the course is to enable students to develop critical strategies of media analysis to become an active, informed media consumer. Prerequisite: ENG 101.

## Computer Aided Drafting/Design (CAD)

**CAD 110 Introduction to Computer Aided Drafting (CAD)***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 142 or Faculty approval.*

**CAD 284 Architectural CAD***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course is designed to teach students to use the advanced features found in Central Maine Community College'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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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, flowcharting, conditional statements, loops, arrays, sub-routines, input/output statements, formatting, menus, and file manipulation.

**CPT 147 Introduction to PC Repair/Operating Systems***3 Credits (2 Lecture 1 Lab 0 Shop)**4 Hrs/Wk (2 Lecture 2 Lab) \*15 wks*

This course is an introduction to the installation, maintenance and repair of PCs and related equipment and to introduce students to operating systems compatible with today's personal computers. It provides students with an elementary understanding of PC environments including system components, peripherals, and component/card interface and the fundamentals of repair as well as intended to familiarize students with the major features and functions of each operating system and build competencies and familiarity with operational aspects of the software. This is the first of two courses designed to prepare students for the A+ exam.

**CPT 166 Fundamentals of Structured Query Language***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

A broad based introduction course that will teach all the fundamentals of relational database access using structured query language (SQL). The course will cover the way to effectively retrieve and manipulate data in a database to meet an employer's or client's needs. The class will cover the basics of SQL, its strengths and weaknesses. It will focus on presenting implementation-independent SQL coding and use while highlighting several vendor specific implementations. The students will be required to become

*\*Please refer to Explanation of Courses on page 94*



proficient in managing a small relational database under MS SQL Server, hosted on campus. Taking a hands-on approach, students will become skilled in designing and using SQL language to retrieve, organize, present, update and delete data. These competencies include a basic understanding of relational database, MS SQL Server and SQL. All learning will be in a lab environment where students will directly apply instructions using individual computers.

### **CPT 201 Linux**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Advanced Linux**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 includes hubs, Ethernet

switches, and routers. Taking a hands-on approach, students will become skilled in setting up and maintaining network equipment. All learning will take place in a hands on environment where students will directly apply instructions using individual computers. *Prerequisite: CPT 141.*

### **CPT 210 Introduction to Routing Technologies \*\***

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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. Students will attend 45 hours of instructor-led class and an additional 25 hours of proctored lab time. *\*\* For Cisco Systems Articulation Agreements Only.*

### **CPT 211 Introduction to Routers \*\***

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.*

*\*\* For Cisco Systems Articulation Agreements Only.*

### **CPT 212 Advanced Routing \*\***

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.*

*\*\* For Cisco Systems Articulation Agreements Only*

### **CPT 213 WAN Routing \*\***

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.*

*\*\* For Cisco Systems Articulation Agreements Only*

### **CPT 225 Advanced PC Repair**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab) \*15 wks

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 Credits - Number of hours per week to be determined by Advisor

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 Introduction to Networking**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is an introduction to core network fundamentals. It will provide students with the ability to design, install, maintain and troubleshoot computer networks. Students 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, IPX/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 266 Server Administration. Prerequisites: CPT 147 or two years of IT experience and Faculty approval.*

### **CPT 236 Introduction to TCP/IP**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is an introduction to the TCP/IP protocol stack and its associated services and utilities as implemented in the Windows Operating Systems. It will provide students with the basic abilities required to install, configure, administer, and troubleshoot the TCP/IP protocol stack. *Prerequisites: CPT 266 Networks II, or equivalent experience and permission of the instructor.*

### **CPT 238 Network Support & Troubleshooting**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 "hands-on" approach whenever possible. *CPT 235 Networks I or two or*

*more years of IT work experience and the permission of the instructor.*

### **CPT 240 Advanced Visual BASIC**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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. *Prerequisite: CPT 130 Intro to Visual Basic or Faculty approval.*

### **CPT 245 Introduction to Java Programming**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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, educational software (math games) and a variety of problem solving programs to automate complex calculations. 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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This is an introductory course in the applications of "C", a programming language common in electronics and electro-mechanical 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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 many types of web sites. The student will design web pages that can be deployed to FTP and Front-Page 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 a web 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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 JavaScript based web site on the World Wide Web, hosted on a web 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 and JavaScript. 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 256 Introduction to Game Level Design**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This elective course will provide an introduction to the process of computer game design and programming. Topics will include graphics, game engines, and their high-level APIs, behavioral control for characters, level design, gameplay. Interface issues and the business, social and personal aspects of games. Classes will be a mix of lecture format, seminar format and working group meeting. See the schedule for relevant structure and dates. Rather than focusing on programming game engines, the course deals with the development of gameplay using the 3D gaming engine provided by Unreal Tournament 2004 (UT), a commercial game engine. Programming for the course will involve using UnrealScript, the scripting language supported by UT. Students will form small teams early in the semester, pitch a level idea to the instructor and to the class, then spend the rest of the time in the course working on the development of the level itself. The final for the course will be the presentation of a working version of your level play-tested at a LAN party open to CMCC students. *Prerequisite: Completion of CPT 130.*

### **CPT 257 Advanced Game Level Design**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This elective course is the second of two video game level design courses. It will provide an advanced look at the process of computer game design and programming. Topics will include graphics, game engines and their high-level APIs, behavioral control for characters, cutscenes, level design, gameplay, interface issues and the business, social and personal aspects of games. Classes will be a mix of lecture format, seminar format and working group meeting. See the schedule for relevant structure and dates. Rather than focusing on programming game engines, the course

deals with the development of gameplay using the 3D gaming engine provided by Unreal Tournament 2004 (UT), a commercial game engine. Programming for the course will involve using UnrealScript, the scripting language supported by UT. Students will form small teams early in the semester, pitch a level idea to the instructor and to the class, then spend the rest of the time in the course working on the development of the level itself. The final for the course will be the presentation of a working version of your level play-tested at a LAN party. *Prerequisite: Completion of CPT 256.*

### **CPT 266 Server Administration**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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. 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 271 Network Security**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course builds on the foundation established in CPT-141 Operating Systems and CPT-235 Networks 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 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 Networks I or instructor approval.*

### **CPT 272 MS Exchange/IIS**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This class is an introduction to Internet Information Server and Microsoft Exchange Server. 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: CPT 235 and 266. CPT 266 may be taken concurrently, with permission of the instructor.*

### **CPT 285 Senior Networking Capstone Project**

3 Credits (1 Lecture 2 Lab 0 Shop)

5 Hrs/Wk (1 Hr. Lecture. .4 Hrs. Lab))

\*15 wks

Students taking this course will use all of the hardware and networking skills they have accumulated thus far to create realistic networks that duplicate the types of hardware, software, configuration, setup, and troubleshooting problems they might encounter in a real employment scenario. Students will begin the semester by building the platform computers from parts, and culminate with final configuration and troubleshooting of user account, rights, and applications. Students will perform all cabling, install all hardware, install all operating systems and applications, and troubleshoot their own problems with assistance from the instructor. *Co/prerequisites: CPT 266, at least one networking elective, permission of the instructor.*

### **CPT 296 Topics in Information Technology**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

Students taking this course will explore selected topics in Information Technology that are relevant at the time of delivery. This course will not address subject matter currently offered within other CPT courses. Since the topics will change from year to year, students should check with the instructor to obtain more in-depth information on the topic offered for that given time period. *Prerequisites: CPT 235 (Introduction to Networking) and 2nd year standing.*



## Criminal Justice (CRJ)

### **CRJ 101 Introduction to Criminal Justice**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is designed to provide an overview of the legal system in America, including the history and evolution of law enforcement and the criminal law, to the present status of the criminal justice system. Topics discussed will include the purposes and goals of the criminal justice system; the history and evolution of the criminal law and the legal process; the role of law enforcement in a democratic society; the balancing of individual rights versus the protection of society; the manner in which the criminal justice system confronts terrorism; and the development and current status of justice policy. The course will examine in significant detail the three primary components which comprise the criminal justice system: law enforcement, adjudication, and corrections. Juvenile justice and its purposes and goals will also be discussed.

### **CRJ 110 Introduction to Corrections**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is designed to provide an overview of the historical background of corrections. Topics discussed will include: the goal and purposes of corrections; the various past and current philosophies of corrections; the concepts and issues that determine the necessity for the development of the Maine Correctional Standards; the legal issues in corrections; the principles and issues of the Constitutional Law as it pertains to the 1st, 4th, 8th, and 14th Amendments and the rights of inmates; the structure and functions of incarceration; Probation and Parole Agencies, Management and treatment programs; and the differences between.

### **CRJ 122 Criminal Law**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course deals with the application and philosophy of criminal law, with a focus on the applicability of the statutory law. The goals and purposes of the criminal justice system will be examined. The formulation of the substantive law and limitations on that authority will be studied.

### **CRJ 201 Due Process in Criminal Justice**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course will examine individual rights under the Constitution, with a concentration on the due process rights of criminally accused persons. The focus will be on United States Supreme Court cases, from the revolutionary "Warren" era to the present, and the development of the doctrine of due process in the criminal justice system in America. The course will examine in significant detail how the construction, interpretation and application of the standards set by the Court impacts justice policy as well as the lives of the average citizen. *Prerequisite: CRJ 101.*

### **CRJ 210 The Juvenile Justice System**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course will examine the Juvenile Justice system in America, including its history, philosophy and development, along with future challenges the system must confront. The rights of Juveniles in the American Juvenile Justice System will be thoroughly explored and discussed. Differences between the adult criminal system and juvenile offender treatment will be analyzed. The problems facing youth as well as the impact of cultural, sociological and other forces will be examined. Other societies' treatment of youthful offenders will be compared and contrasted with the American system. Appropriate punishment of juvenile offenders, including community programs and institutionalization, will be studied. The class will explore in depth the challenges facing the juvenile justice system and discuss ways in which the system might be improved and advanced. Other modalities such as outside speakers, films and/or field trips may be utilized during the course to assist students in more fully integrating the concepts explored. *Prerequisite: CRJ 101.*

## Culinary Arts (CUA)

### **CUA 101 Principles of Cooking**

4 Credits (1 Lecture 0 Lab 3 Shop)

10 Hrs/Wk (1 Hr. Lecture 9 Hrs. Shop)

\*15 wks

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. Students who successfully complete this course may apply for a Certificate from the National Restaurant Association Educational Foundation. ***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**

4 Credits (1 Lecture 0 Lab 3 Shop)

10 Hrs/Wk (1 Hr. Lecture 9 Hrs. Shop)

\*15 wks

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. Students who successfully complete this course may apply for a Certificate from the National Restaurant Association Educational Foundation. *Corequisite: CUA 101 or Faculty approval.*

### **CUA 121 Food Preparation Sanitation**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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. Students who successfully complete this course may apply for certification from the National Restaurant Association Educational Foundation.

