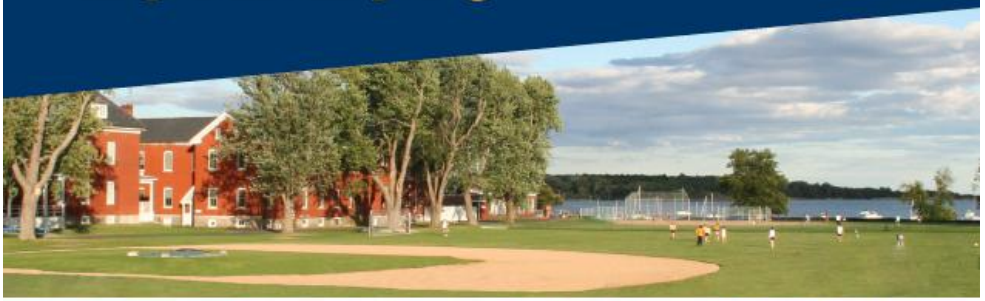
# College Catalog

## 2012-2013



Midcoast Campus in Brunswick Now Open!

SOUTHERN MAINE COMMUNITY COLLEGE

envision a future

www.smccME.edu

# ABOUT THE COLLEGE

## Accreditation

Southern Maine Community College is accredited by the Commission on Institutions of Higher Education of the New England Association of Schools and Colleges (NEASC). SMCC was initially accredited by NEASC-CIHE in 2003 and was reaccredited in 2008. From 1974-2003 SMCC was accredited by the NEASC Commission on Technical and Career Institutions (NEASC-CTCI).

Founded in 1885, the New England Association of Schools & Colleges, Inc. (NEASC) is the nation's oldest regional accrediting association whose mission is the establishment and maintenance of high levels of education, from pre-kindergarten through the higher education doctoral level.

The NEASC Commission on Institutions of Higher Education (NEASC-CIHE) is the regional accrediting agency for over 200 colleges and universities in the six New England states: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

## Message from the President

Welcome! Southern Maine Community College helps people and communities achieve their dreams. I invite you to spend time with our caring and distinguished faculty, staff, students and partners. At SMCC you can sharpen your skills and expand your opportunities whether you're heading to a university, preparing for a job, or growing a business.

With 45 degree and certificate programs serving 7,500 individuals, SMCC is a comprehensive community college of the highest quality. Additionally, we provide workforce training and non-credit workshops for thousands of people every year. No college enjoys a setting more picturesque than our 80-acre South Portland Campus. At SMCC's Midcoast Campus at Brunswick Landing we offer higher education programs and business partnerships that prepare people for high-demand and high-wage careers.

You can also be part of SMCC at our Bath Center, at one of our several community satellite locations, or on-line. Whether you're a current or prospective student, a graduate, entrepreneur, partner or friend of the College, we are invested in your success.

With SMCC you will move forward. Envision a future!

Sincerely,

Ronald G. Cantor, Ph.D.

President

# Campus Locations

## South Portland Campus

The main campus of Southern Maine Community College is located at 2 Fort Road, South Portland, Maine, close to Portland, the largest city in Maine, on a beautiful site overlooking Casco Bay. The College is one of the most picturesque points on the Maine coast, located on the site of the former Fort Preble. Many of the College buildings are historic structures that have been renovated to fulfill the educational mission of the College. The campus covers 80 acres and includes 45 buildings, including residence halls and dining accommodations, as well as an athletic field, a beach, a wharf, interesting military fortifications, and a lighthouse.

## Bath Center

Southern Maine Community College at Bath is located in the Midcoast Center for Higher Education, 11 Park Street in Bath, sharing facilities with the University College. This campus was opened in January 2003 and contains modern classrooms, computer laboratories, science laboratories, faculty and student areas, and administrative offices. The campus allows the College to serve the mid-coast area, expanding educational opportunities to area residents and community businesses/agencies by offering a broad sequence of courses and programs. In 2009 - 2010, over 125 course sections were offered serving the needs of approximately 700 students.

## Midcoast Campus

The SMCC Midcoast Campus is slated to begin offering classes in the fall of 2011 on the site for the former Brunswick Naval Air Station. This campus will offer programming in such diverse areas as health information technology/electronic medical records, nursing, composites technology, advanced manufacturing, heavy equipment operation and repair, and applied engineering. The Midcoast campus will feature a compliment of five buildings that will house these technology programs as well as administrative offices that will provide for complete services for students and businesses in the Midcoast Region.

# Satellite Locations

## Bonny Eagle Site

The Bonny Eagle site, serving the towns of Buxton, Hollis, Standish, and Limington, was established in the Fall of 2005 to bring higher education opportunities to the area. The development of this site saves local residents travel time and provides a range of general education classes close to home. MSAD #6 Adult and Community Education, at the Hollis Learning Center, serves as a local contact. Most classes are held at Bonny Eagle High School, 92 Sokokis Trail in Buxton, or Bonny Eagle Middle School, 700 Saco Road in Standish.

## Casco/Naples Site

The Southern Maine Community College site in Casco/Naples is located at 1437 Poland Spring Road, Casco, at the Crooked River Adult and Community Education Center. Regular college courses as well as community education classes are offered, providing educational opportunities to the western part of the region.

## Portland Sites

The Southern Maine Community College sites in Portland are located at Deering High School, 370 Stevens Avenue, and Casco Bay High School at 196 Allen Ave. The sites provide conveniently located higher education opportunities to local residents.

## Windham Site

The Windham site is located at the Adult Education Office at Windham High School, 406 Gray Road.

## Other Area Sites

Courses have been offered at various other schools or locations when there is a need. Recently, courses have been offered at Gorham High School, Sacopee Valley High School and Gray/New Gloucester High School.

# Mission Statement, Beliefs, and Vision

## SMCC Mission Statement

Southern Maine Community College empowers students to respond to a changing world and enhances economic and cultural development in Southern Maine by providing a variety of educational opportunities and partnerships.

## Beliefs

*Access:*

Southern Maine Community College believes that access to higher education is a fundamental value of democracy.

*Responsiveness:*

Southern Maine Community College believes that the College must be responsive to the changing world and to the educational, social, and cultural needs of our diverse student population and the State of Maine.

*Collaboration:*

Southern Maine Community College believes that collaboration within the College and with the broader community is essential in order to achieve the College's mission and goals.

*Personal Connections:*

Southern Maine Community College believes that each individual deserves respect and encouragement and that the interaction among students, faculty and staff is an important part of the total educational experience.

## Vision

Southern Maine Community College: the institution of choice for innovative and high-quality technical, transferable, cultural and community-based education.

# College History

Since its beginning in 1946 as the Maine Vocational Technical Institute in Augusta, Southern Maine Community College has had one basic guiding principle that to this day serves as the foundation of the College — to provide quality education and, consequently, to strengthen Maine's economy by providing a highly trained and educated work force.

Originally, the College served veterans returning from World War II through such programs as: automotive, construction, machine tool and marine science, serving the economy of the time that was based on agriculture, fishing, and heavy industry. As time passed and the needs of the population and the state economy changed, the College changed. The student body became more traditional with an increase in high school graduates enrolled; the College moved to Fort Preble in South Portland in 1952 and changed its name to Southern Maine Vocational Technical Institute. New programs were added such as nursing, expanding educational programs into the health field.

In 1964, evening classes for adults were added for the first time, expanding education to working adults. The first associate of applied science degrees were awarded to graduates of the Electronics Technology and Electrical Technology Programs in 1968.

Over the years, health programs were expanded and new programs were added in public service and computer technologies: criminal justice, fire science, culinary arts, hospitality, computer technology and media. In 1989, the College became Southern Maine Technical College, continuing with its original mission of providing quality education that met the needs of students and the State of Maine.

In 1998, the College added the associate in arts degree, formalizing the trend for students to transfer to four-year colleges and universities to pursue a baccalaureate degree. The College now has five major academic divisions: Applied Technology; Arts and Sciences; Health Sciences; Information Technology and Business; and Public Safety, which continue to provide quality education and training. In 2003, the College received

accreditation from the Commission on Institutions of Higher Education (New England Association of Schools and Colleges), solidifying the strong foundation of the College as an institution of higher learning.

On March 30, 2003, the College name was changed to Southern Maine Community College, acknowledging the transformation to a comprehensive community college that meets the complex needs of the state and its population.

## Student Profile

7,010 credit students attended Southern Maine Community College in the Fall 2010 semester. Over three percent of the student body is from out-of-state, and less than one percent is from foreign countries. In addition, during the period from July 1, 2010 through June 30, 2011, there were approximately 4,000 registrations in non-credit courses, seminars, workshops and various types of short-term training.

The ratio of full-time/part-time students is 47/53

The ratio of male/female students is 52/48 and

The average student age is 26

## Academic Calendar

| *FALL SEMESTER 2012* | *DATE* |
|---|---|
| *Faculty Professional Days* | *Thursday/Friday, August 23-24* |
| *Classes Begin* | *Monday, August 27* |
| *Drop/Add Period** (16 week classes)* | *August 27 – September 4 at 5 p.m.* |
| *Labor Day - College Closed* | *Monday, September 3* |
| *Early Alert Reporting Due* | *Tuesday, September 25 at 5 p.m.* |
| *Columbus Day - College Closed* | *Monday, October 8* |
| *SMCC Open House – South Portland Campus* | *Saturday, October 13* |
| *SMCC Open House – Midcoast Campus* | *Wednesday, October 17* |
| *Final Day to Submit Grades for Spring '12 Incompletes* | *Monday, October 22* |
| *Advising Week* | *November 5-9* |
| *Veteran's Day Observed - College Closed* | *Monday, November 12* |
| *Registration Begins - Spring 2013* | *Tuesday, November 13 at 8 a.m.* |
| *Last Day to Withdraw** (16 week classes)* | *Monday, November 19 at 5 p.m.* |
| *Thanksgiving Recess - College Closed* | *November 21 (3 p.m.) - 24* |
| *New Student Registration* | *Monday, November 26* |
| *College Forum** | *Thursday, December 6* |
| *Open Registration* | *Monday, December 10* |
| *Fall Classes End* | *Saturday, December 15* |

| *SPRING SEMESTER 2013* | *DATE* |
|---|---|
| *Faculty Professional Day* | *Friday, January 11* |
| *Spring Classes Begin* | *Monday, January 14* |
| *Drop/Add Period** (16 week classes)* | *January 14 – 22 at 5 p.m.* |
| *Martin Luther King Day - College Closed* | *Monday, January 21* |
| *Early Alert Reporting Due* | *Tuesday, February 12 at 5 p.m.* |
| *President's Day - College Closed* | *Monday, February 18* |
| *Registration Begins - Summer 2013* | *Tuesday, February 19 at 8 a.m.* |
| *Spring Break - No Classes* | *Monday – Saturday, March 11 - 16* |
| *Final Day to Submit Grades for Fall '12 Incompletes* | *Monday, March 18* |
| *Open Registration - Summer 2013* | *Monday, March 18 at 8 a.m.* |
| *Advising Week - Fall 2011 Returning Students* | *April 1 - 5* |
| *College Forum** | *Thursday, April 4* |
| *SMCC Open House – Midcoast Campus** | *Thursday, April 4* |
| *Registration Begins - Fall 2013* | *Monday, April 8 at 8 a.m.* |

| | |
|---|---|
| *Patriot's Day - No Classes* | *Monday, April 15* |
| *Last Day to Withdraw** (16 week classes)* | *Tuesday, April 16 at 5 p.m.* |
| *SMCC Open House – South Portland Campus* | *Saturday, April 27* |
| *Spring Classes End* | *Saturday, May 11* |
| *Commencement 2013* | *Sunday, May 19 at 2 p.m.* |
| *New Student Registration - Fall 2013* | *Monday, May 20* |

| *SUMMER SEMESTER 2013* | *DATE* |
|---|---|
| *Memorial Day - College Closed* | *Monday, May 27* |
| *Summer Classes Begin* | *Tuesday, May 28* |
| *Drop/Add Period** (12 week classes)* | *May 28 – June 3 at 5 p.m.* |
| *Open Registration - Fall 2013* | *Monday, July 1* |
| *Independence Day - College Closed* | *Thursday, July 4* |
| *Last Day to Withdraw from Classes** (12 week classes)* | *Monday, July 29 at 5 p.m.* |
| *Summer Classes End* | *Thursday, August 15* |

*College Forum dates tentative and subject to change

**Drop/Add and Withdrawal Periods for shorter term classes are pro-rated based on course length

# COLLEGE POLICIES

## Institutional Policies

### Family Education Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act, FERPA, (Section 438 of the General Education Provisions Act 20 USC § 1232g) affords students certain rights with respect to educational records. Students are informed of this right through this catalog and their Student Handbook. These are:

*Disclosure of Information from Records (Directory Information)*

The College, unless requested not to do so by the student, may release directory information about individual students to anyone who inquires. The College reserves the right not to disclose such information to a person or entity when the College determines that such disclosure is not in the students' best interests and is not otherwise required by law. "Directory Information" is limited to name, address, date of enrollment, date of graduation, degree received, curriculum in which the student is enrolled, date of birth, participation in officially recognized activities and sports, weight and height of athletic team members, and official college publications such as Dean's List and commencement programs. Students who do not wish to have directory information released must submit a Request to Prevent Disclosure of Directory Information form.

*Non -Directory Information*

No information, other than that contained in the directory, will be released without a student's written consent except when prior written consent is not required by FERPA. The College must disclose educational records without written consent of students to those federal and state government agencies and officials as provided by law. The College must also provide access to educational records to personnel within the College determined by the College to have legitimate educational interest; officials of other institutions in which a student seeks to enroll on condition that the issuing institution attempts to inform students of the disclosure, or makes such a transfer of information a stated institutional policy (this notification is to be considered such); organizations contributing to a student's financial aid or determining financial aid decisions concerning eligibility, amount, condition, and enforcement of the terms of such aid; organizations conducting studies to develop, validate, and administer predictive tests, to administer student aid programs or to improve instruction; accrediting organizations carrying out their function; parents of a student who have established that the student is a dependent based upon IRS code and provide a certified copy of the appropriate federal tax form; persons in compliance with a judicial order or lawfully issued subpoena provided that the College makes an attempt to notify the student; appropriate persons in an emergency to protect the health and safety of students or other persons.

*Inspection and Review of Records*

Students have the right to inspect and review their education records. The College requires prior notice and reserves the right to deny access to confidential letters and recommendations associated with admission, employment/job placement, or honors, to other records to which the student has waived the rights of inspection, and to records containing information about more than one student.

*Challenge of Records*

Students have the right to challenge records they believe to be inaccurate, incomplete, or incorrectly disseminated. If the outcome of the challenge is unsatisfactory, the student has the right to a hearing. If the outcome of the hearing is unsatisfactory, the student may submit an explanatory statement for inclusion in the educational record. Such a statement shall become part of the information contained in the educational record and disclosed with it.

*Records of Requests and Disclosures*

The College will maintain a record of requests and disclosures of non-directory information. Records of requests shall include the names and addresses of the persons who requested the information and their legitimate interests in the information. Records of requests will not be maintained for those requests made by students for their own use; those disclosures made in response to written requests from the student; those made by school officials; and those specified in Directory Information.

*Right of Complaint*

Students who believe that the College is not complying with the requirements of the Family Educational Rights and Privacy Act or regulations issued by the Department of Education to implement the Act may file complaints in writing to: The FERPA Office, U.S. Department of Education, 4000 Maryland Avenue, SW, Washington, DC 20202.

## Student Right to Know

As mandated by the Public Law 101-542, the Student Right-to-Know and Campus Security Act, as amended by Public Law 102-26, the Higher Education Technical Amendments of 1991, SMCC student completion information is available upon request from the College's Office of Institutional Research. Information concerning crimes on campus is available on the College website.

## Student Handbook/Code of Conduct

The Compass, SMCC's student handbook, is designed to introduce students to the many aspects of life at SMCC, including policies related to enrollment and student life, rules and regulations, and safety tips. The student handbook serves as a companion piece to the SMCC Catalog, which outlines the College's academic information, requirements, academic programs, course descriptions, and more. Students are expected to become familiar with both publications for a thorough understanding of College regulations.