### **CUA 153 Quantity Food Production**

5 Credits (2 Lecture 0 Lab 3 Shop)

11 Hrs/Wk (2 Hrs. Lecture 9 Hrs. Shop)

\*15 wks

Students will learn how to prepare a variety of beef, veal, poultry, fish and shellfish products. The elements of

*\*Please refer to Explanation of Courses on page 94*



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 hors 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 163 or Faculty approval.

### **CUA 163 Desserts and Pastries**

5 Credits (2 Lecture 0 Lab 3 Shop)  
11 Hrs/Wk (2 Lecture 9 Shop) \*15 wks  
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. Students who successfully complete this course may apply for a Certificate from the National Restaurant Association Educational Foundation. Prerequisites: CUA 101, 111; and corequisite: CUA 153 or Faculty approval.

### **CUA 171 Nutrition and Food Quality**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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. Students who successfully complete this course may apply for certification from the National Restaurant Association Educational Foundation.

### **CUA 179 Food Purchasing**

1 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks  
This course will focus on the principles and practices of purchasing food and beverages, as well as non-food items with

particular attention/emphasis on purchasing systems, quality and quantity concerns, and commodities such as meat, fish and shellfish products, poultry & eggs, dairy products, fruits & vegetables, baked goods and miscellaneous products. Cost analysis of products will also be reviewed.

## **Early Childhood Education (ECE)**

### **ECE 100 Introduction to Early Care and Education**

3 Credits (3 Lecture 0 Lab 0 Field Experience)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Field Experience)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

1 Credit (0 Lecture 0 Lab 1 Field Experience)

3 Hrs/Wk (3 Hrs. Field Experience) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Field Experience)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

2 Credits (0 Lecture 0 Lab 2 Field Experience)

6 Hrs/Wk (6 Hrs Field Experience)

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 Credits (3 Lecture 0 Lab 0 Field Experience)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

Variable Credits (Maximum 9)

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 Central Maine Community College'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 Credits (3 Lecture 0 Lab 0 Field Experience)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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, or approval of ECE Chairperson.

**ECE 210 Issues in Early Care and Education**

3 Credits (3 Lecture 0 Lab 0 Field Experience)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

6 Credits (2 Lecture 0 Lab 4 Field Experience)

14 Hrs/Wk (2 Hrs. Lecture 12 Hrs. Field Experience) \*15 wks

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 or the approval of ECE Chairperson.

**Economics (ECO)****ECO 201 Introduction to Macroeconomics**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is intended to introduce the student to the macro aspects of the economy such as demand and supply, national income, unemployment, inflation, business cycles, aggregate spending, fiscal policy, monetary policy, money and

banking, economic growth and international trade. This course promotes an understanding of the economic environment in which businesses operate.

**ECO 202 Introduction to Microeconomics**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is intended to introduce the student to the analysis of individual markets: the functioning of prices in a market economy, economic decision making by producers and consumers and market structure. Topics discussed include consumer preferences and consumer behavior, production theory and production costs, resource pricing and the monopoly firm. Additional topics are determined by individual instructors.

**Education (EDU)****EDU 101 Introduction to Education**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This survey course will introduce the student to education in America and the basic elements of its structure. The course will explore education's history, examine the role of public education in a democracy and identify current trends affecting education today. The course will also examine the relationship between education and society to analyze the impact they have on each other. The course will emphasize the role of educational staff in the contemporary schools environment.

**EDU 155 Psycho/Social Needs of Students**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is designed as an overview of the psychoemotional and social factors that play a role in the student's concept of self as learner. The educational environment will be viewed through the lenses of the teacher and the student, with discussions focused on what classroom practices work and why. Potential educational problems and appropriate interventions will take center stage. The area of student aspirations will also be one of the focal points of the course.

**EDU 161 Technology in Education**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This survey course will expose students to the increasing role of technology in education. It will explore application of technology in the teaching/learning process and the appropriateness of applied methodologies. Topical areas to be covered include adaptive equipment, distance education and internet support of academic outcomes.

**EDU 185 Fundamentals of Educating Students with Special Needs**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course will survey a variety of special needs issues including condition syndromes, common limitations, mitigation strategies, adaptive equipment and frequently suggested accommodations. This course examines the fundamentals of working with students identified as having special needs and includes an overview PL 94-142 of IDEA and 504 guidelines. Students will study the referral process, evaluation methodologies, the PET process, IEP implementation strategies, transition plans, least restrictive environments, inclusion and other current principles in the field.

**EDU 261 Fundamentals of Literacy Education**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

In this course, students will examine the fundamentals of literacy and explore the ways in which individuals acquire initial reading skills and understand print across content areas. This course will also examine a variety of pedagogical models commonly found in literacy education to familiarize students with standard practices and procedures. *Prerequisite:* Successful completion of ENG 101 or registration in ENG 101.

**EDU 271 Fundamentals of Mathematics Education**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course will provide students with an understanding of the foundation for teaching mathematics in Pre-Kindergarten to Grade 12. The six Principles for school mathematics will be integrated into the five Content Standards of

Number and Operations, Algebra, Geometry, Measurement, Data Analysis and Probability, and the five Process Standards of Problem Solving, Reasoning and Proof, Communication, Connections, and Representation. Students will develop activities that promote the understanding of the NCTM (National Council of Mathematics) Standards at the Pre-K to Grade 2, Grades 3 - 5, Grades 6 - 8, or Grades 9 - 12 level, depending upon their individual need.

**EDU 285 The Theory and Practice of Educational Support**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

The capstone seminar is designed for students to demonstrate their knowledge of educational practices, policies and resources. The students will learn to use that knowledge in order to analyze problems, synthesize appropriate actions and evaluate the outcomes of those actions. During the course the students will be required to interact with K-12 school personnel and other education stakeholders in an interview format. They will then use current educational literature available in libraries to do research on selected issues brought up during their interviews. This course also requires each student to develop a portfolio demonstrating that he/she is fully aware of professional issues and responsibilities. *Prerequisites:* EDU 101, EDU 155, EDU 161, EDU 185, EDU 261.

## Electromechanical Technology (ELT)

**ELT 102 Electric Motors**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)

\*15 wks

This course is a study of electric motor theory and operation. Electromechanical 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-sight preventative maintenance, testing, repair, and replacement of electric motors. *Prerequisite:* ELT 111.

**ELT 103 Residential Controls**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)

\*15 wks

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.

**ELT 104 Blueprint Reading & Estimation**

2 Credits (2 Lecture 0 Lab 0 Shop)

2 Hrs/Wk (2 Hrs. Lecture) \*15 wks

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.

**ELT 105 Commercial Wiring and Transformers**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)

\*15 wks

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:* ELT 111.

**ELT 107 Industrial Motor Controls**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)

\*15 wks

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, Jog, Sequence, Interlock, and Time-control. Particular emphasis is placed on ladder diagrams, designing and wiring control circuits. *Prerequisite: ELT 111.*

### **ELT 108 Basic Electronics**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2Hrs. Lab)

\*15 wks

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: ELT 111.*

### **ELT 109 National Electrical Code I**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2Hrs. Lab)

\*15 wks

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**

4 Credits (3 Lecture 1 Lab 0 Shop)

5 Hrs/Wk (3 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

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. *Corequisite: MAT 100 or 122.*

### **ELT 112 Electricity II**

4 Credits (3 Lecture 1 Lab 0 Shop)

5 Hrs/Wk (3 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

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, and MAT 100 or 122.*

### **ELT 113 Measurement and Control Systems**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2Hrs. Lab)

\*15 wks

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. *Prerequisite: ELT 112.*

### **ELT 123 Electrical Controls I**

3 Credits (2 lecture 1 Lab 0 Shop)

4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

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. *Corequisite: ELT 111.*

### **ELT 126 Electrical Controls II**

2 Credits (1 Lecture 1 Lab 0 Shop)

3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)

\*15 wks

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**

3 Credits (2 lecture 1 Lab 0 Shop)

4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

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 Norton'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. *Corequisite: ELT 112.*



**ELT 153 Digital Logic**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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. In addition, we will cover IC terminology, specifications, circuits and troubleshooting. Other logic families besides TTL will be introduced. Electronic Workbench will be used for Boolean algebra and to simulate circuits. There will be an introduction to the use of oscilloscopes for the purpose of testing and troubleshooting. *Corequisite: ELT 111.*

**ELT 211 Control Systems**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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. *Corequisites: ELT 112 and 153.*

**ELT 221 Industrial Controls**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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 112, 123, and 153.*

**ELT 222 Programmable Controls**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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 RSLogix 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**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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. *Prerequisites: ELT 231 and 245.*

**ELT 245 Electronic Devices II**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

This course is a study of Bipolar Junction Transistors (BJTs), Field Effect Transistors (FETs), and their circuit applications, including amplifiers. 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. FETs are studied with emphasis placed on transconductance curves, parameters, and bias stability. Depletion and Enhancement Metal Oxide Semiconductor Field Effect Transistors (MOSFETs) are also covered. Thyristor theory includes Silicon Control Rectifiers (SCRs) and Triacs. *Prerequisites: ELT 112 and 145.*

**ELT 246 Linear Integrated Electronics**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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 of inverting and non-inverting amplifiers; summing amplifiers; level conversion; active filters; comparators; integrators and differentiators; logarithmic amplifiers; oscillators; and 555 ICs. *Prerequisite: ELT 245.*

**ELT 271 Industrial Robotics**

3 Credits (2 lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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. *Corequisite: ELT-221.*

### **ELT 275 Robotics & Control Systems**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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. *Prerequisites: ELT 221 and 271.*

### **ELT 296 Independent Study**

Variable Credit (0 - 6)

Number of hours per week to be determined by Advisor

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.*

## **English (ENG)**

### **ENG 021 Basic Writing**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 CMCC's placement test. Successful completion of this course and minimum competency in reading will enable students to enroll in ENG 101. This course is graded on a Pass/Fail basis.