## Harassment, Sexual Harassment, Discrimination, & Affirmative Action

*Harassment Prohibited*

The College recognizes the dignity and right of individuals to work, learn, play and live in an environment which is free of substantial unlawful interference. Consequently, the College is committed to preventing and responding promptly and effectively to harassment of College students, employees, volunteers or visitors.

*Sexual Harassment Prohibited*

Sexual harassment is prohibited at the College under both state and federal laws and College and MCCS policies.

*Non-Discrimination Notice*

Southern Maine Community College does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation and/or preference, disability, or age or marital, parental or veteran's status in its programs and activities.

*Affirmative Action*

It is a goal of the College to act affirmatively to admit and serve students from traditionally under-represented groups. The College embraces the educational values served by a diverse student body. All applicants are evaluated for admission based on the criteria and standards established for College programs.

Inquiries about the College's compliance with, and policies on, these bases may be directed to any/all of the following:

Affirmative Action Officer
Cates Building
2 Fort Road, South Portland, ME 04106
Telephone: 207-741-5798
Maine Relay Service: 800-457-1220
Fax: 207-741-5751
E-mail: dvickrey@smccme.edu
Internet: www.smccme.edu

Maine Human Rights Commission (MHRC)
51 State House Station
Augusta, ME 04333-0051
Telephone: 207-624-6050
TTY/TDD: 207-624-6064
Fax: 207-624-6063
Internet:
http://www.state.me.us/mhrc/index.shtml

United States Department of Education
Office for Civil Rights
33 Arch Street, Suite 900
Boston, MA 02110
Telephone: 617-289-0111
TTY/TDD: 617-289-0063
Fax: 617-289-0150
E-mail: OCR.Boston@ed.gov
Internet:http://www.ed.gov/about/offices/list/ocr/index.html?src=oc

Equal Employment Opportunity Commission
475 Government Center
Boston, MA 02203
Telephone: 617-565-3200 1-800-669-4000
TTY: 617-565-3204 1-800-669-6820
Fax: 617-565-3196
Internet: http://www .eeoc.gov/

# Academic Policies

## Enrollment Status

*Full-time/Part-time Status*

Full-time status for financial aid, insurance discounts, etc., is defined as 12 or more credit hours. Fewer than 12 is considered part-time. Credits awarded for transfer coursework, work experience, certification, high school articulation, exemptions, audited courses, and challenge exams, including CLEP and AP, are not considered when determining full-time status.

*Maximum Credit Load*

Southern Maine Community College restricts student enrollment to no more than 18 credits in a single semester and 12 credits during the summer term.

## Add/Drop

Students may alter their schedules by adding or dropping courses during the Drop/Add period at the beginning of the fall and spring semesters and the summer term (please refer to the Academic Calendar for dates). Students who officially drop during this timeframe receive a refund of the tuition and technology fees for that course (please see our website for refund policy details). Please note that any course that meets for less than the traditional semester length, i.e. 15 weeks, has a pro-rated drop/add period. There is no refund for non-attendance.

## Attendance

Students are expected to attend all regularly scheduled classes and laboratory sessions. Students who are having difficulties with absenteeism must contact their instructor as soon as possible to discuss the steps they must take to succeed in the remaining weeks of the term.

*Classroom Attendance*

Faculty members have authority to establish attendance standards appropriate to their course. These standards will be clearly stated in the course syllabus.

*Student-Faculty Communication*

Three or more consecutive absences from regular class meetings with no communication between student and instructor must be reported to Enrollment Services and the student will be assigned a grade of "AF" (Administrative Failure).

A family emergency or personal illness may cause a student's extended absence. The student or a family member may call the Associate Dean of Students' office to request that all instructors be notified of the emergency or to request other assistance as needed. Upon return, the student is responsible for making arrangements with each instructor to complete all course requirements; however, in some cases it may not be possible to successfully complete the course.

SMCC recognizes that students from a variety of established religious traditions have special days of observance during the academic year. Faculty members, when notified by students at least two weeks prior to an intended absence for religious observance, are encouraged to consider such notice as it fits within the confines of their attendance policy stated on the course syllabus. Students who have notified their faculty members of intended absence for religious observation are expected to learn what assignments and/or tests are due or will be assigned during an absence and to arrange, whenever possible, alternate times for fulfilling these requirements.

*Class Attendance – Extracurricular and College-Sanctioned Activities*

The primary responsibility of students attending Southern Maine Community College is to meet their individual academic goals successfully. However, the administration, staff and faculty fully support and encourage student participation in those extracurricular activities that enhance the college experience. Such activities can include participation on athletic teams, course field trips, attendance at outstanding speaker series, participation in student government, participation in Phi Theta Kappa, involvement in service events, military service, and other activities.

Students who engage in any college or course-sanctioned or extracurricular activity, must adhere to the procedure outlined in the Student Handbook regarding notification of faculty and completion of coursework.

If the students properly communicate the upcoming absences to the faculty, faculty members are asked not to penalize students in their classes for absences due to college-sanctioned or extracurricular activities. However, individual faculty members have final discretion concerning allowing class makeup.

Faculty advisors, professors, and coaches (or the athletic director) who sponsor such extracurricular activities shall, to the best of their abilities, send a list of participants to the community or the affected faculty in advance of the scheduled event.

## Student Evaluations of Courses

To assist the College in maintaining a high level of instructional quality, students are asked and strongly encouraged to submit course evaluations for each class that they are attending at SMCC.

## Graduation Requirements

Southern Maine Community College students must meet the following criteria in order to be eligible to graduate from a degree or certificate program:

Students must successfully complete all courses in their associate degree or certificate program.

All candidates for graduation must attain a 2.0 minimum cumulative grade point average (GPA).

All associate degree students must complete at least 15 of their credit hours directly through the College.

Certificate students must complete at least 9 of their credit hours directly through the College.

The College will not award degrees and certificates until all financial obligations are met.

## Catalog Year

Students are held to the curricular requirements outlined in the catalog matching the year they first enroll in a program of study (their catalog year). As requirements change over time, students are not expected to continue to change their initial program path. However, a student may choose to pursue the requirements of a more

current curriculum via change of major. Should a student cease enrollment at SMCC for a period of one or more years and return to complete their degree or certificate, the catalog year will be updated to reflect the year of their return, and the student will be held to that catalog's listed requirements.

## Graduation with Honors

Southern Maine Community College recognizes students who meet certain qualifications during the annual commencement ceremony. The following list of honor levels describes minimum criteria:

*High Honors*

Students who have completed degree requirements with a cumulative grade point average of 3.75 or higher.

*Honors*

Students who have completed degree requirements with a cumulative grade point average of 3.50- 3.7499.

*Highest GPA in Program*

Students who have completed degree requirements with the highest cumulative grade point average of any student in their degree or certificate program, provided the GPA is 3.5 or higher.

## Second and Subsequent Degrees

A student may apply to earn additional associate degrees. To qualify, a student must complete the required courses for each degree, resulting in a minimum of fifteen credits beyond the first degree. A student may not earn more than one associate in arts in Liberal Studies degree, regardless of the multiple available concentrations.

## Withdrawal from the College

A student withdrawing from the College prior to the twelfth week of classes (pro-rated for shorter courses) will be assigned grades of W in all courses. If a student withdraws from school after the twelfth week, the student's instructors will assign letter grades.

A student who has discontinued his/her enrollment at the college for a total of one full calendar year will be officially withdrawn from the college. If the student wishes to return to the college after being withdrawn, the student will be expected to follow the program curriculum for the academic year in which the readmission becomes effective.

## Academic Fresh Start

Academic Fresh Start is a one-time opportunity for qualifying students to have prior grades excluded from their grade point average (GPA) when they resume work toward a degree at SMCC after an extended absence. All prior grades will appear on official transcripts. Only grades earned after the Fresh Start is granted will be used in calculating a new GPA. Only fresh start grades of C or better will count toward degree requirements.

*Conditions:*

A student can only be granted Fresh Start once.

Fresh Start cannot be granted if a student has earned a degree, diploma, or certificate from SMCC.

The student must not have been enrolled in credit-based course work at SMCC or any other college or university for a minimum of three consecutive years prior to readmission to SMCC.

The student must have attempted fewer than 30 credits at SMCC prior to readmission to SMCC.

After readmission, the student must complete 12 semester credits at SMCC with a minimum cumulative GPA of 2.0 and credit completion ration of at least 67%.

Students who meet all conditions must contact their academic advisor and complete the Fresh Start application.

Students must submit the application to Enrollment Services before earning 24 new credits.

At least 50% of the degree or certificate requirements must be completed after readmission.

## Grades and Grading

Grades at Southern Maine Community College are assigned by letters representing levels of achievement. The basis for determining a grade is the relative extent to which the student has met objectives of the course. Letter grades signify the following:

| Grades | Quality Points/Credit | Interpretation |
|---|---|---|
| A | 4.00 | 93-100 |
| A- | 3.67 | 90-92 |
| B+ | 3.33 | 87-89 |
| B | 3.00 | 83-86 |
| B- | 2.67 | 80-82 |
| C+ | 2.33 | 77-79 |
| C | 2.00 | 73-76 |
| C- | 1.67 | 70-72 |
| D+ | 1.33 | 67-69 |
| D | 1.00 | 63-66 |
| F | 0.00 | Failure |
| P | None | Equivalent to a C (2.0) or better |
| AF | 0.00 | Administrative failure assigned at the discretion of the instructor designating unofficial withdrawal (failure to continue attending class) |
| I | None | Incomplete |
| W | None | Official withdrawal from a course prior to the 13th week of classes; no credit earned |
| NS | None | Failure to appear for any session of a class for which you have registered. |

## Computing of Grade Point Average

To compute the grade point average for a semester, first multiply the grade points earned in each course by the number of credit hours assigned to that course. The resulting product is the number of quality points for that course. Then divide the total number of quality points earned during the semester by the total number of credits attempted in that semester.

EXAMPLE FOR DETERMINING GRADE POINT AVERAGE:

| Course | Credits Attempted | Grade | Grade Points | Quality Points Earned |
|---|---|---|---|---|
| MATH140 | 3 | B+ | 3.33 | 9.99 |
| BIOL-100 | 4 | C | 2.00 | 8.00 |
| ENGL-100 | 3 | B- | 2.67 | 8.01 |
| SOCI-100 | 3 | F | 0.00 | 0.00 |
| TOTAL | 13 | | | 26.00 |
| | | | | GPA = 2.000 |

To compute the cumulative grade point average, divide the total quality points earned by the total credits attempted in all semesters. Note: Pass/Fail and Repeated courses and credits granted through CLEP or AP examinations, work experience, or transfer are not to be considered when computing grade point averages.

## No Show Grade

A student who enrolls in a class, and pays any part of the tuition (even if through pending financial aid or another agency), but doesn't appear in class will receive a grade of NS (no show) on the faculty class list and their transcript. They will receive no reimbursement for the course or fees, the grade will be treated in the same manner as a withdrawal for the purpose of determining the number of credits attempted, and the grade will contribute to any determination of probation or suspension status.

## Pass/Fail

A Pass (P) grade earned in a course that is graded pass/fail is equivalent to a C (2.0) or better.

## Course Withdrawal

A student may withdraw from a course only during the semester in which s/he is registered for that course. Early withdrawal for full semester length courses is from day 7 – 10 of the semester. Official withdrawal from a course during this period results in a 50% refund of course tuition and fees. Official withdrawal after the early withdrawal period is available through week twelve of semester-length courses and week nine of summer courses. This period is pro-rated for shorter length courses (75% of the course length). There is no refund associated with a withdrawal following the early withdrawal period. The designation "W" will appear on the transcript after a student has officially withdrawn. A course withdrawal is an uncompleted course and may adversely affect financial aid eligibility. Failure to attend or ceasing to attend class does not constitute withdrawal from the course.

## Auditing Courses

Students planning to audit a course are required to pay full tuition and fees. The request to audit may be made no later than add/drop week. Students auditing a course will not receive a letter grade or credit for the course and may not count course credits toward full-time status or graduation requirements.

## Administrative Failure

Administrative Failure (a final grade of AF) identifies students who have stopped attending class and who have had no contact with the faculty member for a period during which the class has met three or more times. At their discretion, faculty may reinstate students who resume attending after the grade has been assigned.

## Incomplete Grades

A faculty member has the option of granting a grade of "incomplete" when an extraordinary event occurring late in the semester prevents a student from completing all required assignments. The purpose of an incomplete grade is to give students an opportunity to earn the grade they would otherwise have received had the event not occurred. The purpose is NOT to give students more time to improve their grade.

*Guidelines:*

Each instructor has full discretion in granting an incomplete grade, and the student cannot appeal the decision.

A student can request an incomplete grade after the end of the 12-week withdrawal period.

The student must be able to demonstrate substantial progress toward completing all required work at the time an incomplete grade is requested.

The student must be earning at least a C average in the course at the end of the withdrawal period.

The student must have met the attendance requirements for the course prior to the event that the request is based on.

Work submitted to satisfy an incomplete grade must meet the same standards as other course work.

## Repeating a Course

A course may be attempted a maximum of three times (initial enrollment and two repeat attempts). Original work is expected, at the discretion of the faculty member. For credit courses, the last grade (regardless of whether that grade is better or worse) on any course repeated will be the grade used in computing the cumulative Grade Point Average (GPA) and for determining completion of degree requirements. All grades will remain on the student's record. The repeated course will count only once toward graduation requirements, provided the grade meets requirements.

## Early Alert/Academic Alert

Warnings of unsatisfactory performance in individual courses are distributed via student e-mail after the fourth week (Early Alert) and ninth week (Academic Alert) of each semester for all students whose instructors indicate.

## Dean's List

Students completing a minimum of 9 credit hours in courses graded A, B, or C, or P with a term grade point average (GPA) of at least 3.00 are named to the semester's Dean's List, provided that no grade lower than C was earned ***in any course that semester*** and the student is not on probation. Grades lower than C include C-, D+ , D, F, W, NS, AF, and I. Only courses numbered 100 or higher are considered for Dean's List. Students who have asked to be excluded from the College's directory information, by law, cannot be included on the Dean's List published online or in local newspapers.

## Academic Standing

To remain in good academic standing, students must successfully complete 66 percent (66%) or more of the total number of credits attempted with a grade point average (GPA) of 2.0 or higher (see grading system). A course is not successfully completed if the student is assigned a grade of F, AF, I, NS or W. Students who are not in good academic standing will be placed in an academic warning status, placed on probation, or suspended. Academic standing is calculated following each fall and spring semester.

*Warning*

Students whose cumulative grade point average falls below 2.00 will be placed in an academic warning status. Students on academic warning may not enroll in more than 15 credits and are encouraged to address study issues and to seek tutoring from the Academic Achievement Center.

*Probation*

Students are placed on probation if they meet one of the following three criteria:

1. Fail to complete 66% of total credits attempted
2. Fail to earn the required semester GPA
    a. If they've attempted 9-29 credits they must earn at least a 1.79.
    b. If they've attempted 30 or more credits they must earn at least a 2.00.
3. Fail to earn the required cumulative GPA
    a. If they've attempted 9-29 credits they must earn at least a 1.79.
    b. If they've attempted 30 or more credits they must earn at least a 2.00.

Students placed on academic probation may enroll in no more than 12 credits each semester that they are on probation. Academic support, as defined by the College, is mandatory for students on academic probation. Students who remain on academic probation for three consecutive semesters will be suspended.

*Suspension*

Students are suspended from the college if they meet one or more of the following five criteria:

1. Fail to complete 66% of credits attempted and fail to earn the required cumulative or semester GPA
    a. If they've attempted 9-29 credits they must earn at least a 1.79.
    b. If they've attempted 30 or more credits they must earn at least a 2.00.
2. Fail to complete 66% of total credits attempted while on probation*

3. Fail to earn the required semester GPA while on probation
    a. If they've attempted 9-29 credits they must earn at least a 1.79.
    b. If they've attempted 30 or more credits they must earn at least a 2.00.

4. Fail to earn a cumulative GPA of more than 0.0 after attempting 9 or more credits

5. Remain on academic probation for three consecutive semesters

*Probationary students who complete 66% or more of the credits attempted in a semester, and attain a semester GPA of greater than 2.0, will not be suspended.

Students who have been suspended from the College may be considered for reinstatement following a minimum of one semester of leave and after providing the College with evidence of increased potential for academic success. An application for reinstatement must be made through the Learning Commons and the student must meet with a college representative to develop an academic plan. Reinstated students will be placed on academic probation during the semester they return.

*Academic Standing Factors and Results**

| Total number of credits attempted | GPA (Semester & Cumulative GPA unless otherwise noted) | Completion Rate (cumulative) | Result |
|---|---|---|---|
| 0-8 | 0.00 – 1.99 | No minimum | Academic Warning |
| 9 + | 0.00 (cumulative) | 0 | Suspension |
| 9-29 | <1.79 | >66% | Probation |
| 9-29 | >1.79 | <66% | Probation |
| 9-29 | <1.79 | <66 | Suspension |
| 30+ | <2.00 | >66% | Probation |
| 30+ | >2.00 | <66% | Probation |
| 30+ | <2.00 | <66% | Suspension |

**The scenarios above assume prior good academic standing. While on probation, if either semester GPA or completion rate fall below standards, students are suspended.*

# Alternative Credit

## Transfer Credit

Courses in which a student has received a grade of C or better are accepted in transfer from regionally accredited institutions ("C-" grades are not acceptable). There is no limit on the age of courses accepted for transfer credit. Courses must be comparable to those offered at SMCC in order to meet the requirements of the student's program. Transfer is determined by the appropriate academic department and administered by the Enrollment Services Center.

Students seeking an associate degree must complete at least 15 of their credit hours directly through the College. Students seeking a certificate must complete at least 9 of their credit hours directly through the College. A request for transfer credit requires submission of an official transcript from the other college. Transcripts for incoming freshmen should be on file in Enrollment Services 30 days prior to the semester for which consideration for transfer credit is to be given. Transcripts from other institutions submitted to SMCC will become the property of the College and will not be reproduced and/or mailed to other institutions. A student's grade point average at SMCC will not reflect grades in courses transferred from other institutions.

Students who wish to transfer credits from SMCC to other colleges should note that the decision to accept credits is determined entirely by the institution to which the student is transferring, although most area colleges readily accept most applicable SMCC credits.

## Credit by Examination

Credit for College Level Examination Program (CLEP) General Exams and selected Subject Exams will be granted in applicable subject areas. No more than 30 credits may be granted. A minimum acceptable score of 50 is recognized, as recommended by the American Council on Education (ACE), on all exams.

Students with documented skills and the permission of the Department Chair may qualify to sit for challenge exams in selected courses in their programs. Students must register and pay a challenge exam fee for the course. Challenge exam credits do not count toward full-time status for financial aid and the Veterans Administration. No grade is assigned, and the exam does not calculate into grade point average.

Credit is granted for Advanced Placement (AP) courses/exams completed with scores of "3" or higher for which there are comparable courses at SMCC.

## Credit through Experience

Students may be exempted from selected courses or receive "work experience" credit based on documented work experience and approval of the Department Chair and the Registrar. Work experience can be used toward meeting graduation requirements. Credits are not likely to be transferable.

# Course Delivery

## Honors Program

The Honors program at SMCC offers students in every discipline the opportunity to study and learn in an academically challenging and enriching learning environment. Honors students receive special recognition at graduation, and "SMCC Honors Program Scholar" designation on official transcripts. The Honors program is affiliated with the National Collegiate Honors Council (NCHC) and the Northeast Regional NCHC.

*Program Requirements:*

Maintain a 3.30 cumulative GPA. If cumulative GPA drops, honors students are allowed one probationary semester to continue in the program and raise their cumulative average.

Maintain a minimum "B" in all designated Honors courses.

Complete the Honors Seminar.

Complete at least two courses that include an Honors Component.

Complete an Honors Project and present at an appropriate seminar or conference, such as Thinking Matters.

## Writing Intensive Courses

A number of courses at Southern Maine Community College are designated as writing-intensive, indicated with a "WI" credit type on the official transcript. Courses with this designation require ENGL-100, English Composition, as a prerequisite and include student writing and its improvement as primary course objectives.

## Distance Learning

The Distance Learning Program at Southern Maine Community College is an effort to broaden the scope of course content offered via the Internet and to create an environment of creativity and support for faculty members wishing to teach or enhance their courses by offering material online. The ultimate goal of this program is to offer a wide array of individual courses and programs to students enrolled at SMCC who are interested in interactive learning. Many courses use the Internet to enhance the traditional classroom education experience. A wide range of disciplines offer courses on-line, which allows both traditional and non-traditional students the opportunity to pursue a secondary education that may not have been available because of scheduling or distance-related difficulties.

## Online Course Enrollment Requirement

Online courses (section designators beginning in D, for example, ECON-120-**D**1) are restricted to students who have earned a minimum of 12 credits. Students who have earned credits at another institution may submit an unofficial transcript to meet this requirement. Hybrid classes, those for which only a portion of the class is conducted online, do not carry the same restriction.

## Internships/Externships

An Internship places students with a mentor in an on-the-job learning experience. It is practice oriented and requires that students apply prior mastery of theoretical work and basic skills. An Internship should provide mentored apprenticeship experience in a broad range of functions of the career area and is not simply an entry-level job. An internship is usually the culminating experience in the students' program of study.

Academic credit is based on the number of hours of job experience. Regular work hours are to be maintained. A minimum of 40 clock hours of directed on-the-job time is required for each semester hour of credit; often more time is devoted to the internship than that required for minimum credit. Regular tuition rates are charged based on the amount of credit.

## Practicums

A Practicum places students in a practice learning situation. It provides students with supervised observation of a relevant career or profession through exposure to the functioning of an organization as a participant in its operations. Students are encouraged to relate and interpret their experiences through frequent conferences with a faculty supervisor, projects, and assignments. A practicum is exploratory rather than culminating.

Academic credit is based on the number of hours of experience. A minimum of 40 clock hours of directed work is required for each semester hour credit.

## Field Experience

Some courses provide students with the opportunity to participate in field experiences. Field experiences place students in a learning environment in the field observing and assisting professionals at work with selected tasks as an introduction to the profession.

The instructor in a course that requires such an experience places students in field experiences. Assignments related to the field experience are part of the overall course evaluation.

## Independent Study

A student may request an opportunity for independent study in an area not covered in normal course offerings. All requests must be in writing and have prior approval of the Instructor, Department Chair, and Academic Dean.

# Admissions Policies

All students applying to degree or certificate programs are required to take the ACCUPLACER® placement tests in reading, writing, and mathematics unless otherwise exempt. The purpose of the ACCUPLACER® is to determine ability to perform college-level work and assess the levels at which students will begin their study. Based upon test results, the College may prescribe developmental courses or limit a student's enrollment in an effort to enhance that student's ability to succeed. Applicants to health and technical programs must comply with program-specific entrance requirements and application deadlines.

SMCC maintains a rolling admissions policy for most programs allowing candidates to apply and be considered for acceptance throughout the year. Due to competition for acceptance to some programs, particularly health programs, early application (at least 6 months prior to the fall) is encouraged.

## Non-Degree Seeking Students

To enroll in classes as a non-degree student, students should refer to the Academic Calendar for open registration dates. In order to take an English or math course, or a course with an English or math prerequisite, students must take the ACCUPLACER® placement test unless otherwise exempt.

## Home-Schooled Students

Home-schooled students must submit all requested documents, and are encouraged to submit official results from the General Equivalency Diploma (GED) to certify the completion of high school or its equivalent. In lieu of this credential, the minimum ACCUPLACER® scores will satisfy the requirement. The ACCUPLACER®, produced by the College Board, is a recognized ability to benefit test. A student must achieve the following minimums to qualify:

Reading Comprehension 55

Sentence Skills 60

Numerical Math 34

The College reserves the right to request the high school transcript with a listing and description of coursework completed and competency level achieved.

# Underage Student Enrollment

**I. Introduction**

This policy governs the application, admission and enrollment of persons who are 17 years of age or younger and have not yet graduated from a home, junior or high school ("minor students"). The purpose of this policy is to inform such minor students and their parents or guardians (collectively "parents) of the standards that the College uses in determining the likelihood that the minor students will have a positive and successful experience at the College without undue assistance and attention from the College.

**II. Purpose**

The purpose of this policy is to provide opportunities for minors, whose intellectual ability and emotional maturity is advanced, demonstrated and documented, to benefit from attending the College without, at the same time, placing an undue burden on the College's normal operations and standard support services.

**III. Standards**

The following standards and processes apply.

A. Minor students under age 12 are not, consistent with national standards, permitted to attend.

B. Minor students age 14 and under require the approval of the Associate Dean of Students, or designee, who will determine level of emotional and intellectual maturity, educational preparation, and motivation to succeed. Such minor students must submit two references from certified teachers attesting to emotional and intellectual maturity and ability of the minor student to work independently and successfully in a collegiate environment.

C. Minor students age 16 and under require the approval of the Associate Dean of Students, or designee, who will determine level of emotional and intellectual maturity, educational preparation, and motivation to succeed. Such minor students must submit one reference from certified teachers attesting to emotional and intellectual maturity and ability of the minor student to work independently and successfully in a collegiate environment.

D. All minor students must take the College's placement test (Accuplacer: Reading and Sentence Skills) and must place at the college level in English to be eligible to take classes.

E. All minor students seeking or required to take a math course must take the Accuplacer mathematics placement test and must place at the required college level.

F. No minor student is permitted to take developmental courses at the College.

G. No minor student will be a "matriculated" student and instead will be considered a "dual enrollment" or a "home schooled" student, whichever is applicable. Should a minor student wish to matriculate, the student must complete the application process and petition the Associate Dean of Students. Such petitions will be considered on a case-by-case basis and approved only in extraordinary circumstances.

H. Federal education law, the Family Educational Rights and Privacy Act (FERPA), governs access to the records of minor students enrolled at the College. Under FERPA, parents DO NOT have the right to access students' educational records without written consent from the student.

**IV. Student Responsibilities**

In addition the requirements set forth above, all prospective minor students must:

A. Complete the Southern Maine Community College Assumption of Risk, Release and Liability Waiver Form for Enrollment of Minor Students;

B. Conduct him/herself as an adult college student in and out of the classroom;

C. Understand that College courses are conducted with adult content, and that it is the responsibility of the minor student and parent to determine appropriateness of the course;

D. Follow rules and regulations of the college as noted in the College catalog; and

E. If approved, register early if they want to get into their desired course(s).

**IV. Notice to Faculty**

Pertinent faculty and/or the department chair will be notified via e-mail of each minor student's enrollment.

**V. Questions?**

Questions about the application of this policy may be addressed to the Associate Dean of Students at (207)741-5629 and/or Enrollment Services at (207)741-5800.

# International Student Admissions

SMCC is authorized to provide international students admitted to the College with the I-20 form needed to apply to the U.S. Customs and Immigration for an F-1 student visa. Before the College can create an I-20, the student must satisfy the following admission requirements:

Complete an application and pay a non-refundable $20.00 application fee

Submit official high school transcripts for all years attended, and proof of completion of secondary school

Provide a Declaration of Finance form with supporting materials, which includes an affidavit of support or notarized letter from a sponsor documenting that he/she will be responsible for the student's educational and living expenses for one year and/or an official bank statement showing sufficient funds in a bank account to cover total education and living expenses for one year. This amount must be a minimum of $19,043.00 in U.S. dollars

Submit TOEFL with a score of 500 or better in paper version, 173 or better in computerized version, or 61 or better in the internet-based version, or take the ACCUPLACER® placement exam to demonstrate English language proficiency. Students whose first language is not English must take the Test of English as a Foreign Language (TOEFL) at least six months prior to the intended term of enrollment. Test scores more than two years old will not be accepted. Information and application forms may be obtained by writing to TOEFL, P.O. Box 899, Princeton, New Jersey 08541 or by visiting the TOEFL website at http://www.toefl.org.

All documents submitted must be original. If documents are not in English, an official translation must be attached. Please have all documents, such as high school transcripts, TOEFL scores, Declaration of Finance forms, and other related documents sent to the Enrollment Services Center at Southern Maine Community College.

Students attending on an F-1 visa must enroll in a degree program and attend full-time fall and spring semesters. International applicants must submit all required application materials to Enrollment Services by July 1 for the next September semester, November 20 for the next January semester.

If applying from within the U.S., the applicant who is unable to provide TOEFL scores must have language ability assessed through the ACCUPLACER® placement test administered at SMCC.

# Readmission

Students in good standing who have withdrawn from Southern Maine Community College voluntarily and who wish to return must submit a written request. If the period of absence is less than five academic years, withdrawn students in good standing may complete a request for readmission form available in Enrollment Services. If a student wishes to return after an absence of more than 5 years, he/she must reapply to the college.

Students are expected to complete program requirements listed in the catalog in effect for the year they are officially admitted to the college. If readmitted after more than one year, students must meet the academic degree requirements listed in the catalog under which they are readmitted. In the case of readmission, there is no guarantee that the student's desired program will be available.

Students who have been dismissed from the college for academic or disciplinary reasons and who wish to return must should refer to the section in the catalog titled "Reinstatement from Suspension".

# Immunization Requirements

All matriculated students at SMCC must comply with all applicable immunization requirements as determined by Maine State Law.

*Immunization Requirements (Non Health Science majors)*

All students must have proof of diphtheria/tetanus every ten years. In addition, all non health science programs require proof of one (1) dose of the Measles and Rubella vaccine and two (2) doses of the Mumps vaccine OR proof of immunity by a blood titer. All non health science students must provide evidence of immunizations to the Enrollment Services Center. Students who do not meet the requirements may not attend classes.

*Immunization Requirements (Health Science majors)*

In addition to the immunization requirement listed above, students accepted to a Health Science program (Cardiovascular, Dietetic Technology, Medical Assisting, Nursing, Paramedicine, Radiation Therapy, Radiography, and Respiratory) have **additional requirements** such as immunizations, background checks, and drug screening. All requirements must be submitted for review to American DataBank. Please visit www.smccme.edu/ADB for details. Students who do not meet the requirements may not attend classes.

Health Science immunizations include:

Proof of immunity to Hepatitis B by blood titer.

Two doses of MMR vaccine OR proof of immunity by blood titer.

Proof of immunity by blood titer to Varicella (Chicken Pox) OR two doses of the Varicella Vaccine if non-immune.

Tetanus/Diphtheria immunization current within the past ten years.

Negative PPD result (Tuberculosis). Annually updated results are required.

Please note, upon entry of immunization information into your student record, the documentation you or your health care provider submits will be confidentially destroyed. Please keep a copy for your personal records.

# Special Conditions of Admission, Enrollment, & Participation

*A. Introduction*

The colleges of the MCCS offer education and services to students under a process of modified open admissions. Typically, this process enables those students who meet the stated academic criteria for program or college admissions to attend and access the full offerings of the college. In some circumstances, however, a student's personal experiences may affect a student's admission, enrollment or participation in a college's various offerings. The purpose of this policy is to express the authority of the colleges to handle such circumstances.

*B. Definitions*

For purposes of this policy, the following terms have the following meanings.

"Admission" means entry into a college, off-campus site, program or course;

"Circumstances warranting special conditions" or "special circumstances" mean those acts that raise reasonable concerns for community safety and community order. They typically involve prior personal misconduct that demonstrates a diminished reliability to comply with the reasonable rules and regulations of the college, and/or a greater likelihood of risk of harm to persons or property. Such circumstances often include, but are not limited to, a:

Criminal conviction;

Condition of bail, probation, restraining order or other judicial or administrative order;

Pending arrest, indictment or other criminal charge;

Report or recommendation of a law enforcement, probation or parole officer that relates to the risks of harm or disruption that a student may present;

Report or recommendation of a mental health professional that relates to the risks of harm or disruption that a student may present; or

Civil litigation whose allegations raise like concerns for a college.

A "condition" can include either exclusion, restriction or both.

"Enrollment" includes enrollment in on-campus and online courses;

"Participation" means involvement in any college service or activity including, for example, access to housing, financial aid, athletics or extra-curricular activities, as well as a general freedom of movement around campus.

"Student" includes an applicant for admission, an admitted student, and an enrolled student.

### *C. Completed vs. Evolving Matters*

This policy applies both to those special circumstances that have been completed and those that are still evolving. For example, this policy applies to instances when a student has been criminally convicted and to instances when a student is facing criminal charges not yet proven. While this policy recognizes the presumption of innocence that attaches to the latter, this policy also recognizes, and adopts here the equivalent of, the prudent interim approach of courts in imposing reasonable restrictions on the individual until the process for finding guilt, innocence or other disposition is complete.