### **ENG 030 Reading Workshop**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
Reading Workshop 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 CMCC's placement test.

### **ENG 050 Introduction to Academic Reading**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 CMCC's placement test.

### **ENG 101 College Writing**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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) CMCC writing assessment, or ESL 101 or Department approval and b) CMCC reading assessment, or ENG 050.*

### **ENG 107 College Writing: TTV**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This course is designed to help students improve their writing ability through concentration on the writing processes: prewriting, writing and revision. Other concerns of the writer, particularly audience, diction and correctness, will be addressed. Research techniques, library orientation and oral presentation of student writing are also included. Research paper required. *Prerequisite: Enrollment in the Verizon NextStep Program.*

### **ENG 112 American Literature I**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This course is a general introduction to American Literature from the early colonial period to Civil War Reconstruction. The course will provide a literary overview of Native American oral history, European explorers, Colonial, Puritan, Revolutionary, Civil War authors. Learners will explore themes reflected in the literature, examining which are particular to a place or time and which are woven through our nation's history. Through examining the process of early nation building reflected in its literature, learners will gain a greater understanding of how the American character was created, a better understanding of themselves and what it means to be an American. *Prerequisite: Successful Completion of ENG 101 (C or higher).*

### **ENG 113 American Literature II**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This course is a general introduction to American Literature from 1865 through the modern period into the present day, examining major authors from all

regions. Learners will explore exclusively American themes reflected in literary works. Topics of examination may include the Emergence of Poetic Voices, the Development of the Narrative, Developments in Women's Writing, Alienation and Literary Experimentation, the New Negro Renaissance, The Beat Movement, The Vietnam Conflict, and other literature to the present day. Through examining the growing identity of America and the individual voice reflected in its literature, learners will gain a greater understanding of how the American character continues to evolve, a better understanding of themselves and what it means to be an American. *Prerequisite: Successful Completion of ENG 101 (C or higher).*

### **ENG 121 The Short Story**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Department Chair approval.*

### **ENG 131 Style and Syntax of American English**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This course introduces students to the creative writing techniques, with an emphasis on creative non-fiction. Students are encouraged to sharpen their observation skills, use fresh and vivid details, and develop realistic characters to create short pieces of writing. Publishing opportunities will also be explored. 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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 225 Introduction to Literature**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
Introduction to Literature introduces the student to a variety of ways to think and write about the three literary genres: short fiction, poetry and drama. Through close textual readings, class discussions, and writing assignments, students will learn to think critically and to write confidently about literary works, as well as to discuss such texts with an understanding of literary terms. This course is designed for transfer into a four year program. *Prerequisite: Successful completion of ENG 101.*

### **ENG 227 English Composition II (TTV)**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This course introduces students to both college-level informational texts and British and American literature as a focus for writing. Informational prose readings deal with interdisciplinary themes, such as interpersonal issues, environmental issues, social and civil rights issues, and labor issues. Selected literature exposes students to a range of literary styles and forms. In addition, the course introduces students to the language of literature, and the fundamentals of literary analysis. A final research project will be assigned. *Prerequisite: ENG 107*

### **ENG 230 Children's Literature**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
The study of children's literature as a legitimate literary form will allow learners to examine how it plays an intricate role in the belief systems we carry into



adulthood. Learners will develop and deepen their appreciation of the literature through an extensive survey of multicultural and diverse books in children's literature. This course will include study of the various literary genres found in children's literature. *Prerequisite: ENG 101 or Department Chair approval.*

### **ENG 294 Special Topics in Literature**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course will examine particular aspects of literature, depending on the semester. Examples might be - specific genres such as fantasy, graphic novels or poetry; literature of a particular place, time or related to social or political issues such as Russian lit, Renaissance lit, lit of the Beat Generation, or protest lit; or feature the work of writers as individuals or as members of a particular literary movement such as Shakespeare, Chaucer, Jane Austen, native American writers. Because this is not a regular offering of the Humanities Department, students are encouraged to seek detailed information from the instructor or department chair, prior to registering. *Prerequisites: College Writing and Intro to Literature.*

### **ENG 296 Portfolio Preparation Seminar**

1 Credits (1 Lecture 0 Lab 0 Shop)

1 Hr/Wk (1 Hr. Lecture) \*15 wks

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 Department Chair approval.*

## **English as a Second Language (ESL)**

*Placement in ESL courses is based on the student's scores on CMCC's assessment test*

### **ESL 070 Study Skills for International Students**

1 Credit (1 Lecture 0 Lab 0 Shop)

1 Hr/Wk (1 Hr. Lecture) \*15 wks

This course examines the cultural expectations of students in US higher education, as well as techniques to help students succeed in that environment. Topics include: the syllabus, organizing work, time management, preparing for exams and quizzes, academic honesty, individual vs. collective responsibilities, basic computer/word processing skills, academic vocabulary, using textbooks effectively, taking notes, and student support services. *Enrollment is limited to students taking ESL courses.*

### **ESL 071 Writing and Grammar**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

Focus on developing oral fluency in English at the high intermediate level: conversation, pronunciation, presentation skills, and listening comprehension. Some reading and writing also expected.

### **ESL 074 English: Its Structure and History**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This is an introduction to the origins and history of English and the structure of English grammar. The course covers the nature of language.

### **ESL 075 Building an Academic Vocabulary**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

An effective vocabulary is the key to success in work and in life. For many students learning English, a limited vocabulary is the biggest obstacle to their success. This course is designed to help students quickly learn new English words for use in academic courses. Priority will

be given to the 3,000 most commonly used words in written and spoken English, words from the Academic Word List, common idiomatic expressions, terms used frequently on tests and quizzes and other assignments, and abbreviations and acronyms commonly found in American English. The goal is to increase students' working vocabulary (in correct forms and in various contexts) to enhance their success in college.

### **ESL 101 Academic Writing and Grammar**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 cultural context for understanding college texts.

### **ESL 104 Academic Writing II**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course is a continuation of ESL 101, with an emphasis on developing proficiency in advanced grammar structures and usage, including prepositions, phrasal verbs, adverbs and adjectives, comparatives and superlatives, perfect tenses, modals, gerunds and infinitives. *Prerequisite: Completion of ESL 101*



## Automotive - Ford ASSET (FOA)

(Automotive Student Service  
Educational Training)

### FOA 130 Engine Repair/Climate Control

4 Credits (1 Lecture 0 Lab 3 Shop)  
10 Hrs/Wk (1 Hr. Lecture 9 Hrs. Shop)  
\*15 wks

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 190, FOA 191 or Faculty approval.

### FOA 131 Field Experience

2 Credits (0 Lecture 0 Lab 2 Shop)  
4 Hrs/Wk (4 Hrs. Shop) \*15 wks

In FOA 131 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 230. *Prerequisite:* FOA 130.

### FOA 150 Auto Service/Auto Electrical/Electronics

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Hrs. Lecture 6 Hrs. Shop)  
\*15 wks

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 151 Field Experience

5 Credits (0 Lecture 0 Lab 5 Shop)  
15 Hrs/Wk (15 Hrs. Shop) \*15 wks  
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 150. *Prerequisite:* FOA 150.

### FOA 190 Brakes, Steering & Suspension, Manual Transmission & Driveline

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Hrs. Lecture 6 Hrs. Shop)  
\*15 wks

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 150 and FOA 151 or Faculty approval.

### FOA 191 Field Experience

5 Credits (0 Lecture 0 Lab 5 Shop)  
15 Hrs/Wk (15 Hrs. Shop) \*15 wks

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 190. *Prerequisite:* FOA 190.

### FOA 232 Field Experience

4 Credits (0 Lecture 0 Lab 4 Shop)  
12 Hrs/Wk (12 Hrs. Shop) \*15 wks

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 270. *Prerequisite:* FOA 270.

### FOA 240 Automatic/Manual Transmission

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Hrs. Lecture 6 Hrs. Shop)  
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 270, FOA 271 or Faculty approval.

### FOA 270 Computer Controlled Systems, Engine Performance

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Hrs. Lecture 6 Hrs. Shop)  
\*15 wks

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 V System and engine drive-ability diagnosis.

### FOA 271 Field Experience

5 Credits (3 Lecture 0 Lab 2 Shop)  
9 Hrs/Wk (3 Hrs. Lecture 6 Hrs. Shop)  
\*15 wks

In FOA 271, 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 240. *Prerequisite:* FOA 240.

## French (FRE)

### FRE 101 Beginning French I

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course offers an introduction to the French language and to the cultures of French-speaking areas of the world. The class will be communicative and interactive: the class will be conducted in French, and students will speak French in every session. This course is designed for students with no prior knowledge of French.