### *D. Coordination of this Policy with the Student Code of Conduct*

When the student's underlying personal conduct at issue is subject to the jurisdiction of the MCCS Student Code of Conduct (for example, the underlying misconduct at issue occurs on college property or is related to a college event, and is also subject to criminal prosecution), the procedures of that Code and the substantive guidance of this policy shall be used. When the underlying conduct is not subject to that Code (for example, the underlying misconduct at issue does not occur on college property or in relation to a college event but is still subject to criminal prosecution), the procedures and substantive guidance of this policy shall be used.

### *E. Authority to Exclude or Limit*

A college may exclude a student or limit a student's admission, enrollment or participation to the extent that a student's special circumstance diminishes the student's:

Likelihood of success in a program for which admission is competitive;

Ability to be placed in a required internship or clinical experience;

Ability to qualify for a professional license after graduation;

Ability to qualify for financial aid, especially federal financial aid if there is a drug-related conviction;

Compatibility for placement in a college residence hall;

Trustworthiness for on-campus employment;

Reliability to comply with the reasonable rules and regulations of the college; and

Reliability not to present a greater likelihood of risk of harm to persons or property.

### *F. Determining Whether to Exclude or Limit a Student*

In determining whether to apply any conditions to a student with a special circumstance, a college should:

Identify the specific nature of the student's special circumstance. For example, a college should consider the following:

Whether the conduct underlying the special circumstance was admitted or proven, or is not yet admitted or proven;

When and how recently the conduct was committed or alleged to be committed, and whether the student was a juvenile or adult at the time;

Whether the conduct was against a person or property; violent or passive; and intentional, reckless, negligent or grossly negligent;

Whether the harm actually or allegedly caused was minor and temporary or serious and permanent;

Whether the student acknowledged the student's responsibility by plea, or contested by trial and/or appeal;

What punishment, if any, was imposed on the student; whether that punishment was satisfactorily completed; whether the student is on bail, probation or parole, and, if so, the terms and conditions thereof; and the perceived degree to which the student has been rehabilitated; and

Any other factor that is relevant and material.

Provide the student with an opportunity to be heard before making a decision;

Consult, as appropriate, with the MCCS General Counsel;

Weigh the student's circumstances against the college's interests in, for example, those issues addressed in *Section E* above and determine the rational relationship between the facts of a particular student's case and the college's interests in excluding or limiting the student; and

Impose those conditions that by amount, scope and duration are reasonable under the particular circumstances.

# TUITION AND FEES

## Cost of Attendance

### Tuition and Fees

The Board of Trustees sets tuition annually for all Maine community colleges. The financial requirements of the College, changing costs, state and legislative action, and other matters may require an adjustment of these charges and expenses. The College reserves the right to make such adjustments to the estimated charges and expenses as may, from time to time, be necessary. All students (or potential students) acknowledge this reservation by the submission of an application for admission or by registration.

*Tuition*
Maine Residents: $86.00 per credit hour
Non-Residents: $172.00 per credit hour
New England Regional: $129.00 per credit hour, qualified students from other New England States**
Senior Citizens: pay fees only, age 65+, Maine Residents*

*must provide proof of age & residence to Bursar
**refer to the catalog entry New England Regional Student Program

*Fees*

*Application Fee (non-refundable, paid once with the initial application for admission)*
$20.00

*Comprehensive Fee*
$8.60 per credit hour

*Course Fee*
$8.60 per credit hour

*Lab/Tech Fee*
$17.20 per credit hour

*Document Processing Fee*
$3.00 per credit hour

*Information Access Fee*
$2.50 per credit hour

*Academic Services Fee*

$1.00 per credit hour

*Student Activity Fee*
$25.00 per semester, not charged during Summer term

*Parking Permit Fee*

Fall Parking Permit: $30.00 (covers September through December)

Spring Parking Permit: $30.00 (covers January through May)

Summer Parking Permit: $15.00 (covers June through August)

Students may waive parking charges up to the end of the first 2 weeks of each semester by completing and submitting the online waiver attesting that they do not bring a vehicle onto the campus.

*Accident and Sickness Insurance Plan*
$798/twelve-month plan, beginning August 16; $535 nine-month plan beginning January 1

Students who are enrolled in a comparable health insurance plan can waive this plan up to the end of the first 2 weeks of the semester by completing the online waiver form with the Insurance Company. Dependent coverage is available upon application at CrossAgency.com/SMCC, payable by a separate fee directly to Cross Agency.

*Liability Insurance*
$15.00 or $61.00 An annual charge to students in Health Sciences, Behavioral Health, Early Childhood, and Paramedicine programs for participation in clinical and practicum settings.

*Background Checks and Immunization Tracking*
Charged to students in Health Sciences, Behavioral Health, Early Childhood, and Paramedicine programs for participation in clinical and practicum settings. Paid directly to the processing agency, not SMCC.

*Testing Fees*

| | |
|---|---|
| $106.25 | Nursing Test Fee, per Nursing student, per semester |
| $10 | American Heart Test Fee, applies to CARD-175, MDAS-160, and RESP-125 for CPR test |
| $25 | American Heart Test Fee, applies to CARD-225, EMSP-220, and RESP-225 for ACLS test |
| $25 | American Heart Test Fee, applies to EMSP-215, and EMSP-225 for PALS test |
| $50 | EMT Test Fee, if student qualifies |
| $150 | Paramedic Test Fee, if student qualifies |

Charged for certain classes that have specific testing or certification requirements

*Room Charges*

| | |
|---|---|
| $2,500 | per semester, per student in a Residence Hall Room, regardless of room type (single, double, triple, quad); $1,875 for summer term |
| $250 | Housing Damage Deposit, paid with housing application, will be refunded, unless forfeited, at the end of the academic year, less any room, suite or common area damage costs that are assessed to students |

*Cable/Internet Services Fee*
$140 per semester per student in a Residence Hall Room; $114 for summer term

*Meals*
$1,500 per semester.

All on-campus residence hall students are required to purchase a meal plan. The Dining Hall serves three meals per day Monday through Friday and two meals per day on the weekend. Sandwiches, soups, salads, bottled drinks and tea/coffee are also available in the Café located in the Campus Center, which is open most of the day Monday through Friday. Unused meals or flex dollars purchased as part of a meal plan are forfeited if not used in the semester in which they were purchased.

*Beacon Bucks (for food purchases in the Dining Hall and Café)*
All students may purchase declining balance/debit cards in any denomination, with a minimum initial payment of $50. Beacon Bucks remain active as long as the student remains continuously enrolled (including summer) and then are forfeited **if not enrolled in the summer semester**

# Statement of Financial Responsibility

By enrolling in classes at Southern Maine Community College, students agree to pay all charges incurred as a result of that enrollment including any late penalties assessed due to failure to pay. Students should also understand that they are responsible for any collection costs assessed should the services of a collections agency be required.

Students are responsible for the status of their accounts. Account statements can be accessed through the Student Accounts link on the student portal of our website. Please contact the Student Billing Office immediately if you have any questions or concerns about your account or if there have been any changes in any of your payment arrangements.

Failure to meet financial obligations may result in dismissal from the College. In addition all grades, transcripts, certificates, diplomas, and the ability to register for upcoming semester classes will not be released until individual accounts are settled in full.

# Refund of Charges

For purposes of this section:

"Official withdrawal" means the student's timely and complete execution of documents required by the college to accomplish formal removal from, as appropriate to the context, the college or its course(s), residence and /or meal plan.

"Unofficial withdrawal" means any absence without the notice required for an official withdrawal.

*Refund Policy - Tuition and Course Fees*

| ACTION | REFUND |
|---|---|
| Official withdrawal from a course which produces a net reduction in student's semester credit hours and which is: | |
| Within 6 business days of the semester's first day of classes | 100% of each dropped class |
| Between 7 and 10 business days of the semester's first day of classes | 50% of each dropped class |
| After 10 business days of the semester's first day of classes | 0% of each dropped class |
| Unofficial withdrawal at anytime | 0% of each dropped class |
| Course canceled by college | 100% of canceled course |

*Refund Policy - Room/Meal Plan/Cable & Internet Fee*

| TIMEFRAME for PERIOD OF ATTENDANCE OR USE | REFUND |
|---|---|
| College residence canceled by college | 100% of room and board charges |
| Official withdrawal from a college residence prior to the: | |
| Semester's first day of classes | 100% of room and board charges |
| End of the semester's second week of classes | 80% of room and board charges |
| End of the semester's third week of classes | 60% of room and board charges |
| End of the semester's fourth week of classes | 40% of room and board charges |
| End of the semester's fifth week of classes | 20% of room and board charges |
| Official withdrawal from a college residence after the end of the semester's fifth week of classes | 0% of room and board charges |
| Unofficial withdrawal from a college residence at any time | 0% of room and board charges |

# Native American Tuition Waiver Policy

Southern Maine Community College waives all or a portion of tuition charges for matriculated students who are Maine residents and document their membership or ancestry in a Maine-based Native American tribe.

*Waiver Eligibility*

To qualify for an SMCC Native American tuition waiver, the student must meet the following eligibility criteria:

***Tribal Membership or Ancestry:*** The student must be included on the current tribal census or have at least one parent or grandparent included on the current tribal census of the Passamaquoddy Tribe, the Penobscot Nation, the Houlton Band of Maliseet or Aroostook Band of Micmac.
***Maine Residency*:** The student must meet SMCC's criteria to qualify for in-state tuition charges.
***Enrollment:*** The student must be accepted into a degree or certificate program and enrolled in credit-bearing courses at SMCC. The student must remain in good academic standing as defined by the college and maintain Satisfactory Academic Progress as defined by Title IV Federal financial aid regulations.
***SMCC Native American Waiver Application:*** The student must complete and submit a "SMCC Native American Tuition Waiver Application" to the SMCC Financial Aid Office. Once eligibility is established, re-application is not necessary.
***Financial Aid Application*:** Applicants for the Native American Waiver must complete the Free Application for Federal Student Aid (FAFSA) annually as soon as possible after January 1 and provide the documents required for determining aid eligibility. Applicants must meet the general eligibility requirements for receiving Federal student aid.
***Programs taught at other campuses:*** Students enrolled in the Fire Science program taking classes at Eastern Maine Community College or the Criminal Justice program taking classes at Washington County Community College must apply for the Native American Waiver at those respective colleges and are subject to their waiver policies.

*Waiver Amount*

The waiver is equal to in-state tuition charged to the student in a semester less any Federal or state need-based grants or scholarships for which the student qualifies. Other restrictions apply:

Charges other than tuition are not waived.
Tuition is not waived for courses with a grade of NS (no show).
Summer session tuition is waived only for students in majors which require summer attendance:
Automotive Technology – AAS
Cardiovascular Technology – AS
EMS/Paramedicine – AS
Radiation Therapy – AS
Respiratory Therapy – AS
Radiography – AS

*Duration of Eligibility*

Eligibility for the waiver ends after the student has earned one degree or one certificate or after the student has attempted 90 credits at SMCC, regardless of whether or not the student has earned a credential.

# Residency Policy

A student is classified as a Maine resident or non-resident for tuition purposes at the time of admission to the college. No student, once having been identified as a non-resident student, is eligible for resident classification unless he/she has been a bonafide domiciliary of the state for at least one year immediately prior to registration for the term for which resident status is claimed. If the student is enrolled for a full academic program, as defined by the College, it will be assumed that the student is in Maine for educational purposes and that the student is not in Maine to establish a domicile as a permanent resident; thus, the burden will be on the student to prove that s/he has established a Maine domicile by the time of such registration. The domicile of a student who is claimed as a dependent for tax purposes follows that of the parents or legally appointed guardian of the student.

If a student classified as a non-resident marries a person who is domiciled in Maine and asserts the establishment of a domicile in Maine, the student shall be presumed to be eligible for resident status at such student's next registration. In general, members of the Armed Forces and their dependents are granted resident status while officially stationed in the state.

In-state tuition is not available to anyone who holds a non-immigrant U.S. visa. If an individual is not a domiciliary of the United States, they cannot be a domiciliary of the State of Maine.

# New England Regional Student Program

Southern Maine Community College participates in the New England Regional Student Program (NERSP). This program allows a limited number of out-of-state students to attend SMCC at a rate of 150% of in-state tuition if they enter an approved course of study that is not available in their state of residence. Various restrictions and exceptions apply.

## Financial Aid

Student financial aid is available on a first-come, first-served basis to all students who apply and demonstrate financial need, as defined by federal regulations. Students must file the Free Application for Federal Student Aid (FAFSA) to apply for federal, state and SMCC student assistance, including consideration for all grants, scholarships, Direct Loans and on-campus student employment. FAFSAs are completed on-line at www.fafsa.ed.gov.

*FAFSA Priority Filing Dates*

The SMCC FAFSA priority filing date is March 1.
The FAFSA filing deadline for Maine State Grant is May 1.

Students are encouraged to file by the priority date, however, FAFSAs can be filed at anytime during the academic year and students may file after the priority filing date. Entering students should file their FAFSA early and not wait until they are formally accepted into an SMCC program.

During the 2009-10 academic year, SMCC students received over $13 million dollars through federal, state, college, and private funding sources. Students with questions concerning any aspect of student financial assistance are strongly encouraged to contact the SMCC Student Financial Aid Office at 207-741-5518.

# COLLEGE PARTNERSHIPS & ARTICULATION

## Partnerships with Baccalaureate Institutions

Many SMCC graduates wish to continue their education and have successfully transferred to a wide range of baccalaureate degree granting colleges. SMCC students frequently can transfer all or most of their credits from their associate degree programs, but ultimately the decision to accept or deny transfer credit lies solely with the transfer destination.

For a current list of articulation agreements with Baccalaureate institutions, please visit the SMCC webpage at www.smccme.edu and click on the "Transfer & Articulation" link.

## AdvantageU

Participation in the AdvantageU program streamlines admission to University of Maine System (UMS) institutions for Maine Community College students graduating with an associate in arts degree in liberal studies. Benefits of the agreement for Southern Maine Community College (SMCC) students include:

Guaranteed admission at junior standing to a UMS University, when G.P.A. admission requirements are met;
Dual advising to ensure maximum transferability of community college courses;
Seamless and simplified transition from SMCC to an UMS University;
Waiver of UMS application fees

Upon a student's admission into the Liberal Studies Major at SMCC and prior to completion of 30 credits, she/he may request to join the AdvantageU program. AdvantageU participants are assured a place at a UMS University once they have graduated from SMCC with an Associate of Arts degree in Liberal Studies and have met the grade point average admission requirements for the University/major of their choice. In the majority of cases, students admitted to a UMS institution through AdvantageU would be able to complete their baccalaureate degree within two years.

## Greater Portland Alliance of Colleges and Universities

Southern Maine Community College belongs to the Greater Portland Alliance of Colleges & Universities (GPACU), a higher education consortium that broadens learning opportunities. Through valuable services such as cross-

registration and shared library borrowing, GPACU benefits students, staff, and teachers; expands intercollegiate cooperation; and enhances the cultural, educational, and economic quality of life in Greater Portland.

Cross registration allows you to take courses toward your degree from one of the other GPACU member colleges listed below.

*GPACU Member Schools*

Kaplan University
Maine College of Art
Saint Joseph's College
University of New England
University of Southern Maine

*GPACU Guidelines:*

First-semester freshmen are not eligible to take courses through GPACU.
Students must meet all course prerequisites for the host institution.
Only Fall and Spring semester courses are eligible for cross-registration. No cross-registration is allowed during Summer or Winter terms.
The intent of the Alliance is to expose you to learning opportunities that are not available at your home institution Courses equivalent to those offered by Southern Maine Community College are not eligible to be taken at other GPACU schools regardless of transferability, availability, or schedule conflicts.
Selected courses must meet an outstanding requirement in the student's current program requirements at Southern Maine Community College. Courses toward a future major or interest only courses are not covered under GPACU.
Students are limited to (3) external courses in a single academic year and five (5) total cross-registrations throughout the duration of their time at SMCC. Any graded course including No Show (NS), Withdrawal (W), or Failure (AF or F), will count as one cross-registration. A course with separate credit for a corresponding lab will count as one cross-registration.
Students must take the majority of credits at their home institution during any semester they are cross-registered. No GPACU requests will be accepted after SMCC's add/drop period, regardless of the add/drop deadline for the host institution, which must also be met.

# Partnerships with Secondary Schools

Southern Maine Community College works with high schools and regional centers of technology to provide college exploration experiences for students, improve career guidance, link secondary and post-secondary curricula, and help prepare students for college. These goals are addressed as follows:

***College Exploration:*** Secondary educators and their students visit the SMCC campus to expose students to college life. The experience is tailored to the grade level and needs of the visitors and may include sitting in on a class, observing college students in action, touring the campus, and eating in the Dining Hall.
***Career Guidance:*** Students from area high schools experience a hands-on career exploration program when they attend Careers of the 21st Century hosted at SMCC each spring. This popular program serves over 1500 students annually. Through the welding partnership, another hands-on opportunity, students from area schools learn a skill and experience college life.
***Articulation Agreements:*** Secondary teachers in high schools and regional centers of technology discuss what they teach with Community College faculty. When the high school course mirrors the college course, the educators form an arrangement called an articulation agreement. This allows students to earn free college credit while in high school that can be applied toward a program of study at SMCC. Credit is awarded to students who earn a B (85) or better, and meet admission standards for college level courses. These students can apply articulated credits from high school as if they were college credits. The credits appear on the SMCC transcript. Articulation agreements save students both money and time when attending college. Instead of repeating an entry-level course that the student mastered in high school, the student can waive that course and study at a more advanced level.

***College Readiness:*** SMCC personnel help inform students about the standards for college by administering the ACCUPLACER® ® to juniors at area high schools and regional centers of technology.

# Secondary School Articulation

SMCC currently has over one hundred articulation agreements with area high schools and regional centers of technology. The College continues to expand those agreements to include other schools and other programs of study. To take advantage of these:

Schools must have a written, signed agreement with the College.
Students must earn an 85 (B) in the articulated class.
Students must enter SMCC within 15 months of high school graduation.
Teachers must complete a recommendation (called a Competency Checklist).
Students must, in some cases, pass SMCC's challenge examination usually administered at the high school or submit a portfolio of "best works".

Students must submit Technical Advanced Placement forms to request credit by July 1.

*Secondary School Articulation Agreements*

**Bath Regional Career and Technical Center**
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
CNMS-120 Introduction to Digital Imaging
CULA-100 Introduction to Culinary Arts
ELEC-160 Controls I
ELEC-175 Wiring Practices
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Biddeford Regional Center of Technology**
ACCT-105 Financial Accounting
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CMPT-101 Introduction to Computer Applications
CNMS-135 Introduction to Digital Design
ELEC-160 Controls I
ELEC-175 Wiring Practices
MACH-105 Basic Machine Theory
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Biddeford High School**
PHYS-150 College Physics I & Lab

**Capital Area Technical Center**
AEDD-100 Print Reading
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
ELEC-160 Controls I
ELEC-175 Wiring Practices
MACH-105 Basic Machine Practice Theory
MDAS-100 Medical Terminology

**Caribou Technical Center**
CULA-100 Introduction to Culinary Arts

**Creteau Regional Technology Center, NH**
AEDD-105 CAD Graphics
CMPT-101 Introduction to Computer Applications
MACH-105 Basic Machine Theory

**Falmouth High School**
PHYS-150 College Physics I & Lab

**Foster Technology Center**
ACCT-105 Financial Accounting
AUTO-105 Automotive Maintenance and Light Repair
BIOL-110 Introduction to Biotechnology
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Gray/New Gloucester Adult Education**
CMPT-101 Introduction to Computer Applications
MDAS-100 Medical Terminology

**Greater Lawrence Technical School, MA**
ACCT-105 Financial Accounting
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
BIOL-110 Introduction to Biotechnology
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
MDAS-100 Medical Terminology
PHYS-150 College Physics I & Lab
WELD-100 Introduction to Welding

**Greely High School**
PHYS-150 College Physics I & Lab

**Hancock County Technical Center**
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CJUS-105 Introduction to Criminal Justice
CULA-100 Introduction to Culinary Arts
MDAS-100 Medical Terminology

**J. Oliva Huot Technical Center, NH**
AEDD-105 CAD Graphics
BIOL-110 Introduction to Biotechnology
CMPT-101 Introduction to Computer Applications
MACH-105 Basic Machine Theory

**Kennett High School, NH**
CMPT-101 Introduction to Computer Applications

**Lake Region Vocational Center**
ACCT-105 Financial Accounting
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
CMPT-101 Introduction to Computer Applications
CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
MDAS-100 Medical Terminology

**Lewiston Regional Technical Center**
ACCT-105 Financial Accounting
AUTO-105 Automotive Maintenance and Light Repair
CJUS-105 Introduction to Criminal Justice
CULA-100 Introduction to Culinary Arts
ELEC-160 Controls I
ELEC-175 Wiring Practices
WELD-100 Introduction to Welding

**Lynn Vocational Technical Institute, MA**
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CMPT-101 Introduction to Computer Applications
CNMS-135 Introduction to Digital Design
MACH-105 Basic Machine Theory
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Maine Region 10 Technical High School**
AUTO-105 Automotive Maintenance and Light Repair
CNMS-120 Introduction to Digital Imaging
CULA-100 Introduction to Culinary Arts
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Manchester School of Technology, NH**
AEDD-105 CAD Graphics
MACH-105 Basic Machine Theory
WELD-100 Introduction to Welding

**Mid-Coast School of Technology**
AUTO-105 Automotive Maintenance and Light Repair
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
MACH-105 Basic Machine Practice Theory
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Mt. Ararat High School**
PHYS-150 College Physics I & Lab

**Mt. Washington Valley Career and Technical Center, NH**
ACCT-105 Financial Accounting
AEDD-105 CAD Graphics
AUTO-210 Intro to Engine Repair and Performance
CNMS-135 Introduction to Digital Design
MACH-105 Basic Machine Theory
WELD-100 Introduction to Welding

**Nashua Technology Center North, NH**
AEDD-105 CAD Graphics
BIOL-110 Introduction to Biotechnology
CMPT-101 Introduction to Computer Applications
MACH-105 Basic Machine Theory

**North Shore Technical High School, MA**
AUTO-105 Automotive Maintenance and Light Repair
CNMS-135 Introduction to Digital Design
MACH-105 Basic Machine Practice Theory
MDAS-100 Medical Terminology

**Northern Penobscot Technical Center, Region 3**
AEDD-100 Print Reading
AUTO-105 Automotive Maintenance and Light Repair
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CULA-100 Introduction to Culinary Arts
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Old Colony Regional Vocational Technical High School, MA**
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance

**Oxford Hills Technical School**
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CJUS-105 Introduction to Criminal Justice
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
MDAS-100 Medical Terminology

**Portland Adult Education**
ACCT-105 Financial Accounting
CNMS-111 Digital Imaging, Design, and Illustration
WELD-100 Introduction to Welding

**Portland Arts and Technology High School**
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CULA-100 Introduction to Culinary Arts

MACH-105 Basic Machine Practice Theory
MDAS-100 Medical Terminology
OSHA-120 Construction Safety
WELD-100 Introduction to Welding

**Plymouth South High School, MA**
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Portsmouth Career-Tech Center #19**
WELD-100 Introduction to Welding

**Portsmouth High School, NH**
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics

**Presque Isle Regional Career and Technical Center**
ACCT-105 Financial Accounting

**Region 2 Southern Aroostook**
AUTO-105 Automotive Maintenance and Light Repair
CULA-100 Introduction to Culinary Arts
MDAS-100 Medical Terminology
WELD-100 Introduction to Welding

**Region 9 School of Applied Technology**
AUTO-105 Automotive Maintenance and Light Repair
MACH-105 Basic Machine Practice Theory
WELD-100 Introduction to Welding

**River Bend Career and Technical Center, VT**
AUTO-105 Automotive Maintenance and Light Repair
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging

**Sacopee Valley High School**
AEDD-100 Print Reading
AEDD-105 CAD Graphics

**Salem High School, NH**
BIOL-110 Introduction to Biotechnology

**Sanford Regional Technical Center**
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
MACH-105 Basic Machine Practice Theory
WELD-100 Introduction to Welding

**Scarborough High School**
CMPT-101 Introduction to Computer Applications

**Seacoast School of Technology, NH**
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
BIOL-110 Introduction to Biotechnology
WELD-100 Introduction to Welding

**Somerset Career and Technical Center**
ACCT-105 Financial Accounting
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
ELEC-160 Controls I
ELEC-160 Wiring Practices
WELD-100 Introduction to Welding

**Somersworth Career Technical Center, NH**
BIOL-110 Introduction to Biotechnology

**St. Croix Regional Technical Center**
CULA-100 Introduction to Culinary Arts

**St. John Valley Technology Center**
AUTO-105 Automotive Maintenance and Light Repair
MDAS-100 Medical Terminology*
WELD-100 Introduction to Welding

**Sugar River Valley Regional Technical Center, NH**
AEDD-105 CAD Graphics
CMPT-101 Introduction to Computer Applications
MACH-105 Basic Machine Theory

**Tri-County Technical Center**
AEDD-100 Print Reading
AUTO-105 Automotive Maintenance and Light Repair
CJUS-105 Introduction to Criminal Justice
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-135 Introduction to Digital Imaging
MACH-105 Basic Machine Practice Theory
MDAS-100 Medical Terminology

**United Technologies Center**
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CMPT-101 Introduction to Computer Applications
CULA-100 Introduction to Culinary Arts
HEOP-100 Introduction to Construction Safety
HEOP-115 Maintenance and Service
HEOP-130 Backhoe and Excavator
WELD-100 Introduction to Welding

**Waldo County Technical Center**
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CJUS-105 Introduction to Criminal Justice
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging

CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
ELEC-160 Controls I
ELEC-175 Wiring Practices
WELD-100 Introduction to Welding

**Westbrook Regional Vocational Center**
ACCT-105 Financial Accounting
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CJUS-105 Introduction to Criminal Justice
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
CULA-100 Introduction to Culinary Arts
ELEC-160 Controls I
ELEC-175 Wiring Practices
HEOP-100 Introduction to Construction Safety
HEOP-115 Maintenance and Service
HEOP-130 Backhoe and Excavator

**Whittier Regional Vocational Technical Center, MA**
AEDD-100 Print Reading
AEDD-105 CAD Graphics
AUTO-105 Automotive Maintenance and Light Repair
AUTO-155 Electricity and Electronics
AUTO-210 Intro to Engine Repair and Performance
CMPT-101 Introduction to Computer Applications
CNMS-135 Introduction to Digital Design
MACH-105 Basic Machine Practice Theory
WELD-100 Introduction to Welding

**Windham Adult Education**
ACCT-105 Financial Accounting
CMPT-101 Introduction to Computer Applications
CNMS-111 Digital Imaging, Design, and Illustration
CNMS-120 Introduction to Digital Imaging
CNMS-135 Introduction to Digital Design
MDAS-100 Medical Terminology

**Windham High School**
CMPT-101 Introduction to Computer Applications

# STUDENT RESOURCES & SUPPORT

## Academic Achievement Center

The Academic Achievement Center is a drop-in tutoring center that is open to all students. Faculty and staff provide professional tutoring in writing, English as a second language, math, physics, accounting, chemistry, and computer applications. The Center also offers personal assistance in study skills and time management, inventories of learning styles, academic advising and peer tutoring in technology courses. Accommodations, tutoring and advising are also available for students with diagnosed learning disabilities.

The Center provides students with access to study space and to computers for word processing and other computer applications and to Internet research. Also available are reference textbooks, study guides, and multimedia materials. Please visit the Academic Achievement Center web page for hours of operation and to learn more.

## Library

The Library is SMCC's student-friendly center for research, study, and casual reading resources. The Library is located in a beautiful setting on the second floor of the Campus Center, and through its growing Web services, the Library is also anywhere our students are. The SMCC Library provides its students and faculty with a strong and evolving collection of on-site books and periodicals, on-line access to the collections of libraries throughout the State of Maine, and a growing collection of electronic books, encyclopedias, journals, magazines and newspapers. These resources are available by logging into the MySMCC portal and visiting the Library's web page. The Library's holdings and its on-line databases are selected to support the full and varied range of programs of study offered by the College.

The Library is staffed by a team of knowledgeable professionals who are dedicated to empowering students to become independent researchers who are proficient and comfortable with the use of library tools and resources. Students are welcome to participate in any number of the free research workshops offered throughout the academic year.

The physical layout of the Library is pleasant and varied and provides a choice of individual carrels, study tables, reading areas and computer workstations. Students are welcome to browse the Library's books and periodicals which are on open stacks and easily accessible. All students are encouraged to visit the Library and make its resources a part of their learning experience while attending the College.

# Advising and Counseling

Every incoming student is assigned an advisor from either the student's program of study or the Office of Student Success. A student may also request a specific advisor from his/her program.

The advisor helps each student select and register for courses and make recommendations for add/drop changes and withdrawals. Additionally, an advisor helps students locate academic and personal resources on campus and helps the student determine program options, such as attending college part-time while working, career goals, or pursuing further education. The more clearly a student can articulate respective needs and goals, the more productive the advisor relationship will be.

SMCC recognizes the importance of personal counseling to assist students in balancing their academic needs with problems or concerns of an individual, family, or job-related nature. An on-campus licensed counselor provides short-term counseling services to students free of charge. Confidentiality is maintained throughout the process and referrals for other community services are provided as needed. Counseling services are available through the Student Services Office.

*New Student Advising & Registration Sessions*

New Student Advising & Orientation sessions are designed to be interactive and fun as well as informative. They offer newly accepted students the opportunity to visit key offices on campus, learn the secrets of success in college, meet faculty, staff and current SMCC students, and get to know other new students. Students also learn how to create a course schedule that meets their needs, how to use MySMCC, our college portal, (to not only register for classes, but also to drop courses, access grades, and more), about their responsibilities as a student, and SMCC's important registration policies.

# Career and Transfer Services

In the Office of Career and Transfer Services, students enrolled at SMCC will find help with career research, career interest testing, career planning, job search strategy, resume and cover letter writing, and preparing for interviews. The Office has available for students' use a collection of career-oriented books, a virtual interview program, current Maine employment statistical information and two computers available with which students may conduct career and company research. The Office of Career and Transfer Services manages several career events on campus during the academic year. An online job-listing site maintained by this Office informs students about job opportunities posted by employers who are interested in hiring current and graduated students.

This Office also assists students with their plans to transfer on from SMCC to enroll in baccalaureate programs at institutions all across the U.S. Some of the colleges that SMCC students have transferred to include Northeastern University, Bryant University, Sierra Nevada College, Bates College, University of Maine, Smith College, Maine College of Art, Wellesley College, University of Southern Maine, University of Tampa and Wentworth Institute of Technology. The Office of Career and Transfer Services helps students with researching and choosing colleges and the application process. Many colleges visit the SMCC campus to recruit students throughout the academic year and this Office also coordinates the fall SMCC Transfer Fair, which brings over 30 four-year colleges to the SMCC campus all on one day.

# Services for Students with Disabilities

In accordance with Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990, Southern Maine Community College is committed to helping qualified students with disabilities achieve their individual educational goals. Upon request and verification of the disability, SMCC will provide service coordination and reasonable accommodations to remediate the competitive disadvantage that a disability can create in the educational setting.

Disability services are available through the Student Services Office.

# Veterans Affairs

SMCC welcomes Veterans and their dependents to the College and honors the service they have given to the nation. The Veterans Affairs office is located in the Campus Center. The office is staffed by a full-time administrator who is available to assist veterans and their family members in negotiating the often complex

processes involved in gaining certification for educational benefits. For more information, please visit the College's website, contact the Veterans Affairs office at 207-741-5926, or drop by.

# STUDENT LIFE

## Student Handbook

*The Compass*, SMCC's student handbook, is designed to introduce students to the many aspects of life at SMCC, including policies related to enrollment and student life, rules and regulations, and safety tips. The student handbook serves as a companion piece to the SMCC Catalog, which outlines the College's academic information, requirements, academic programs, course descriptions, and more. Students are expected to become familiar with both publications for a thorough understanding of College regulations.

## Residence Life

There are two residence halls on SMCC's campus housing approximately 407 students.