### FRE 102 Beginning French II

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course offers continuing study of the French language and the cultures of French-speaking areas of the world. The class will be communicative and interactive: the class will be conducted in French

\*Please refer to Explanation of Courses on page 92

and students will speak French in every session. This course is for students who have completed FRE 101 or two years of high school French. *Prerequisite: FRE 101 or two years of high school French.*

## Geology (GEO)

### **GEO 101 Geology**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.

### **GEO 102 Environmental Geology**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

Environment Geology involves the relationships of geology, humans and their environment. The course examines the ways in which geologic hazards (earthquakes, volcanoes, floods, landslides, tsunamis and others) affect people and the places and manners in which they live. Additionally, students will study the effects of people and the activities of our daily lives on the earth's surface: our use of soil to grow food, our habits-walking, driving and building on soils and bedrock, extraction of drinking water from the ground, use of petroleum and other mineral resources, and pollution of soil and water, as examples. There is no pre-requisite for this course; however, high school earth science and/or Introductory Geology (GEO 101) would be helpful. Basic math concepts and functions will be incorporated into the course.

## Graphic Arts/ Printing Technology (GAT)

### **GAT 100 Introduction to Printing**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)

\*15 wks

This course will explore the exciting industry of commercial printing. All

aspects of this amazing industry will be presented from its roots to the present technology. The students will generate images by traditional and digital means and produce practical printed and bound products.

### **GAT 104 Copy Preparation Techniques**

1 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks

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 Credits (2 Lecture 0 Lab 0 Shop)  
2 Hrs/Wk (2 Hrs. Lecture) \*15 wks

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 (QuarkX-Press), 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**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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 108 Introduction to Acrobat Professional**

3 Credit (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (3 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

This course introduces the student to Adobe Acrobat, a well known computer program that converts any document,

both text and graphics, to PDF (portable document format). PDF files are used over the web and in the printing industry as a means of transporting large amounts of data. Using a mixture of class/lecture and lab activities, students will convert a variety of files to PDF format as well as create bookmarks and links within the PDF document. *Prerequisites: A working knowledge of a computer and its operating system.*

### **GAT 111 Offset Preparation**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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 process 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 Image Assembly**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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 131 Duplicator & Finishing Operations**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab) \*15 wks

This course is designed to familiarize the student with the pressroom. Areas of study and activity include identification 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**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab) \*15 wks  
A course designed to introduce the related

theory and lab experiences involved in line and grayscale 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**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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.*

**GAT192 Production Experience-Prepress (Certificate Program) OR****GAT 193 Production Experience-Press/Bindery (Certificate Program)**

6 Credits (0 Lecture 0 Lab 6 Shop)  
18 Hrs/Wk (18 Hrs. Shop) \*15 wks

This certificate level program 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 either prepress or press/bindery areas of employment. Live work assignments are obtained by the student from a production area instructor and student performance is evaluated. The course is designed to provide closely supervised production experiences of skills and concepts 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**

3 Credits (2 Lecture 1 Lab 0 Shop)  
4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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**

2 Credits (1 Lecture 1 Lab 0 Shop)  
3 Hrs/Wk (1 Hr. Lecture 2 Hrs. Lab)  
\*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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***6 Credits (0 Lecture 0 Lab 6 Shop)**18 Hrs/Wk (18 Hrs. Shop) \*15 wks*

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 twenty-one credit hours in GAT program or Faculty approval. *Note:* Prerequisites for GAT 285 are: GAT 113, 155, and 176.

**GAT 292 Industrial Experience (in-house) Pre-press****OR****GAT 294 Industrial Experience (in-house) Press/Bindery***12 Credits (0 Lecture 0 Lab 12 Shop)**36 Hrs/Wk (36 Hrs. Shop) \*15 wks*

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***12 Credits (0 Lecture Lab 12 Shop)**36 Hrs/Wk (36 Hrs. Shop) \*15 wks*

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. Students are required to complete and submit weekly reports and two evaluations from their supervisor. *Prerequisite:* GAT 285 or 286 and Faculty approval.

**GAT 296 Independent Study***(Maximum 3 Credits)**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.

## History (HIS)

**HIS 110 Survey of American History***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 151 Western Civilization I***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course introduces the student to the heritage of Western society from ancient to early-modern times. Particular attention is given to the ancient civilizations of Egypt, Greece and Rome. Medieval civilization is explored with a focus on the institutions it bequeathed to the modern world. The Renaissance and Reformation and the rise of the great nation-states are studied. Throughout the course important individuals are considered such as Alexander the Great, Caesar, Charlemagne, Michelangelo, and Elizabeth I.

**HIS 152 Western Civilization II***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course introduces the student to the heritage of Western society from early modern times to the atomic age. Particular attention is given to the Enlightenment, the French Revolution, the rise of the industrial era, the growth of nationalism, and the World Wars. Personalities such as those of Napoleon, Marx, and Hitler are studied.

**HIS 201 Maine History***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 210 The Washburns of Livermore, ME***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course will use traditional historical research and several field trips to learn about one of the most outstanding political dynasties in American history. Israel and Martha Washburn had a large family during the hard years of the early 19th century. Raised with "the iron hand of poverty always on their shoulders" the seven sons of Israel and "Patty" wrote their names large across the middle of 19th century political life. Out of the seven boys came two governors of different states, for US Representatives, one Union Army major general, a commander in the US Navy, one senator, one minister to France, one minister to Paraguay, one Secretary of State, three authors, the founders of Gold Medal Flour and the Pillsbury Corporation, one millionaire banker philanthropist, the founders of a Wisconsin Railway still in operation, "The Mighty Soo," and three founders of the Republican Party.

**HIS 220 America & the Cold War***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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.

**Human Geography (GEY)****GEY 101 Human Geography***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

Human Geography constitutes an introductory course designed to furnish the student with a general understanding of the spatial dimensions of human culture. The course provides an overview of the global distribution of such elements of culture as population, languages, religions, economic activities, urban systems, and political organization. The spatial perspective will furnish a greater

understanding of the cultural world around us, and patterns of human activity which exist in dynamic interaction with the physical environment.

**Humanities (HUM)****HUM 294 Special Topics in Humanities***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course will examine particular aspects of the humanities, depending on the semester. Examples might be-music, literature and art of a specific time period; the history of language as it related to modern modes of communication; the work of artists, writers and thinkers of a particular period or movement. Topics can cover a range of disciplines classified under the category "humanities" - art, music, language, cinema, philosophy, gender studies, and so on. Because this is not a regular offering of the Humanities Department, students are encouraged to seek detailed information from the instructor or department chair, prior to registering. *Prerequisite: ENG 101 College Writing.*

**HUM 296 Independent Study in Humanities***3 Credits**\*15 wks*

*Number of hours per week to be determined by Advisor*

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 112 Introduction to Community Mental Health***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 program in particular.

**HUS 153 Substance Abuse***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 HUS 112 with a grade of "C" or better or permission of the instructor.*

**HUS 155 Case Management***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 HUS 112 with a grade of "C" or better or permission of the instructor.*

### **HUS 241 Human Services Practicum I**

4 Credits (1 Lecture 0 Lab 3 Clinical)  
10 Hrs/Wk (1 Hr. Lecture 9Hrs. Clinical)  
\*15 wks

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 experiential 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. *Prerequisites: Completion of HUS 112, HUS 155, PSY 101, PSY 116, PSY 151 and SOC 200. Corequisites: HUS 153, PSY 111, and SOC 201, with a grade of "C" or better, and permission of the program director.*

### **HUS 251 Human Services Practicum II**

4 Credits (1 Lecture 0 Lab 3 Clinical)  
10 Hrs/Wk (1 Hr. Lecture 9Hrs. Clinical)  
\*15 wks

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. *Prerequisite: HUS 241; Corequisites: COM 100 and SOC 220, with a "C" or better, and permission of the program director.*

## **Interdisciplinary Studies (INS)**

### **INS 101 Technology and Society**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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.*

### **INS 211: The Asian Tradition**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
The Asian Tradition will provide students with an overview of the largest continent starting with the religion, history, and literature of Ancient India and the Chinese Dynasties, and continue through medieval Asia with the emergence of Japan and Southeast Asia. Because of Asia's vast size, the development of the various cultures was distinct. Unique art, literature, and religious traditions emerged, but the extraordinary diversity was often accompanied with mistrust and conflict. The course ends with an examination of modern Asia and an investigation of how the volatile current events (India/Pakistan, North/South Korea, China/Tibet, China/Taiwan,) are the product of ages-old cultural traditions.

### **INS 251 Western Thought and Culture**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This survey course introduces the student to the major ideas and artistic achievements in the western tradition from the Renaissance to today. The course will focus on the evolution of thinking in each period, including the Renaissance, the Baroque, the Enlightenment, the Modern, and the Postmodern. In each period, the role and nature of the arts, including painting, sculpture, architecture, literature, and music will be examined. *Prerequisite: ENG 101*

### **INS 296 Interdisciplinary Seminar**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks  
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 Community College. Projects and activities are based on in-class activities, reading assignments and other sources.

### **LER 011 Orientation Seminar**

1 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks  
This seminar is designed to assist Bell Atlantic/NEXT STEP (Telecommunications Technology) students to reach their academic potential and experience success at Central Maine Community College. Emphasis will be on the college environment and services, study/learning skills and self-awareness and self development. *Prerequisite: Bell Atlantic participant..*

### **LER 025 Master Student Seminar**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

This course will introduce the student to safety, along with the use of hand tools, and measuring tools, which relate to

milling. Additionally, the set up and operation of vertical and horizontal milling machines, calculations of feeds and speeds with the selection of different types of cutting tools are included. The layout of parts and various types of inspection procedures is also introduced.