The New Residence Hall, the larger of the two halls, houses about 320 students, including eight Resident Assistants and a professional Resident Director. The new hall opened in January 2008 and is located on the corner of Benjamin Pickett St. and Fort Rd., across the street from the Campus Center. There is a large laundry room and vending area, study areas on three floors and a beautiful common lobby that houses a 42" LCD HDTV, a pool table and a ping pong table. The new hall has sweeping views of the Portland skyline and Casco Bay from its many windows.

Surfsite Hall, the smaller of the two halls, houses 93 students including three Resident Assistants and a professional Resident Director. Surfsite Hall is located diagonally up the hill from the H.U.B. Gymnasium on Surfsite Road. Surfsite Hall has a laundry room, large recreation room with a big screen TV, a pool table and a ping-pong table and a large study lounge. Most room in Surfsite Hall are tripled to provide the opportunity of housing to as many students as possible.

The Housing and Residence Life staff includes the professional Residence Directors and the student staff listed above. The residence life staff team plans various educational and recreational activities for the residence hall students to enjoy. We expect residents to be serious about their academic work and to get involved in the residence life community. To reach staff, students should call (207) 741-5967.

There is a strict policy concerning illegal drugs and alcohol on campus. SMCC prohibits use, sale, possession and/or distribution of alcoholic beverages or illegal drugs anywhere on campus. It is a violation of the Student Code of Conduct for any student or guest to be under the influence of or knowingly in the presence of illegal drugs or alcohol while on campus or at school-sponsored events, regardless of age. Alcohol and drug paraphernalia are not permitted in any residence hall room or common areas and will be viewed as evidence of consumption. Disciplinary action, including possible residence hall agreement termination and eviction without refund, will take place for any student found in violation, regardless of whether or not the student is of legal drinking age.

For many students, residence life represents the first extended stay away from home. As such, it is a time of major adjustment, a time when self-reliance and self-discipline become more important than one's dependence upon one's family. All students who become residence hall students at SMCC are expected to conduct themselves with regard for the welfare and the reputation of the College, the property of College community members, and most importantly the welfare of all College community members. They must refrain from any action that might injure the College or any of its members. The College reserves the right to require withdrawal, at any time, of a student whose conduct or academic standing is judged unsatisfactory.

Residence hall space is limited at SMCC; there are just 407 beds available for over 7,000 students. In addition, the College recognizes that a community living environment can sometimes provide a variety of temptations and distractions that can make it challenging for some students to focus on their primary goal—completing an academic program. Consequently, the College has created a housing application process that requires students

to demonstrate their commitment to their educational goals in order to be assigned to housing or to the housing waiting lists.

Students who submit a complete application packet are assigned to a space or to the waiting list on a first come, first served basis. In the event that two applications are received at the same time, priority for housing is determined by: 1) students who attended high school in the last five years, 2) current SMCC students who lived on campus in the prior academic year, and 3) current SMCC commuter students.

Not every student is eligible to live on campus. Please check the Housing and Residence Life area of the website for eligibility criteria. Students may occupy their rooms on the dates specified in the College's calendar; however, they are expected to vacate the halls during the Thanksgiving Break, Semester Break, and Spring Break. The College is unable to accept responsibility for personal belongings, and suggests that students consider insuring property against loss, damage, theft and fire.

# Dining Services

A contract food service vendor operates the SMCC Dining Hall and Campus Center Seawolves Café. The Dining Hall serves three all-you-care-to-eat meals per day Monday through Friday and two per day on the weekend for a reasonable, fixed price. Sandwiches, soups, salads, bottled drinks and coffee are available on an a la carte basis in the Café most of the day and evening.

*Resident Students*

All resident students are required to purchase a meal plan. Meal plan offerings vary from year to year in response to student needs and requests. Typically each meal plan offers a set number of all-you-care-to-eat meals in the dining hall and some "flex dollars" for use in the Seawolves Café. Students use their student ID card for payment at the register. The required meal plan cost per semester varies from year to year. Please check with the Housing and Resident Life Office for the most up-to-date rates. Whatever the cost, the price includes costs for overhead and is the same for the fall as it is for the spring, regardless of student usage. Unused meals purchased as part of a meal plan are forfeited if not used in the semester in which they were purchased.

*Commuter Students*

Commuter students are encouraged to eat in the dining hall and the Seawolves Café. Commuter meal plan offerings vary from year to year and are purchased directly from the food service vendor. To purchase a commuter meal plan, students may inquire within the Dining Hall.

*Beacon Bucks*

Commuter students who would prefer not to carry cash on campus may deposit funds into a Beacon Bucks account for use in the Dining Hall and the Seawolves Café. There is a minimum initial deposit, usually $50 and subsequent minimum deposit amounts, usually $10. These funds are debited from the student's Beacon Bucks account on a dollar for dollar basis. For example, if a student purchases a $5 all-you-care-to-eat lunch meal, $5 is debited from the account. Beacon Bucks balances remain active until a student ceases to be enrolled and then is forfeited, so it is in the student's best interest to deposit only funds that he or she intends to use.

# Campus Safety & Security

## *Security*

The Campus Safety and Security Department is open 24 hours a day. Business hours are from 7:00am-7pm. The office is located in the Fort Building (92 Campus Center Drive) across from Preble Hall. The department provides assistance to the campus community through regular patrols and other services; such as issuing parking permits and student ID cards, security escorts, lost and found repository, and emergency response services. Emergency messages for students are routed and delivered through this department. If you have any questions, or are in need of assistance, please call us at 741-5553.

## *Parking*

Southern Maine Community College is a very busy campus. In order to assure the safety and welfare of all who bring their vehicles on campus, a parking policy has been designed to keep parking orderly, provide as many

spaces as possible for everyone in the community, and assure emergency vehicle access. Handicapped parking is available throughout the campus; everyone is reminded to respect these spaces and campus property by parking in approved spots only.

### *Regulations*

All students, staff and faculty must display a valid parking permit and date sticker. All Students attending classes at SMCC (on or off campus) must purchase a permit in order to park their vehicles on campus. Permits are assigned to a particular vehicle, and must be affixed to the lower passenger side corner of the front windshield. Any vehicle information changes during the course of the year should be reported to Safety and Security Department, ensuring any problems will be communicated to the registrant of the vehicle. Each semester students are required to update their parking permit with a valid semester date sticker.

Vehicles without a valid SMCC parking permit need to have a temporary permit in order to park on campus. These permits are issued for a maximum of 2 weeks and are only valid for student lots. If an individual needs to use a vehicle for longer than 2 weeks they must purchase a permit.

The SMCC Security Office will issue temporary medical parking permits for valid medical reasons with appropriate documentation. These permits will allow students to park in faculty and staff spaces, as well as student spaces. These permits **DO NOT** allow you to park in handicapped parking.

### *Parking Violations*

Vehicles not parked in accordance with campus regulations will be issued a SMCC ticket, which carries a fine of $15.00 per violation. Fire lane violations carry a $50 fine and unauthorized parking in a handicapped parking space carries a fine of $100. Fire Lane and Handicap tickets are City of South Portland violations that ***must be paid within 15 days*** to the City of South Portland or fines will double. The Campus Safety and Security Department does not accept payment for permits or fines. All SMCC ticket payments must be made to the Student Billing Office. Handicap and fire lane violations are paid at South Portland City Hall, located at 25 Cottage Road in South Portland. Instructions are printed on the ticket. A list of all violation types is available online in the Safety and Security section of MySMCC.

Noncompliance with SMCC parking policy regulations may result in action beyond ticketing. Violations may result in ticketing, booting, towing and storage, suspension and/or revocation of parking privileges, or other appropriate action at owner expense. Unpaid parking tickets may result in a hold being placed on student records. Safety and Security makes every effort to affix tickets to the front windshield, and are not responsible for lost or missing citations.

Vehicle registrants who have fines in excess of $75.00, park in reserved spots, or for other infractions as determined by the Security Manager will be subject to having their vehicle immobilized by the use of a boot. Once the vehicle is booted, the registrant will be charged a $25.00 administrative fee. All fines must be paid before the boot is removed unless payment arrangements are made with the Safety and Security Department. The registrant of a booted vehicle who does not take appropriate action may be subject to having the vehicle towed from campus at their expense.

All overnight and school trip parking must be approved by the Safety and Security Department, who will inform vehicle operators of the areas they may park. Security reserves the right to tow vehicles from campus parking lots not designated for overnight or long-term parking.

SMCC makes every effort to provide parking to all members of the campus community, please realize that possessing a permit does not guarantee you a parking space on campus.

# Student Activities and Athletics

SMCC strives to engage students both inside and outside of the classroom by complementing the enriching classroom experience with a variety of activities for students. Students who are active participants in the life of the college are more likely to persist and be successful in college. Getting involved provides an opportunity to build connections with fellow students and with faculty and staff and to develop lifelong friends and mentors. No matter what a student's interest, the college provides an opportunity to get involved; from student government, honors and community service societies, technical and trade organizations, the student newspaper and literary magazine, to intercollegiate athletics. For more information on student organizations, or on how to

start a new student organization, stop by the Center for Student Involvement and Leadership (CeSIL) in the Campus Center.

## Athletics

The College offers eight intercollegiate sports. They include men's and women's basketball, baseball, softball, men's and women's soccer, and men's and women's golf. SMCC Athletics is a member of the Yankee Small College Conference (YSCC), which is the regional league for the parent national organization the United States Collegiate Athletic Association (USCAA). SMCC Athletics has won close to 40 conference championships and has participated in multiple USCAA National Tournaments.

In addition to the intercollegiate athletics program, a variety of intramural sports fitness programs and recreational activities are offered. With a brand new fitness center and aerobics studio, the Athletic Department has something for every student who attends the college.

Located at the front of our 80-acre oceanside campus, the Hutchinson Union Building Athletic Center, or "HUB", serves as the center of all athletic programs at the College. The HUB is complemented by our baseball diamond, softball and soccer fields which also serve the programs recreational needs Students, faculty, and staff can also take advantage of the series of walking trails around the campus knows as the "Green Belt".

## Center for Student Involvement & Leadership

The Center for Student Involvement and Leadership (CeSIL), located on the first floor of the Campus Center, is a one-stop resource to learn about ways to become involved on campus. The center has information on the student clubs and organizations on campus, how to start a new student organization, community service opportunities and activities and events on campus. The center is a great place to learn about student leadership opportunities such as serving on the Student Senate, working as an Orientation and Welcome Leader and participating in various leadership education programs. The Center is also home to the offices of the Student Senate, The Alpha Chi Nu Chapter of Phi Theta Kappa and The Beacon student newspaper.

## The Student Senate

The Student Senate represents all students in organizing campus events and sponsoring student organizations and clubs. The Student Senate plans large campus wide events such as the Welcome Back BBQ, Winter Carnival and Spring Fest. Student Senate has also presented comedians, singers, hypnotists and a variety of other entertainment on campus as well as trips to off-campus events such as hockey games and amusement parks. Senate sponsored programs have also included poetry readings, open microphone nights, and trips to theatrical productions. In addition to activities planning, the Student Senate represents the voice of the students to the administration of the college and advocates for the interests, ideas and welfare of the student body.

## The Phi Theta Kappa International Honor Society

Phi Theta Kappa is the honor society of the two-year college. All eligible students receive a letter of invitation from the College president to join Phi Theta Kappa. The purpose of Phi Theta Kappa is to recognize and encourage academic excellence and scholarship among students. The chapter also provides students with the opportunity to serve in the community and to develop leadership skills. Many students join not only to participate in service work and leadership opportunity, but also for the lively fellowship and stimulation of interest in continuing academic excellence. Chapter members are also eligible for transfer scholarships to four-year colleges and universities.

*Membership Qualifications*

*Candidates*

- Must be matriculated in an associate degree program.
- Must have earned a minimum of 12 college-level credits at SMCC.
- Must have a minimum cumulative GPA of 3.50.

*To Maintain Membership:*

Member must maintain a minimum cumulative GPA of 3.50.

## Student Newspaper & Publications

The Beacon is the official student newspaper of Southern Maine Community College and features college news as well as features and columns on topics of interest for the student body.

The Writ literary magazine is a publication written and edited by SMCC students featuring works of fiction, non-fiction and poetry.

## Skills-USA

The College sponsors a chapter of Skills-USA, a national organization for students preparing for careers in technical, skilled and services occupations, including heath occupations. The SMCC chapter competes at the statewide level and has sent a number of students to the national competition in Kansas City, Missouri.

## College Chorus

The SMCC Chorus is open to singers of all abilities and performs a number of times each year, including SMCC's graduation ceremony.

# ACADEMIC PROGRAMS

The college offers programs awarding associate in applied science, associate in science, and associate in arts degrees; and certificate programs. Associate degrees require at least two academic years of study. The certificate option is offered in selected areas and normally requires one year or less of study. All options may be taken over extended times beyond one or two years and often through both day and evening courses.

Each program of study is made up of three groups of courses: general education courses that meet specific core curriculum requirements for that credential and develop communication, analytical and problem solving skills, increased awareness of the physical and social world and of other cultures; program requirements; and discipline related courses that support and reinforce the program requirements. Successful completion of all courses or equivalencies in a curriculum is required for the awarding of an associate degree or certificate from the College.

Curricula may be modified without notice as adjustments are made in response to occupational needs, industrial change, and Advisory Committee recommendations that provide the College with contacts in the various fields of technology to ensure up-to-date programs. Program availability is based upon adequate enrollment and resources.

## General Education Learning Outcomes

The general education requirements for Southern Maine Community College programs represent the College's definition of an educated student.

*Arts & Humanities:*

SMCC students differentiate and evaluate various perspectives of the human intellect and imagination.

- Study, create, or participate in a work that demonstrates artistic and/or aesthetic value.
- Critique a work's artistic and/or aesthetic value.
- Demonstrate an appreciation of the creative arts in personal, cultural and historical perspectives.
- Analyze and interpret literature.
- Articulate an understanding of major philosophical questions.
- Demonstrate an understanding of the inter-relationship of arts and humanities to one's self, other disciplines, and the life of the community.

*Communications:*

SMCC students effectively communicate through writing, speaking and listening.

- Show ability to communicate ideas clearly, with a specific purpose and to a specific audience, utilizing appropriate strategies for varying contexts and logical organization methods.
- Demonstrate knowledge of literary analysis and comparison/contrast rhetorical modes and identify appropriate uses for each.
- Apply revision methods to achieve polished final draft/presentation, using standard academic format and conventions of grammar.
- When necessary, utilize information literacy skills, including evaluation of information from a variety of media and proper MLA and/or APA documentation.
- Use critical thinking and listening skills in written and oral communication as a tool for learning.

*Critical Thinking:*

SMCC students evaluate information to make educated decisions based on the fusion of experience, reason, and training.

(Level I, Introductory)

- Read and demonstrate understanding of complex ideas by identifying key concepts.
- Apply theory to practice using problem solving techniques and data analysis.

(Level II, Reinforce)

- Analyze and evaluate research data to produce a well-reasoned argument or position on an issue.
- Synthesize data from multiple sources to create and support a new solution that considers relevant ethical standards.

*Global Citizenship:*

SMCC students can articulate how their personal growth and development are shaped by ethical choices, cultural differences and global interconnectedness.

- SMCC students can explain their culture within the context of global and cultural diversity.

SMCC students will meet a minimum of at least three out of the following four competencies.

- SMCC students can demonstrate knowledge of cultures that are separated from their own by both time and space and demonstrate the significant connections between the contemporary world and past peoples, events and societies.
- SMCC students can explain how the social sciences help us understand the interactions of societies - locally, regionally, nationally and globally.
- SMCC students can recognize cultural and individual differences that underlie the complexities of human behavior.
- SMCC students can demonstrate knowledge of political and/or economic systems and ways they are globally connected.

*Quantitative Methods:*

SMCC students logically analyze and solve quantitative problems.

(Level I, Introductory)

- Solve problems using algebraic techniques.
- Interpret information presented in charts and graphs or illustrate a scenario using graphic techniques.

(Level II, Reinforce)

- Create an algebraic and/or graphical model to represent a given situation.

- Utilize quantitative methods to solve and/or assess complex problems to support decision making, forecasting, and recommendations.

*Science & Technology:*

SMCC students apply the scientific method and employ the technological skills necessary to function effectively in an increasingly complex world.

- Participate in a direct experience of scientific inquiry of the natural world using the scientific method.
- Apply scientific principles, concepts and knowledge to distinguish between science and pseudoscience.
- Find and evaluate credible sources of scientific information using a variety of media to support a research need.
- Demonstrate the capacity to make informed and ethical judgments about the impact of science and technology on the self, the environment, and the practice of sustainability.

# Degree Programs

*Associate of Arts (AA)*

The Associate of Arts Degree is intended to provide a basic foundation for a Bachelor of Arts Degree program.

*Associate of Applied Science (A.A.S.)*

The Associate of Applied Science Degree is intended to provide the preparation necessary for potential employment in an occupational specialty.

*Associate of Science (A.S.)*

The Associate of Science Degree is intended to provide the preparation necessary for potential employment in an occupational specialty and/or a basic foundation for a Bachelor of Science Degree program.

*Certificate*

A certificate is awarded for specific studies that one can complete in a one year program or less. Certificates can be a permanent solution or a first step in developing, changing, or upgrading your career.

The following table details the number of credits required in each category of the College's core curriculum:

| Degree | Composition | Literature | English | Social Science | Humanities | Math/Science | Total |
|---|---|---|---|---|---|---|---|
| A.A. | 3 | 3 | 3 | 9 | 9 | 7 | 34 |
| A.A.S. | 3 | 3 | | 3-6 | 3 | 7-10 | 22 |
| A.S. | 3 | 3 | | 3-6 | 3-6 | 12-18 | 30 |

# Degrees Offered

**Architectural & Engineering Design**
A.A.S. in Architectural & Engineering Design
Certificate in Marine Design

**Art**
A.A. in Liberal Studies Art Concentration

**Automotive Technology**
A.A.S. in Automotive Technology

**Behavioral Health and Human Services**
A.A.S. in Behavioral Health and Human Services
Certificate in Behavioral Health Science

**Biology**
A.A. in Liberal Studies Biological Science Concentration

**Biotechnology**
A.S. in Biotechnology

**Business Administration**
A.S. in Business Administration

**Cardiovascular Technology**
A.A.S. in Cardiovascular Technology
Invasive Option
Non-Invasive Option

**Communications and New Media**
A.A.S. in Communications and New Media

**Composite Technology**
A.A.S. in Composite Technology

**Computer Science**
A.S. in Computer Science

**Computer Technology**
A.A.S. in Computer Technology

**Construction**
A.A.S. in Construction Technology
Certificate in Building Science and Sustainability
Certificate in Residential Framing

**Criminal Justice**
A.A.S. in Criminal Justice

**Culinary Arts**
A.A.S. in Culinary Arts

**Dietetic Technology**
A.S. in Dietetic Technology

**Early Childhood Education**
A.A.S. in Early Childhood Education
Certificate in Early Childhood Education

**Education**
A.A. in Liberal Studies Elementary Education Concentration (K-8)
A.A. in Liberal Studies Secondary Education Concentration (7-12)

**Emergency Medical Services/Paramedicine**
A.A.S. in Paramedicine

**Engineering**
A.S. in Pre-Engineering
A.A.S. in Electrical Engineering Technologies
Certificate in Electrician Technology

**English**
A.A. in Liberal Studies English Concentration

**Fire Science**
A.A.S. in Fire Science
Certificate in Fire Science

**Heating, Air Conditioning, Refrigeration & Plumbing**
A.A.S. in Heating, Air Conditioning & Refrigeration
A.A.S. in Heating & Plumbing
Certificate in Heating
Certificate in Plumbing
Certificate in Refrigeration & Air Conditioning

**Heavy Equipment**
Certificate in Heavy Equipment Operations

**History**
A.A. in Liberal Studies History Concentration

**Horticulture**
A.A.S. in Horticulture

**Hospitality Management**
A.A.S. in Hospitality Management

**Machining**
A.A.S. in Integrated Manufacturing Precision Machining Option
Advanced Certificate in Multi-Axis Machining

**Mathematics**
A.A. in Liberal Studies Mathematics Concentration

**Liberal Studies**
A.A. in Liberal Studies Liberal Studies Concentration (Undeclared)

**Marine Science**
A.S. in Marine Science

**Medical Assisting**
A.A.S. in Medical Assisting
A.A.S. in Health Information Technology

**Nursing**
A.S. in Nursing
A.S. in Nursing LPN Upgrade Option

**Political Science**
A.A. in Liberal Studies Political Science Concentration

**Psychology**
A.A. in Liberal Studies Psychology Concentration

**Radiation Therapy**
A.S. in Radiation Therapy

**Radiography**
A.S. in Radiography

**Respiratory Therapy**
A.S. in Respiratory Therapy

**Science**
A.A. in Liberal Studies Science Concentration

**Social Work**
A.A. in Liberal Studies Social Work Concentration

**Sociology**
A.A. in Liberal Studies  Sociology Concentration

**Sport Management**
A.S. in Business Administration  Sport Management Option

**Surgical Technology**
A.A.S. in Surgical Technology

**Trade and Technical Occupations**
A.A.S. in Trade and Technical Occupations

**Welding**
A.A.S. in Integrated Manufacturing Precision Welding Option
Certificate in Welding Technology

# Program Information

## Architectural & Engineering Design

The Architectural & Engineering Design program prepares students for technician level work assisting architects, engineers, and contractors who work in the diverse manufacturing industry. Offering a variety of design disciplines, the program provides students with individual choices of specialization including architectural, mechanical and marine interests.

The Architectural and Engineering Design program provides a wide selection of courses, both specific and broad in scope, reinforced by established degree-level courses in general education and related technologies.

*Upon completion of the program, graduates will be able to:*

- Understand and apply proper technical graphic standards
- Acquire and demonstrate knowledge within several design disciplines
- Identify and solve design problems by working with recognized methods and material limits
- Understand and use Computer Aided Design software to generate accurate designs in two and three-dimensional formats.
- Demonstrate an ability to meet deadlines, manage time for multiple tasks and make revisions
- Acquire the skills to organize and present designs, drawings and concepts clearly to groups.

*Architectural & Engineering Design Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra, physics, and geometry is recommended.

People currently working in the field are encouraged to take courses for professional development. Formal admission is not required for enrollment in Architectural & Engineering Design courses. Prerequisites may be waived based on work experience or demonstrated ability by the Chair of the department.

### *Associate in Applied Science*
### *Architectural & Engineering Design*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra ***AND*** | |
| MATH | 160 | College Trigonometry ***OR*** | 3 + 3 credits |
| MATH | 145 | College Algebra and Trigonometry ***AND*** | |
| | | Mathematics Elective | 4 + 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Physics Elective | 4 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| AEDD | 100 | Print Reading | 3 credits |
| AEDD | 105 | CAD Graphics | 3 credits |
| AEDD | 160 | CAD Applications | 3 credits |
| AEDD | 205 | Technical Illustration | 3 credits |
| AEDD | 210 | AutoCAD-3D | 3 credits |
| AEDD | 255 | Applied Engineering-Buildings | 3 credits |
| AEDD | 260 | CAD Management | 3 credits |
| | | Architectural & Engineering Design Electives | 9 credits |
| | | Parametric Modeling Elective (AEDD-170, AEDD-219, or AEDD-220) | 3 credits |
| | | Approved Technical Electives | 3 credits |
| | | Total Credits Required for Degree: | 61-62 credits |

### *Certificate*
### *Marine Design*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| MATH | 145 | College Algebra & Trigonometry | 4 credits |
| PHYS | ELE | Physics Elective & Lab | 4 credits |
| **Major Required Courses** | | | |
| AEDD | 100 | Print Reading | 3 credits |
| AEDD | 105 | CAD Graphics | 3 credits |
| AEDD | 109 | Introduction to Marine Design | 3 credits |
| AEDD | 160 | CAD Applications | 3 credits |
| AEDD | 209 | Marine Design II | 3 credits |
| AEDD | 219 | Marine Parametric Modeling | 3 credits |
| AEDD | 260 | CAD Management | 3 credits |
| | | Total Credits Required for Certificate: | 35 credits |

## Automotive Technology

The Automotive Technology program is designed to prepare skilled technicians to work in the automotive industry. The program involves general education as well as automotive lecture and laboratory instruction focusing on state-of-the-art products. Students may also work at a dealership as part of the cooperative education phase of training.

The program is certified by National Automotive Technicians Education Foundation, Inc. (NATEF, a division of Automotive Service Excellence), in all eight performance areas. Opportunities for graduates include positions in dealerships, independent shops, automotive parts stores, and companies with vehicle fleets as general technicians. Positions may allow technicians to specialize in areas such as front-end alignment, brakes, automatic transmissions, engine performance, heating, ventilation and air conditioning systems, and others.

*Upon completion of the Automotive Technology program, graduates will be able to:*

- Perform tasks to diagnose and repair components of electrical/electronic systems, and heating, ventilation and air conditioning systems.
- Perform tasks to diagnose and repair automotive engine and power train systems.
- Perform tasks to diagnose and repair components of automotive suspension and steering systems.
- Perform tasks to diagnose and repair components of hydraulic and anti-lock brake systems.

*Automotive Technology Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. A current, clean, and valid driver's license is required for admission to the Automotive Technology program. High school or post-secondary coursework in algebra is recommended.

### *Associate in Applied Science*
### *Automotive Technology*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 125 | Discrete Mathematics ***OR*** | |
| MATH | 145 | College Algebra & Trigonometry | 3 ***OR*** 4 credits |
| PHYS | 110 | Technical Physics & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Electives | 6 credits |

| Major Required Courses | | | |
|---|---|---|---|
| AUTO | 105 | Automotive Maintenance & Light Repair | 3 credits |
| AUTO | 110 | Steering and Suspension | 3 credits |
| AUTO | 115 | Automotive Brake Systems | 4 credits |
| AUTO | 155 | Electricity and Electronics | 4 credits |
| AUTO | 160 | Automotive Business Operations | 3 credits |
| AUTO | 170 | Automotive HVAC | 3 credits |
| AUTO | 174 | Advanced Level Lab ***OR*** | |
| AUTO | 175 | Internship/Cooperative Education ***OR*** | |
| AUTO | 176 | Externship/Cooperative Education I | 3 credits |
| AUTO | 205 | Electricity and Electronics II | 4 credits |
| AUTO | 210 | Engine Repair | 4 credits |
| AUTO | 215 | Manual Transmissions and Drivelines | 4 credits |
| AUTO | 255 | Engine Performance I | 4 credits |
| AUTO | 260 | Engine Performance II | 4 credits |
| AUTO | 265 | Automatic Transmissions & Transaxles | 4 credits |
| | | Total Credits Required for Degree: | 69-70 credits |

## Behavioral Health and Human Services

The Behavioral Health & Human Services program is designed to prepare individuals with the necessary knowledge and skills for employment and/or future study in the human service field. Successful graduates work with individuals of all ages confronting disabling mental health issues, developmental disabilities, substance abuse, and other behavioral health conditions.

The Associate in Applied science degree in Behavioral Health and Human Services is designed primarily for students seeking to enter the work force after graduation or to advance their career at their place of employment. Graduates of the associate degree program qualify for Mental Health Rehabilitation Technician/Community (MHRT/C) certification and are eligible for Ed Tech II certification.

The Associate in Arts degree in Liberal Studies Social Work concentration is designed for transfer to a baccalaureate program in social work or human services. The curriculum is built on a foundation of general education classes, supplemented with elective courses that focus heavily on relevant general education coursework with some specialization.

*Upon completion of the Behavioral Health & Human Services program, graduates will be able to:*

- Demonstrate an understanding of the nature of human systems: individual, group, organization, community and society, and their major interactions.
- Demonstrate an understanding of human development, group dynamics, organizational structure, how communities are organized, how national policy is set, and how social systems interact in producing human problems.
- Demonstrate an understanding of the conditions that promote optimal functioning or the classes of deviation that limit desired functioning in the major human systems.
- Demonstrate an understanding of the major models of causation that are concerned with the promotion of healthy functioning and treatment rehabilitation.
- Identify and select interventions, which promote growth and goal attainment. Graduates will be able to conduct a competent problem analysis and select strategies, services, or interventions that are appropriate to helping their clients attain a desired outcome.
- Plan, implement, and evaluate interventions. The student will be able to design a plan of action for an identified problem and implement the plan in a systematic way.
- Select interventions, which are congruent with the values of one's self, clients, the employing organization and the human service profession.
- Use verbal and oral communication, interpersonal relationships, and other related personal skills (such as self discipline and time management) effectively to plan and implement services.

*Behavioral Health Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions.

## *Associate in Applied Science*
## *Behavioral Health and Human Services*

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 100 | Biology & Lab for Non-Majors | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| SOCI | 100 | Introduction to Sociology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| **Major Required Courses** | | | |
| BHHS | 100 | Introduction to Human Services | 3 credits |
| BHHS | 105 | Crisis Intervention | 3 credits |
| BHHS | 110 | Psychosocial Rehabilitation | 3 credits |
| BHHS | 150 | Special and Diverse Populations | 3 credits |
| BHHS | 220 | Interviewing and Counseling | 3 credits |
| BHHS | 225 | Behavioral Health Practicum | 3 credits |
| BHHS | 230 | Substance Abuse | 3 credits |
| BHHS | 260 | Group Process | 3 credits |
| BHHS | 265 | Trauma, Sexual Abuse, and Recovery | 3 credits |
| BHHS | 270 | Case Management | 3 credits |
| BHHS | 275 | Direct Service Practicum II | 3 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| | | Behavioral Health Elective | 3 credits |
| | | Total Credits Required for Degree: | 61 credits |

*Behavioral Health Certificate*

The one-year Behavioral Health certificate program is designed to meet the requirements for certification as a Mental Health Rehabilitation Technician/Community (MHRT/C), but includes course work in addition to MHRT/C requirements (please see http://muskie.usm.maine.edu/cfl/MHRTCOverview.html for details). MHRT/C certification is required by the state of Maine for work as an entry-level mental health practitioner. Associate Degree candidates need not apply separately to the SMCC Certificate program in order to qualify for MHRT/C certification.

## *Certificate*
## *Behavioral Health*

| Required Courses | | | |
|---|---|---|---|
| BHHS | 100 | Introduction to Human Services | 3 credits |
| BHHS | 105 | Crisis Intervention | 3 credits |
| BHHS | 110 | Psychosocial Rehabilitation | 3 credits |
| BHHS | 150 | Special and Diverse Populations | 3 credits |
| BHHS | 175 | Behavioral Health and Aging | 3 credits |
| BHHS | 220 | Interviewing and Counseling | 3 credits |
| BHHS | 230 | Substance Abuse | 3 credits |
| BHHS | 260 | Group Process | 3 credits |
| BHHS | 265 | Trauma, Sexual Abuse, and Recovery | 3 credits |
| BHHS | 270 | Case Management | 3 credits |
| | | Total Credits Required for Certificate: | 30 credits |

# Biotechnology

Biotechnology is the use of technology and applied biology to find solutions to problems. Career and research opportunities include animal sciences, biomedical technologies, immunology, pharmaceutics, forensics, plus marine and environmental science. Students learn the fundamentals of biology and chemistry and gain an advanced understanding of related subfields such as cellular biology, genetics, and microbiology. Students work with DNA, cells, enzymes, and other biological agents in hands-on laboratory settings, and have the opportunity to work in outside laboratories as part of a summer internship program. Graduates find employment in entry-level biotechnology positions, including jobs as manufacturing, research, and lab technicians or transfer to a baccalaureate degree program.

*Upon completion of the Biotechnology program, graduates will be able to:*

- Communicate effectively, using the language, concepts and models of biotechnology.
- Use the scientific method to define and solve problems independently and collaboratively.
- Use a wide variety of laboratory techniques with accuracy, precision, and safety.
- Accurately interpret scientific information.
- Demonstrate proficient library, mathematical and computer skills in data gathering and analysis.
- Apply scientific concepts to environmental and societal issues.
- Apply their learning in an off-campus professional setting.

*Biotechnology Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra is recommended.