### **MTT 113 Grinding I & Drilling**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

This is the first of three CNC courses which includes the study of G codes, M codes and a glossary of terms related to CNC. Students will write four CNC programs using manual programming, which will be used in MTT 124 Applied Computer Numerical Control. CNC machine operation and setup will also be covered during this class. *Prerequisites: MTT 111, 112, or Faculty approval.*

### **MTT 121 Introduction to Threading Processes**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

This is the second of three CNC courses which covers setup and operation of state of the art CNC machining centers and CNC lathes. Each student will setup and manufacture two machining centers and two lathe projects. CNC machine safety is emphasized in this course. Programs will be downloaded from the computer to the CNC machines and the students will be responsible for setting tooling and recording offsets. *Prerequisite: MTT 115 or Faculty approval.*

### **MTT 204 Geometric Dimensioning & Tolerancing**

1 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks

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 current standards set by the American National Standards Institute (ANSI) 14.5 M - 1994. *Prerequisite: MECT 103 or Faculty approval.*

### **MTT 211 Advanced Threading Processes**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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, and slot milling operations. The setup and cutting of a keyway to print specifications will be covered. *Prerequisite:* MTT 122 or Faculty approval.

### **MTT 214 Advanced Computer Numerical Control**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

This is the third of three CNC courses which covers CNC programming with the aid of a computer. The student will input part and tool information into the computer that will generate codes to run the CNC machines. Circular interpolation, canned cycles, thread codes, and tool library data will be introduced. Once the programs are completed, students will machine complex parts on the CNC machining centers and CNC lathes. *Prerequisite:* MTT 124 or Faculty approval.

### **MTT 217 Introduction to Toolmaking**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

This course will introduce the student to the realm of tool making. While the design of Jigs, Fixtures and Stamping Dies will be studied, the course will focus more on the basic tool making practices and techniques used in their construction. *Prerequisites:* MTT 123, MTT 211, MTT 212 or Faculty approval.

### **MTT 221 Advanced Turning Processes**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

Advanced machining processes are covered in this course including angular and contour milling 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**

2 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

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 Credits (.5 Lecture 1 Lab .5 Shop)  
4 Hrs/Wk (.5 Hr. Lecture 2 Hrs. Lab 1.5 Hrs. Shop) \*15 wks

This course will expand upon the toolmaking skills acquired in MTT 217 Introduction to Toolmaking. More in depth instruction on the function 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 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Lecture) \*15 wks

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.

## **Mathematics (MAT)**

### **MAT 030 Basic Mathematics**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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:* Minimum 5th percentile on Arithmetic Assessment & Placement Test.

### **MAT 050 Algebra I**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 40th percentile on Arithmetic and 20th on Algebra Assessment & Placement Tests, or Math SAT 480.

### **MAT 100 Intermediate Algebra**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 of 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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Placement Tests, or Math SAT 480.

### **MAT 122 College Algebra**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 75th percentiles on Arithmetic and Algebra Assessment & Placement Tests, and Algebra I & II (C or better), or math SAT 480.

### **Prerequisites For Mathematics Courses 2007-08**

Prerequisite courses from Central Maine Community College 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 CMCC math course and takes the place of all prerequisites below. If an SAT score or prior CMCC course is not on record, both the applicable high school course(s) AND the CMCC 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	CMCC Course Prerequisites		All equivalents are required		
			High School Course Equivalents	CMCC Assessment and Placement Tests Minimum Percentiles	
				Arithmetic	Algebra
MAT 030 Basic Math				5%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 I	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	75%ile	75%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				

\*Please refer to Explanation of Courses on page 94

**MAT 125 Finite Mathematics**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course will cover several topics related to problem solving in the areas of business, finance, sociology, economics, and other areas in which mathematical methods are used. Specific topics include linear functions, systems of equations, matrix algebra, linear programming, and the fundamentals of probability and statistics. No previous experience in finite mathematics is necessary; however, a solid foundation in algebra is essential. *The math prerequisite is MAT 100 (intermediate algebra) or the appropriate combination of Algebra II, SAT scores, and Accuplacer placement scores.*

**MAT 130 Technical Mathematics I**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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: TTV matriculant and ACT Math 34.*

**MAT 132 Pre-Calculus**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.*

## Mechanical Engineering Technology (MECT)

**MECT 103 Print Reading and Sketching**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

4 Credits (3 Lecture 1 Lab 0 Shop)

5 Hrs/Wk (3 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

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**

4 Credits (3 Lecture 1 Lab 0 Shop)

5 Hrs/Wk (3 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

This course provides the students with the skills required to develop drawings of increasing complexity. Emphasis will be placed upon creating drawings using CMCC'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 & Strengths of Materials**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.*

*\*Please refer to Explanation of Courses on page 94*

**MECT 211 Introduction to Design**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 151 or Faculty approval.

**MECT 221 Manufacturing Technology**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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:* MECT 142 or Faculty approval.

**MECT 241 Mechanical Design Projects**

3 Credits (1 Lecture 2 Lab 0 Shop)

5 Hrs/Wk (1 Lecture 4 Lab) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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. *Pre-requisites:* MET 111, BCA 120.

**MEA 210 Insurance Coding/Claims Processing**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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. *Pre-requisites:* MEA 200.

**MEA 220 Medical Clinical Procedures I (Lecture)**

2 Credits (2 Lecture 0 Lab 0 Shop)

2 Hrs/Wk (2 Hrs. Lecture) \*15 wks

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)**

2 Credits (0 Lecture 2 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lab) \*15 wks

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 (Lec.)**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 231.

**MEA 231 Advanced Medical Clinical Procedures II (Lab)**

2 Credits (0 Lecture 2 Lab 0 Clinical)

4 Hrs/Wk (2 Hrs. Lab) \*15 wks

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. *Co-requisite:* MEA 230.

**MEA 263 Medical Assistant Externship I**

3 Credits (0 Lecture 0 Lab 3 Clinical)

8.5 Hrs/Wk (8.5 Hrs. Clinical) \*15 wks

*Prerequisite:* Satisfactory completion of MEA 220 and MEA 221. *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 15 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 264 Medical Assistant Externship II**

3 Credits (0 Lecture 0 Lab 3 Clinical)  
8.5 Hrs/Wk (8.5 Hrs. Clinical) \*15 wks  
*Prerequisite:* Satisfactory completion of MEA 262. *Co-requisite:* the prescribed fourth 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 15 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 Coding (MCO)**

### **MCO 121 Medical Diagnosis (ICD-9) Coding**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This course covers ICD-9-CM diagnostic coding. This course will facilitate coding knowledge and enhance coding skills by addressing specific coding issues within particular areas. Medical coding is defined as the translation of diagnoses, procedures, services, and supplies into numeric and/or alphanumeric components for statistical reporting and reimbursement purposes. *Prerequisite:* MET 101.

### **MCO 125 Medical Procedure Coding**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
This course covers CPT-4 Procedural coding. This course will facilitate coding knowledge and enhance coding skills by addressing specific coding issues within particular areas. CPT 4 coding is a systematic listing and coding of procedures and services performed by physicians. Each procedure or service is identified with a five digit code. With this coding course, the procedure or service rendered by the physician is accurately identified. This course will also include HCPSC injectable drugs, ambulance services, prosthetic devices and selected provider services. *Prerequisite:* MET 101 Medical Terminology.

## **Medical Transcription (MET)**

### **MET 101 Medical Transcription I**

4 Credits (4 Lecture 0 Lab 0 Shop)  
4 Hrs/Wk (4 Hrs. Lecture) \*15 wks  
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 Credits (4 Lecture 0 Lab 0 Shop)  
4 Hrs/Wk (4 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
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.

## **Music (MUS)**

### **MUS 101: Music Appreciation and History**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks  
Music Appreciate and History is a one-semester survey of the Western music tradition, from the chant of the Middle Ages to the art music of this century. It includes study of the major composers, genres, and forms of each period. An understanding of musical style through repeated listening is a primary goal of the class

## **Nursing (NUR)**

### **NUR 112 Foundations of Nursing/Nursing Care of Adults**

9 Credits (5 Lecture 0 Lab 4 Clinical)  
17 Hours/Week (5 Hrs. Lecture 12 Hrs. Clinical) \*15 wks  
This course emphasizes the acquisition of knowledge and skills by the student for the provision of basic patient care. Major focus areas for the student include professional behaviors, communication, techniques of physical assessment, critical thinking, nursing process, patient teaching strategies and the management of time and resources for the student and the provision of care. The student uses the classroom, the laboratory and clinical areas for practice and discussion. *Prerequisites:* Admission to the Nursing Program; *Corequisites:* BIO 115, 116; ENG 101.

### **NUR 115 Medication Preparation, Administration and Dosage Calculations**

1 Credit (1 Lecture 0 Lab 0 Clinical)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks  
This course is designed for nursing students. It focuses on the safety and accuracy required for medication administration. Included will be the interpretation of drug orders (including standards and common abbreviations



used in a drug order), understanding drug labels, oral and parenteral drug administration, reconstitution of solutions, pediatric and adult dosages based on body weight and body surface area, calculating and adjusting intravenous solutions, and dosage calculations using the formula, ratio and proportion or dimensional analysis approach. *Prerequisites:* Admission to the Nursing Program; *Corequisites:* BIO 115, 116, ENG 101; NUR 112.

### **NUR 116 Role Transition - LPN**

3 Credits (1 Lecture 0 Lab 2 Clinical)  
7 Hrs/Wk (1 Hr. Lecture 6 Hrs. clinical)  
\*15 wks

This course is designed to assist the licensed practical nurse with the role transition to professional role of the associate degree nursing student. The emphasis in this course includes application of assessment, planning, intervention and evaluation of outcomes in the provision of holistic care to patients with common, well defined health problems. Major focus areas for the student include practice of the role of the student nurse, development of assessment skills, nursing care planning, communication with patients and families, generation of clinical judgments related to patient's assessed needs, increasing proficiency with nursing skills, patient teaching, and identification of student's own learning needs. *Prerequisites:* Completion of an approved Practical Nursing Program and current Maine LPN license and ENG 101, BIO 115 and 116; *Corequisites:* PSY 101, BIO 117, 118.

Students are reminded that they are responsible for prior knowledge. Supervised clinical experiences take place on medical-surgical nursing units within a structured health care setting. Pre and Post conferences are designed to assist the student to further utilize the nursing process and provide nursing care.

### **NUR 121 Nursing Across the Life Span I**

10 Credits (6 Lecture 0 Lab 4 Clinical)  
18 Hrs/Wk (6 Hrs. Lecture 12 Hrs. Clinical)  
\*15 wks

The emphasis in this course includes application of assessment, planning, intervention and evaluation of outcomes in the provision of holistic care to patients with common, well defined health problems as well as patients in the childbearing/childrearing stage of life. Major focus areas for the student include practice of the role of the student nurse,

communication with patients across the life span, growth and development issues, generation of clinical judgments related to patient's assessed needs, increasing proficiency with nursing skills, patient teaching, and identification of student's own learning needs. *Prerequisites:* NUR 112, ENG 101; *Corequisites:* BIO 115, 116, 117, 118, PSY 101.

### **NUR 134 Clinical Practicum**

2 Credits (.5 Lecture 0 Lab 1.5 Clinical)  
5 Hrs/Wk (.5 Lecture 4.5 Hrs. Clinical)  
\*15 wks

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 115, 116, 117, 118; PSY 101.

### **NUR 212 Nursing Across the Life Span II**

9 Credits (5 Lecture 0 Lab 4 Clinical)  
17 Hrs/Wk (5 Hrs. Lecture 12 Hrs. Clinical)  
\*15 wks

This course builds on previous coursework while increasing the student knowledge and responsibility in the provision of care for two or more patients experiencing complex health needs. Emphasis is placed on effective communication with other health care team members, use of assessment data, prioritization of patient needs and the formulation of clinical judgments to provide holistic nursing care. *Prerequisites:* All Level I (1st year) courses except NUR 134. LPN advanced placement students must complete NUR 116; *Corequisites:* BIO 211, 212, PSY 111, NUR 213.

### **NUR 213 Nursing Across the Life Span III**

9 Credits (5 Lecture 0 Lab 4 Clinical)  
17 Hrs/Wk (5 Hrs. Lecture 12 Hrs. Clinical)  
\*15 wks

In this course the student moves into the professional role of the AD nurse. Provision of holistic care through effective collaboration with the health care team, the patient and families, collection and analysis of relevant data and the formulation of clinical judgments for patients of all ages with more complex or multiple health

needs becomes the focus of this course. Students assume responsibility for a group of patients practice delegation while working within the health care team in the provision of care. Students are encouraged to continue their own education through courses and/or review of professional resources. *Prerequisites:* NUR 212, BIO 211 212, PSY 111; *Corequisites:* COM 100, Humanities Elective, General Education Elective.

## **Occupational Health and Safety (OHS)**

### **OHS 100 Introduction to Occupational Health & Safety**

3 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 non 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 Credits (3 Lecture 0 Lab 0 Shop)  
3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credit (1 Lecture 0 Lab 0 Shop)  
1 Hr/Wk (1 Hr. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 & Responsibilities for Workplace Health & Safety**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 185 Fire Prevention & Suppression**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course, one of five in the Associate in Loss Control Management (ALCM) sequence focuses on fire prevention and suppression techniques. In-house fire brigades will be discussed. Training and readiness activities will also be covered.

### **OHS 200 Practicum I in Occupational Health & Safety**

3 Credits

*Number of hours per week to be determined by Advisor.*

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 Credits - Number of hours per week to be determined by Advisor.

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**

1 Credit (1 Lecture 0 Lab 0 Shop)

1 Hr/Wk (1 Hr. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 prerequisite to registration.*

### **OHS 221 Emergency Planning & Response**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 216 and ENG 101 or Faculty approval.*

### **OHS 260 Ergonomics**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 (Lecture)**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

### **OHS 266 Introduction to Industrial Hygiene (Laboratory)**

1 Credit (0 Lecture 1 Lab 0 Shop)

2 Hrs/Wk (2 Hrs. Lab) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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**

3 Credits (2 Lecture 0 Lab 1 Shop)

5 Hrs/Wk (2 Hrs. Lecture 3 hrs. Shop)

\*15 wks

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**

1 Credit (0 Lecture 0 Lab 1 Shop)

3 Hrs/Wk (3 Hrs. Shop) \*15 wks

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**

1 Credit (0 Lecture 0 Lab 1 Shop)

3 Hrs/Wk (3 Hrs. Shop) \*15 wks

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**

2 Credits (1 Lecture 0 Lab 1 Shop)

4 Hrs/Wk (1 Hr. Lecture 3 Hrs. Shop)

\*15 wks

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**

3 Credits (1 Lecture 0 Shop 2 Shop)

7 Hrs/Wk (1 Hr. Lecture 6 Hrs. Shop)

\*15 wks

This course is the final component in a series of automotive related management 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**

1 Credit (.5 Lecture 0 Lab .5 Shop)

2 Hrs/Wk (.5 Hrs. Lecture 1.5 Hrs. Shop)

\*15 wks

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**

1 Credit (.5 Lecture 0 Lab .5 Shop)

2 Hrs/Wk (.5 Hrs. Lecture 1.5 Hrs. Shop)

\*15 wks

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**

1 Credit (.5 Lecture 0 Lab .5 Shop)

2 Hrs/Wk (.5 Hrs. Lecture 1.5 Hrs. Shop)

\*15 wks

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**

1 Credit (.5 Lecture 0 Lab .5 Shop)

2 Hrs/Wk (.5 Hrs. Lecture 1.5 Hrs. Shop)

\*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course introduces the student to the principles of critical thinking and provides practice in applying these principles to everyday decision making and argument analysis. The student will learn to distinguish between rational thoughts and feelings, identify assumptions, identify the quality of evidence, clarify by asking questions, fair-mindedly analyze multiple viewpoints, and make reasonable judgments. Students will apply principles of clear thinking to evaluating messages from the news media and advertising. *Prerequisite:* ENG 101.

### **PHI 111 Introduction to Ethics**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course provides the students with an introduction to ethics, or moral reasoning.

\*Please refer to Explanation of Courses on page 94



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 Western Philosophy**

**3 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 Philosophy 151 will examine the major philosophers and philosophies of Western thought starting with the early Greek and Christian thinkers, followed by an examination of the arrival of science and the new trend toward rationalism. The course ends with an investigation of the modern, more individualistic philosophies of Existentialism and Nihilism. Western Philosophy will also address the major philosophical questions regarding happiness, reason, emotions, and God.

### **PHI 153 An Introduction to Eastern Philosophy**

**3 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 Unlike Western faith-based religious tradition, Eastern thought is experiential. To that end, Philosophy 153 will not only include a historical overview, but will also incorporate several primary texts from Hinduism, Buddhism, and Taoism to gain a deeper understanding. Topics will include: Eastern Philosophy's inquiries into happiness, the nature of reason, goals and desires, the function of emotions, Reincarnation, God, Enlightenment, as well as major spiritual figures.

## **Physics (PHY)**

### **PHY 121 Technical Physics I (Lecture)**

**3 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 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)**

**1 Credit (0 Lecture 1 Lab 0 Shop)**  
**2 Hrs/Wk (2 Hrs. Lab) \*15 wks**  
 Experiments designed to support the subjects being introduced in Technical Physics I. *Corequisite: PHY 121.*

### **PHY 130 Physics for Communication Technology**

**4 Credits (4 Lecture 0 Lab 0 Shop)**  
**4 Hrs/Wk (4 Hrs. Lecture) \*15 wks**  
 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 (lecture)**

**3 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 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 (laboratory)**

**1 Credit (0 Lecture 1 Lab 0 Shop)**  
**2 Hrs/Wk (2 hrs. Lab) \*15 wks**  
 Experiments designed to support the subjects being introduced in PHY 142 (theory). *Corequisite: PHY 142.*

### **PHY 221 Technical Physics II (lecture)**

**3 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 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)**

**1 Credit (0 Lecture 1 Lab 0 Shop)**  
**2 Hrs/Wk (2 hrs. Lab) \*15 wks**  
 Experiments designed to support the subjects being introduced in Technical Physics II. *Co-requisite: PHY 221.*

### **PHY 242 Physics II**

**3 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 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 )**

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 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 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 Credits (3 Lecture 0 Lab 0 Shop)**  
**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks**  
 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 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 170 Sports and Politics**

*3 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course will introduce the student to the relationships between sports and politics in the contemporary world. In particular, the course will analyze how politics and laws affect the structure and outcomes of sports and how sports affect the structure and content of politics and laws. Specifically, the course will focus on the following themes: civil rights and sports, the legal and fiscal environment of sports, federal and state and local government regulations of sports, commercialism in sports and the globalization of sports. Both amateur and professional sports will be analyzed. The following specific sports and sporting events will be analyzed: the Olympics, baseball, soccer, hockey, and snowmobiling. In a more general way, football and basketball will also be analyzed. Within these, the following issues will be analyzed: the legal environment of competition and antitrust law, the responsibility and rights of owners, player associations and fans, the collective bargaining process, drugs and sports, gender equality and law, international politics and amateur sports and safety and regulation of sports. There may be some field trips to sporting events.

### **POS 201 Maine State Government**

*3 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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.

### **POS 296 Special Topics in Political Science**

*3 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

The students in this course will analyze selected topics in political science. These topics will analyze various controversies in contemporary political science. The topics may be found in the political institutions, social institutions and public policy of selected countries. The special topic analyzed is not a regular course offering of the Social Sciences department. Since the topic covered in this class differs from year to year, students should seek further information from the instructor before registering regarding the particular topic that will be analyzed. Possible topics to be analyzed include: US presidential elections, civil liberties, terrorism, technology and politics and political participation.

## **Psychology (PSY)**

### **PSY 101 Introduction to Psychology**

*3 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 discus-

sions 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 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 ongoing 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 116 Psychology of Group Dynamics**

*3 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course will examine the theories, history, and stages of group development, group dynamics and processes, distinguish between the various types, uses and functions of groups. Identification of the major components of groups such as roles, rules, structure, norms, cohesion, conflict, leadership roles and styles will be explored. Emphasis will be on the principle dynamics of group interaction, group decision-making, and these may be applied in the therapeutic milieu, and within organizations. Students will demonstrate a basic knowledge and demonstration of skills useful in working in and with groups, through participation in structured exercises.

### **PSY 120 Psychology in the Workplace**

*3 Credits (3 Lecture 0 Lab 0 Shop)*

*3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 HUS 112, PSY 101, with a grade of "C" or better or permission of the instructor.

**PSY 201 Social Psychology***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course will examine individual human behavior in social contexts. The cognitive, symbolic interaction, exchange, role-reference group, and dramaturgical approaches are explored. An emphasis will be placed on language and communication, inter-group conflict and conflict resolution, social judgments and decisions attitudes, perceptions of others, social influence, attraction, aggression, and group pressure.

**PSY 202 Developmental Disabilities and Psychosocial Rehabilitation***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 and other nervous symptom disorders. The rehabilitation process will be examined, including the history and background, legislation, basic principles and philosophy. Also considered are the steps in the rehabilitation process, historical attitudes toward people with disabilities, the medical model and independent living programs. Course content and activities will enable students to recognize ways in which disability affects individuals as members of families, groups, organizations and communities. Course focus will also be on exploring techniques

used in various life stages and reviewing innovative ways to overcome apathy and discrimination in populations. Additional focus will be on developing 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 vocation/federal system. Ethical and legal issues such as self-determination, strategies for independence and nondiscrimination will be addressed.

**PSY 210 Behavior Analysis and Management***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

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 or permission of the instructor.

**PSY 212 Abuse, Trauma and Recovery***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

This course examines human adaptations to traumatic events including various types and sources of violence and abuse. The historical and social contexts in which abuse and trauma are identified will be explored. Stages of recovery, and an intervention framework for the human service worker with traumatized people will be examined. Topics included: domestic violence, sexual abuse, workplace violence of people over the life course. *Prerequisite:* Completion of HUS 112 with a grade of "C" or better or permission of the instructor.

**PSY 296 Special Topics in Psychology***3 Credits (3 Lecture 0 Lab 0 Shop)**3 Hrs/Wk (3 Hrs. Lecture) \*15 wks*

The students in this course will analyze selected topics in psychology. These topics will analyze various individual and social patterns in contemporary psychology. The special topic analyzed is not a regular course offering of the social sciences department. Since the topic covered in this class differs from year to year, students should seek further information

from the instructor before registering regarding the particular topic that will be analyzed. Possible areas to be analyzed include: counseling, industrial organizational, professional issues and ethics, research methods, cognitive, developmental, family, social, and general. Possible topics to be addressed include: close relationships, personality, abnormal psychology and diagnosis, and persuasion.

**Radiologic Technology (RAT)****RAT 199 Radiologic Technology***45 Credits**Prior Learning*

This catalog listing reflects CMCC'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***4 Credits (4 Lecture 0 Lab 0 Shop)**4 Hrs/Wk (4 Hrs. Lecture) \*15 wks*

This course provides the student with sufficient competency in Real Estate to sit for the Maine Real Estate Commission Sales Agent Exam. Students who successfully complete this course can apply for the exam. Topics will include license and contract law, the listing process, types of mortgages, real estate math, and the negotiating and closing process. This course is subject to annual review and approval by the Maine Real Estate Commission.

**Science (SCI)****SCI 151 Hydraulics and Pneumatics (Lecture)***2 Credits (2 Lecture 0 Lab 0 Shop)**2 Hrs/Wk (2 Hrs. Lecture) \*15 wks***SCI 152 Hydraulics and Pneumatics (Laboratory)***4 Hrs/Wk (4 Hrs. Lab)*

This course will cover the fundamentals of hydraulic and pneumatics including energy, force, power, and pressure. Applications will employ flow principles,

*\*Please refer to Explanation of Courses on page 94*

Pascal's Law, and Bernoulli's Principle. Laboratory exercises will be in support of the lecture. *Prerequisite:* MAT 122 or Faculty approval.

## Social Science (SSC)

### **SSC 110 Occupational Health and Safety in American Society**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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. The economic, social, psychological and historical impact of Occupational Health and Safety will be discussed.

### **SSC 216 Changing Nature of Work (TTV)**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits - Number of hours per week to be determined by Advisor

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.

### **SOC 201 Sociology of Aging**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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.

### **SOC 215 Sociology of Gender**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course will examine gender from a sociological perspective. Factors that affect gender relations, inequality and communication will be discussed, with special emphasis given to theoretical approaches, socialization, and power differentials. How gender is implicated in our social institutions such as the educational system, workplace, family, criminal justice system, and government will be explored. Additionally, how gender shapes more micro interactions and the relationship between gender in the macro setting of social institutions and micro setting of personal interactions will also be addressed. Topics will include: gender in education; gender and work; gender in intimate relationships; and gender, crime and justice.

### **SOC 220 Sociology of the Family**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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).

### **SOC 230 Human Sexuality**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course deals with sex as it relates to the individual, family, group and society. Historical and cultural perspectives on contemporary American sexuality; knowledge, attitudes, and practices; sexuality over the life cycle, socialization; affection, interpersonal attraction; marriage, law, other institutions will be addressed.

### **SOC 296 Special Topics in Sociology**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

The students in this course will analyze selected topics in sociology. These topics will analyze various social patterns in contemporary society. The special topic analyzed is not a regular course offering of the social sciences department. Since the topic covered in this class differs from year to year, students should seek further information from the instructor before



registering regarding the particular topic that will be analyzed. Possible areas to be analyzed include: family and life course, research methods, social change and development, social deviance and mental health, social organization, social psychology, social inequality, and general. Possible topics to be addressed include: gender roles, race and ethnic relations, aging, deviance and criminology.

## Spanish (SPA)

### **SPA 101 Beginning Spanish I**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

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 II**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

Continuation of Spanish 101. Emphasis on development of listening comprehension, speaking, reading and writing skills. *Prerequisite:* Spanish 101 or 2 years of high school Spanish.

## Telecommunications Technology (TET)

### **TET 201 Telecommunications I**

3 Credits (2 Lecture 1 Lab 0 Shop)

4 Hrs/Wk (2 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

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.

## Telecommunications Technology - VERIZON (TTV)

### **TTV 114 Electrical Circuits**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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 circuits 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. *Prerequisites:* BCA 120, MAT 130.

### **TTV 143 Electronics I**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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 multi-meters, 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 160 Digital Systems for Telecommunications I**

4 Credits (3 Lecture 1 Lab 0 Shop)

5 Hrs/Wk (3 Hrs. Lecture 2 Hrs. Lab)

\*15 wks

This course presents topics in hardware and systems as used in the telecommunications industry. Electrical and digital circuits are explored. Binary numbers systems are discussed as applied to telecommunications equipment. Students will explore hardware to the modular level. Students will demonstrate and simulate digital circuits. *Prerequisites:* BCA 120, MAT 130.

### **TTV 161 Digital System for Telecommunications II**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

In this course students will be working with hardware and software installation with an introduction of the personal computer fundamentals. Students will connect a personal computer to a network, and install and setup a printer. The course will cover managing and supporting Windows. Configure user related issues and customization. Learning how to maintain a computer and troubleshooting fundamentals. Students will connect a personal computer to a network, and install and setup a printer. An optional topic would cover Home Technology Integration including surveillance and home automation. The course is composed of lecture and in-class demonstration. *Prerequisite:* TTV 160

### **TTV 162 Electrical Circuits**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

In this course students learn to analyze DC and AC passive circuits using Ohm's Law, Kirchhoff's laws, Superposition. RC and RL circuits are analyzed for impedance and phase angles; Troubleshooting, analysis by computer simulation using simulation software, and telecommunication applications are stressed throughout. *Prerequisites:* BCA 120, MAT 230.



**TTV 240 Electronics II**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

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 260 Introduction to Electronics**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

In this course students are taught the characteristics of amplifiers using opamps with respect to amplification, dB, frequency response, and input and output impedance. Opamp applications such as inverting and non-inverting amps, summing amps, averaging amps, and comparators are introduced with emphasis on the uses of these devices in the telecom industry. Electro-optical devices, such as LEDs, laser diodes, and photodiodes, are studied including uses in the telecom industry. Diodes and transistors are conceptually introduced. Transformers are introduced in connection with power supplies. Diodes are applied as switches in linear and switching power supplies. The frequency response of passive networks and amplifiers is measured. Cutoff frequencies, rolloff, bandwidth, and magnitude and phase are discussed and visualized via Bode plots. Troubleshooting and analysis by computer simulation

software is stressed throughout. *Prerequisites:* PHY 130, TTV 162.

**TTV 261 Telecommunications I**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

An introduction to the techniques, principles, and terminology of voice telecommunications will be presented. Public and private telecommunication networks will be examined. Telecommunication equipment, switching and transmission technology will be demonstrated. The frequency spectrum, modulation schemes and multiplexing techniques will be explored. Lectures, interactive learning and demonstrations will be employed. Laboratory exercises will be required. *Prerequisite:* TTV 162.

**TTV 262 Electronic Communication**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

Students practice the analysis and application of advanced electronic circuits as applied to the telecommunications industry. Topics include frequency response of active filters, oscillators; amplitude modulation, frequency modulation, phase locked loops; pulse modulation concepts; and introduction to television; theoretical and hands-on troubleshooting of test circuits, and analysis by computer simulation. *Prerequisite:* TTV 260.

**TTV 263 Telecommunications II**

4 Credits (4 Lecture 0 Lab 0 Shop)

4 Hrs/Wk (4 Hrs. Lecture) \*15 wks

This course is designed to train students in the organization, architecture, setup, maintenance, hardware and software aspects of local area networks. Topics include: introduction to networks; types and characteristics of different network architectures and network topologies; intra and inter-network devices; network operating systems; peer-to-peer and client/server environments; LAN setup and maintenance, network printing; internal web server. A hands-on approach will be taken, with team projects throughout. *Prerequisite:* TTV 261.

**TTV 264 Telecommunications III**

4 Credits (3 Lecture 1 Lab 0 Shop)

5 Hrs/Wk (3 Hrs. Lecture 2 Hrs Lab)

\*15 wks

This course is designed to train students in the organization, architecture, set up, hardware and software aspects of interconnecting local area networks (LANs)

and wide area networks (WANs). Topics include: introduction to intra and inter-network devices; network operating systems; client/server environments; LAN/WAN setups, network printing; internal web server. A hands-on approach will be taken, with team projects throughout. *Prerequisite:* TTV 263

**TTV 265 Telecommunications IV**

4 Credits (3 Lecture 1 Lab 0 Shop)

5 Hrs/Wk (3 Hrs. Lecture 2 Hrs Lab)

\*15 wks

A survey of current and emerging technologies in Telecommunications will be presented. Lectures, interactive learning, demonstrations, and site visits will be employed. *Prerequisite:* TTV 264.

## Trade and Technical Occupations (TTO)

**TTO 199 Apprenticeship (Prior Learning)**

Variable credit (maximum 24)

This catalog listing reflects Central Maine Community College'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.

## Women's Studies (WST)

**WST 101 Women's Studies**

3 Credits (3 Lecture 0 Lab 0 Shop)

3 Hrs/Wk (3 Hrs. Lecture) \*15 wks

This course employs a range of interdisciplinary sources in order to examine women's positions in and contributions to society. This course covers a broad scope of issues in Women's Studies, including definitions of feminism, the role of gender in social interaction, women of color, women's sexuality, health and the female body, women in mythology, women in the workplace, violence against women, images of women/women's self-image, and women and aging. Students will be

asked to explore their own beliefs and attitudes, as well as the attitudes of societies. The course will look at commonalities and differences among women, and investigate the multiple dimensions of women's experiences. Part of the course will be to consider the ways in which institutions (education, the workplace, family) influence women's lives. Weekly assignments require writing and reading a variety of texts. *Successful completion of ENG 101 is recommended.*





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Program Advisory Committees provide valuable assistance to the faculty in such areas as curriculum review and the development of recommendations concerning student selection criteria. Representative of the type of organizations which employ graduates of the program, advisory committee members provide helpful information about jobs and employment trends, and serve as an important communications link between the program and the students and labor markets it serves.

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B.A., M.A., Ph.D., University of California.

**Maguire, Valarie**

Mathematics & Business Computer Applications  
B.A., University of Southern Maine;  
M.E., Plymouth State College.

**Manning, Dennis**

Social Science  
B.S. and M.Ed., Wright State University

**Mead, David**

Business Computer Applications  
B.S., Thomas College; M.E., University of New England.

**Miller, Jim**

Mathematics/Science  
B.S., University of Southern Maine.

**Nardi, Lisa**

Humanities  
M.F.A., Vermont College; M.A. University of Findlay.

**O'Gorman, Jeff , PE**

Humanities  
B.S., SUNY College; M.A., Texas University;  
M.B.A., University of Baltimore.

**Owens, Christina M.**

Nursing  
B.S.N., University of Maine, M.S.N., University of Southern  
Maine; Registered Nurse, Family Nurse Practitioner.

**Pettigrew, Charles S.**

Business Administration & Management/Humanities  
M.B.A., New Hampshire College; M.S. University of  
Southern Maine.

**Plourde, Noël Marie**

Humanities  
B.A., Boston College; M.S., University of Southern Maine.

**Reissfelder, Tyson**

Mathematics/Science  
B.S., Millikin University; M.Ed., Plymouth State College.

**Roberts, Kenneth**

Humanities  
B.A. St. Anselm College.

**Snodgrass, Langston**

Humanities  
M.A.T., College of Notre Dame;  
M.S.W., Catholic University; J.D., Duke University.

**Snow, Brian**

Business Computer Applications  
M.S., University of Maine.

**Thibodeau, Martha**

Mathematics/Science  
M.S., Thomas College.

**Thomas, Mitchell Clyde**

Humanities  
B.A., University of Maine at Farmington;  
M.P.A., University of Maine.

**Tomic, Vladimir**

Humanities  
B.F.A., M.F.A., University of Belgrade, Yugoslavia.

**Trebilcock, Caroline M.**

Writing Center  
B.S., St. Joseph's College; M.S., University of Maine.

**Urquhart, John**

Humanities  
Ph.D., Florida State University.

**Verrill, Timothy**

University of New Hampshire (Thompson School of Applied Science), Central Maine Community College.

**Wallace, John**

Mathematics/Science  
M.A., San Diego State University.

**Walls, Roger**

Humanities  
B.A., University of Southern Maine;  
M.A., Norwich University.

**Williams, Eben**

Humanities  
A.L.B., Harvard University; M.Ed., Regent University.

**Worden, Timothy**

Business Administration & Management  
B.S., University of New Hampshire.

**Yomoah, Bruno**

Humanities  
B.A., University of Cape Coast; M.A. U.S. International University, San Diego, CA, CAS Certificate of Advanced Studies, USM.

**Zink, Julie**

Humanities  
B.A., University of Mississippi; M.A., University of South Carolina; Ph.D., University of Alabama.

**Affiliated Faculty**

(Guest Lecturers and/or Preceptors who Contribute Instructional Services to Our Programs)

**Bridgton Hospital (Central Maine Health Care), Bridgton**

Barbara Brunjes, MLT (ASCP); Sandy Clark, MT (ASCP); Barbara Gately, MT (ASCP) BB; Susan L. Hamel, MT (ASCP); Bob Whittaker, MT (HEW).

**Central Maine Medical Center, Lewiston**

Donna Beaulieu, MT (ASCP) BB; Cathy Blais, MLT (ASCP); Michael Eng, MD; Donna Gagnon, MT (ASCP); Stephanie Golino, MT (ASCP); Cielette Karn, MD; Beverly Leavitt, MT (ASCP); Amy Marchesseault, MT (ASCP); Mona Murphy, MT (ASCP); Margaret Noddin, MTT (ASCP); Matthew Twomey, MT (ASCP); Johana Ward, MT (ASCP).

**Franklin Memorial Hospital, Farmington**

Deborah Sealey, (ASCP), (HEW), (CLT).

**NorDx, Scarborough**

Kathy Dragoni, MT (ASCP); Cathy Carmichael, MT (ASCP)

**Parkview Memorial Hospital, Brunswick**

Louise Coté, MS, MT (ASCP) SM; Dayle Payne, MS MT (ASCP) Lab Manager; Traci Dubois, Lab Coordinator.

**St. Joseph Hospital, Bangor**

Marilyn Kenyon, MT (ASCP).

**St. Mary's Regional Medical Center, Lewiston**

Doris Boyle, MLT, (ASCP); Karen Hobson, MLT, (ASCP); Marjorie Lachance, (CLT); Anne Levesque, MLT (ASCP).

**Southern Maine Medical Center, Biddeford**

Patricia Burner MT (ASCP); Nancy Clark, MLT (ASCP); Steve Hunt, MT (ASCP); Judy Perry, MT; Diane Petrin, Denise St. Pierre, MT.

**Stephens Memorial Hospital, Norway**

Janice Cardoza, MT (ASCP); Nancy Bisesti, MT (ASCP) SM.

**Goodall Hospital**

Christopher Records, MT (ASCP); Amy Shuckhart, MT (ASCP); David Thomas, MT (ASCP).

**Mid Coast Hospital**

Linda Bradley, MT (ASCP); Sue Ross, MT (HEW); Linela Hodgkins; Pat Fortier; Michelle Miller.



## College Support Staff

**Todd Bergeron**, *Electrician*  
Maintenance Department

**Donald L. Blaisdell**, *Custodian*  
Maintenance Department

**Jean Blais**, *Food Service Worker*  
Food Service

**Gina M. Blanchard**, *Personnel/ Payroll*  
Business Office

**Daniel J. Boulet**, *Mechanic*  
Maintenance Department

**Karla Bransford**, *Office Assistant*  
Registrar's Office

**Nancy Carr**, *Bookstore Clerk*  
Bookstore

**Lenore Charest**, *Information System Support Specialist II*  
Information Technology Services

**Nancy Couture**, *Teacher Aide*  
Culinary Arts

**Robert H. Daigle**, *Manager*  
Food Service Department

**Christina Desjardins**, *Purchasing/Accounts Payable*  
Business Office

**Bill Dowling**, *Information System Support Specialist/  
Web Master*  
Information Technology Services

**Richard Eastman**, *Custodian*  
Maintenance Department

**Tracey L. Farmer**, *Accounts Receivable*  
Business Office

**Betty A. Foster**, *Manager*  
Business Office

**Paul Groleau**, *Custodian*  
Maintenance Department

**Patricia Grondin**, *Secretary*  
Student Services and Financial Aid

**David Guimond**, *Custodian*  
Maintenance Department

**Michelle Hawley**, *Receptionist*  
Administration

**Jeannette Labonte**, *Food Service Worker*  
Food Service

**Jennifer Lyons**, *Secretary*  
Corporate and Community Services

**Raymond L. Masse**, *Director*  
Maintenance Department

**Christine Morin**, *Manager*  
Bookstore

**Joan I. Nichols**, *Admissions Assistant*  
Student Services

**Megan Paine**, *Food Service*  
Food Service Department

**Philip Roy**, *Custodian*  
Maintenance Department

**Richard D. Whalen**, *Cook*  
Food Service Department