## *Associate in Science*
## *Biotechnology*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| CHEM | 120 | General Chemistry I with Lab | 4 credits |
| CHEM | 125 | General Chemistry II with Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| MATH | 230 | Statistics | 3 credits |
| PHIL | 105 | Ethical Dilemmas | 3 credits |
| PHYS | 110 | Technical Physics & Lab | 4 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| BIOL | 110 | Introduction to Biotechnology | 4 credits |
| BIOL | 120 | Biology I | 3 credits |
| BIOL | 121 | Biology I Lab | 1 credit |
| BIOL | 125 | Biology II | 3 credits |
| BIOL | 126 | Biology II Lab | 1 credit |
| BIOL | 212 | Genetics & Lab | 4 credits |
| BIOL | 250 | Microbiology with Lab | 5 credits |
| BIOL | 255 | Cell Biology | 3 credits |
| BIOL | 275 | Biotechnology Internship | 2 credits |
| | | Computer Applications Elective | 3 credits |
| | | **Total Credits Required for Degree:** | **63 credits** |

# Business Administration

The Business Administration program provides students with a foundation in general business practices, leadership concepts, and microcomputer applications. In addition to acquiring skills in accounting, finance, sales, and operations, students enhance their ability to write, think, work in groups, solve problems and build confidence and the ability to succeed in the world of business.

The Associate in Science degree emphasizes math, science, and core business requirements. The sequence of courses comprises the typical transfer option that many baccalaureate programs prefer, deferring many upper-level business courses until the third or fourth year.

*Upon completion of the Business Administration program, graduates will be able to:*

- Make decisions and take actions that enable businesses/organizations to earn profits and grow.
- Describe and utilize the role of science, technology, and market commercialization in the creation of viable products and services.
- Demonstrate an ability to understand organizational structures.

*Business Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions.

## *Associate in Science*
## *Business Administration*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science or Humanities Electives | 6 credits |
| **Major Required Courses** | | | |
| ACCT | 105 | Financial Accounting | 3 credits |
| ACCT | 155 | Managerial Accounting | 3 credits |
| BUSN | 100 | Introduction to Business | 3 credits |
| BUSN | 260 | Business Law | 3 credits |
| ECON | 120 | Microeconomics | 3 credits |
| ECON | 125 | Macroeconomics | 3 credits |
| | | Business Capstone: ACCT 205; BUSN 255; or BUSN 265 | 3 credits |
| | | Business Electives | 6 credits |
| | | Computer Applications Elective | 3 credits |
| | | Total Credits Required for Degree: | 61 credits |

## *Associate in Science*
## *Business Administration*
Sport Management Option

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |

| | | | |
|---|---|---|---|
| | | Fine Arts or Humanities Elective | 6 credits |
| | | Economics Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| Major Required Courses | | | |
| ACCT | 105 | Financial Accounting | 3 credits |
| ACCT | 155 | Managerial Accounting | 3 credits |
| BUSN | 100 | Introduction to Business | 3 credits |
| BUSN | 255 | Human Resource Management | 3 credits |
| MKTG | 200 | Marketing | 3 credits |
| PSYC | 230 | Sport Psychology | 3 credits |
| SPTM | 105 | Foundation of Sport | 3 credits |
| SPTM | 155 | Introduction to Sport Management | 3 credits |
| SPTM | 200 | Sport Management Internship I | 3 credits |
| SPTM | 205 | Sport and Facilities Management | 3 credits |
| | | Total Credits Required for Degree: | 61 credits |

# Cardiovascular Technology

The Cardiovascular Technology program provides graduates with the skills necessary to work with medical professionals in cardiac catheterization laboratories, operating rooms, non-invasive laboratories, and echocardiography departments. Students receive training in cardiovascular physiology, medical electronics and instrumentation, and applied cardiovascular techniques, and are introduced to both invasive and non-invasive patient care areas.

Students spend time in both the classroom setting and at various clinical sites throughout their educational experience. The clinical component of the program includes more than 1,240 hours of patient care experience over four of the five semesters and is closely aligned with the cardiovascular curriculum.

Students enrolled in the Cardiovascular Technology program are encouraged to take Part 1 – Basic Science Exam from Cardiovascular Credentialing International (CCI) while enrolled at SMCC. Upon completion of the program, graduates are eligible to take the registry level examination (Part 2 of the two-part certification examination). Students may select either the Registered Cardiac Sonographer (RCS) or the Registered Cardiovascular Invasive Specialist (RCIS).

Career opportunities for graduates are numerous. The growth in cardiovascular surgeries, diagnostic procedures and interventional techniques, and the continued advances in echocardiography and non-invasive cardiology, has increased the demand for qualified cardiovascular technologists throughout the nation.

*Upon completion of the Cardiovascular Technology program, graduates will be able to:*

- Demonstrate attitudes and behaviors in the clinical setting consistent with a technologist level Cardiovascular Care Practitioner.
- Demonstrate and perform in the clinical setting, twelve lead ECGs and echocardiograms.
- Calculate hemodynamic parameters in the clinical setting.
- Set up, operate, and perform various blood analyses utilized during open heart surgery.
- Assist the cardiologist with invasive and therapeutic procedures utilizing aseptic technique.

*Cardiovascular Technology Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra and biology is recommended.

## *Associate in Science*
## *Cardiovascular Technology*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| CHEM | 120 | General Chemistry I with Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| **Major Required Courses** | | | |
| CARD | 100 | Intro to Cardiovascular Technology | 3 credits |
| CARD | 105 | Medical Instrumentation | 3 credits |
| CARD | 115 | Non-Invasive Testing | 3 credits |
| CARD | 125 | Clinical Practicum I | 1 credit |
| CARD | 160 | Cardiovascular Physiology/Patho I | 2 credits |
| CARD | 175 | Clinical Practicum II | 4 credits |
| CARD | 180 | Rehabilitation and Prevention | 3 credits |
| CARD | 210 | Cardiovascular Physiology/Patho II | 2 credits |
| CARD | 215 | Vascular Imaging and Pathology | 3 credits |
| CARD | 225 | Clinical Practicum III | 6 credits |
| CARD | 275 | Clinical Practicum IV | 12 credits |
| HLTH | 155 | Pharmacology | 3 credits |
| RESP | 115 | Applied Physics for Health Sciences | 2 credits |
| ***OPTION I : INVASIVE CARDIOVASCULAR TECHNOLOGY*** | | | ***8 credits*** |
| CARD | 150 | Invasive Cardiovascular Tech I | 3 credits |
| CARD | 155 | Invasive Cardiovascular Tech Lab I | 1 credit |
| CARD | 200 | Invasive Cardiovascular Tech II | 3 credits |
| NURS | 100 | Dosage Calculations | 1 credit |
| ***OPTION II: NON-INVASIVE CARDIOVASCULAR TECHNOLOGY*** | | | ***9 credits*** |
| CARD | 165 | Ultrasound Physics & Instrumentation | 3 credits |
| CARD | 170 | Echocardiography I | 3 credits |
| CARD | 220 | Echocardiography II | 3 credits |
| | | Total Credits Required for Degree: | 85-86 credits |

# Communications and New Media

Communications and New Media (CNM) is a multi-media program that prepares students for careers as media producers. Media producers use technology to create and enhance communication through the integration of visual, audio, and web to present design solutions. They create web sites, interactive and 3-D animation, and graphic design for print media; they edit video for TV and web; they produce and edit scripts for TV and radio. This is a hands-on program providing students with access to industry-standard software and gear through work in state-of-the-art labs.

The CNM program provides students with a strong foundation in web, video/ audio, and print media. Once the fundamental courses have been completed, students can choose to specialize by selecting from a flexible menu of advanced curriculum options including Animation & Gaming, Digital Imaging & Design, Video & Audio Production, or Website Production. Students in the CNM program can transfer to a baccalaureate program in visual communication or art. The program is designed to prepare students for entry level employment in graphics and production.

*Upon completion of the Communications and New Media program, graduates will be able to:*

- Demonstrate the ability to incorporate language, visual images, and sounds using a variety of digital media formats to influence thought, emotions, and behaviors.
- Analyze and assess the influence of mass media on individual perceptions, social behaviors, and cultural change.
- Analyze, assess, and critique media productions for accuracy of information, audience relevance, aesthetic style, balance of perspectives, and overall effectiveness.
- Demonstrate a respect for a diversity of ideas and concepts within a group environment and the ability to effectively communicate personal viewpoints and criticism.

*Communications and New Media Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra is recommended.

### *Associate in Applied Science*
### *Communications and New Media*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Fine Arts or Humanities Elective | 6 credits |
| | | Mathematics Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| CNMS | 105 | Introduction to Mass Communication | 3 credits |
| CNMS | 111 | Digital Imaging, Design and Illustration | 3 credits |
| CNMS | 115 | Foundations of Visual Design | 3 credits |
| CNMS | 125 | Writing for Media | 3 credits |
| CNMS | 160 | Video & Audio Production Basics | 3 credits |
| CNMS | 165 | Website Production | 3 credits |
| CNMS | 296 | Senior Portfolio | 3 credits |
| | | Communications & New Media (CNMS) Electives | 21 credits |
| | | *may include up to 6 credits ARTS or CMPT electives* | |
| | | Total Credits Required for Degree: | 64 credits |

## Composite Technology

The Composite Technology program provides education and real world experiences in a state of the art lab that prepares students for entry into many advanced manufacturing industries as a materials/composites technician, shop foreman, fabricator, or materials testing technician.

Students who earn the Composite Technology degree begin my taking the technical courses required for a job in the field as a foreman with the option to pursue a bachelor's degree. Students may choose to pursue a bachelor of science degree in industrial engineering or technical management after completing the associate degree.

The Composite Technology program is designed to provide students with both theoretical knowledge and practical skills that are essential for careers in today's composite manufacturing industries. Courses included in this program provide introductory experience, computer-aided drafting and design (CADD), and composite materials and processes for manufacturing. Students are exposed to materials testing, machine tool design, power conversion and control. Technology courses include practical laboratory experiences that enable students to work with industrial materials, tools and equipment in product development.

*Upon completion of the Composite Technology program, graduates will be able to:*

- Demonstrate proficiency in the manufacturing processes of hand lay-up, vacuum bagging, closed molding, resin transfer molding, light resin transfer molding, filament winding, pre-preg, and dry resin film infusion.
- Use common composite processes and techniques in development and repair of composite materials.
- Use closed mold technology in the development of composite materials.
- Apply industry standards of quality and lean manufacturing principles to development of composite materials.
- Demonstrate an understanding of the properties of materials.
- Employ computer-aided design and computer-aided manufacturing (CAD/CAM) for the design, development and production of manufactured goods.
- Organize and control a manufacturing environment.
- Demonstrate behavioral patterns that include communication skills, safe and efficient individual and group work habits, leadership within groups, and an attitude of cooperation and tolerance.

*Composite Technology Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra and physics is recommended.

## *Associate in Applied Science*
## *Composite Technology*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra & Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 6 credits |
| **Major Required Courses** | | | |
| BUSN | 100 | Introduction to Business | 3 credits |
| CHEM | 120 | General Chemistry I *OR* | |
| COMP | 120 | Chemistry of Composites | 4 credits |
| COMP | 100 | Introduction to Composites | 3 credits |
| COMP | 105 | Closed Mold Manufacturing and Mold Making | 4 credits |
| COMP | 110 | Composite Repair | 2 credits |
| COMP | 115 | Technical Graphics for Composites | 3 credits |
| COMP | 150 | Composite Materials | 3 credits |
| COMP | 160 | Fundamentals of Quality Testing | 3 credits |
| COMP | 200 | Advanced Composite Processes | 3 credits |
| COMP | 205 | Polymer Technology | 3 credits |
| COMP | 210 | Lean Manufacturing | 3 credits |
| COMP | 250 | Composites Internship | 3-9 credits |
| MTSC | 100 | Introduction to Materials Science | 3 credits |
| OSHA | 120 | Construction Safety | 0.5 credits |
| PHYS | 155 | College Physics II & Lab | 4 credits |
| | | **Total Credits Required for Degree:** | **67.5-73.5 credits** |

# Computer Science

The study of computer science involves both the theory and the practice of solving problems by computer. It describes the analysis, design, implementation, and application of algorithms in order to solve complex problems. While computer science requires the study and use of several programming languages, the discipline as a whole encompasses much more; theoretical and practical mathematics, design and analysis of algorithms, and modeling of large systems are all part of computer science.

The Associate in Science in Computer Science is designed to prepare students for immediate entry into the workforce or for transfer into a Bachelor's degree program. From robotics to programmatic alteration of media to mobile applications, students receive instruction in both practical and theoretical aspects of computer science. The program offers a range of courses that will enhance students' competencies in programming languages and their applications to solve problems.

One major advantage of attending a community college is the possibility of close association with faculty and fellow students. Students who choose to study computer science at SMCC receive the benefit of small classes and the supportive environment that a community college provides.

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

- Work with various number systems and with Boolean logic
- Describe algorithms and program behavior using UML
- Select appropriate algorithms and data structures for a variety of problems
- Diagram computer hardware and its architecture, and use low-level programming languages such as assembly language
- Create computer programs in several languages, incorporating concepts such as variables, loops, arrays, objects, and other common programming constructs
- Solve software and hardware problems using logical reasoning

## *Associate in Science*
## *Computer Science*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 125 | Discrete Mathematics | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science Elective | 3 credits |
| | | Social Science or Humanities Elective | 3 credits |
| **Major Required Courses** | | | |
| CSCI | 105 | World of Computing | 3 credits |
| CSCI | 110 | Principles of Computer Science | 4 credits |
| CSCI | 160 | Object Oriented Design and Programming | 4 credits |
| CSCI | 250 | Computer Organization | 3 credits |
| CSCI | 290 | Data Structures | 4 credits |
| MATH | 145 | College Algebra & Trigonometry | 4 credits |
| MATH | 190 | Precalculus | 3 credits |
| MATH | 260 | Calculus I | 4 credits |
| | | Computer Science Electives | 12 credits |
| | | Total Credits Required for Degree: | 63 credits |

# Computer Technology

The Computer Technology program concentrates on the three major areas in the information technology industry: programming, networking, and computer hardware/operating systems. The program provides the student with a broad-based education that will prepare them for a career in the information technology field.

The curriculum, which includes a large amount of hands-on experience in individual and team-based projects, is designed to encourage the student to develop critical thinking skills and a well-rounded knowledge of the computer industry and its applications.

The program provides students with experience in the installation, configuration and maintenance of Microsoft and open source operating systems; network design and management; object oriented programming; database design and management; web based software development; and microcomputer hardware maintenance and support.

Career opportunities for our graduates include: user support/helpdesk technician, desktop computer service technician, programmer, web server administrator, and network administrator.

*Upon completion of the Computer Technology program, graduates will be able to:*

- Build, maintain, and repair personal computer systems.
- Install, configure, and maintain Microsoft and open source operating systems.
- Build personal computer based local area networks.
- Create and manage Microsoft Windows® and Linux network objects and services.
- Create programs, applications, and web services utilizing various programming languages.
- Design, build and maintain databases.

*Computer Technology Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra and introductory computer applications is recommended.

## *Associate in Applied Science*
## *Computer Technology*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 125 | Discrete Mathematics | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science Electives | 6 credits |
| **Major Required Courses** | | | |
| CMPT | 100 | Introduction to Computer Technology | 4 credits |
| CMPT | 105 | Introduction to Web Programming | 4 credits |
| CMPT | 110 | Introduction to Databases | 3 credits |
| CMPT | 115 | Microcomputer Hardware | 4 credits |
| CMPT | 120 | Open Source Operating Systems | 4 credits |
| CMPT | 125 | Structured Programming | 3 credits |
| CMPT | 210 | Applications in Software | 3 credits |
| CMPT | 215 | Microsoft Operating Systems | 3 credits |
| CMPT | 220 | Network System Management | 3 credits |
| CMPT | 225 | Network Engineering | 3 credits |
| CMPT | 230 | Senior Internship | 3 credits |
| CMPT | 235 | Senior Seminar | 3 credits |
| CMPT | 2XX | Computer Technology Elective (200-level) | 3 credits |
| | | **Total Credits Required for Degree:** | **65 credits** |

# Construction Technology

The Construction Technology program provides technical and extensive hands-on experience in residential construction and light commercial construction, preparing its graduates for a rewarding career in the construction industry.

The construction field involves constantly changing technology in today's continuing search for more energy-efficient structures. Technically trained professionals with innovative ideas and the skills to apply these ideas and knowledge are needed to meet the challenges of today's building industry. The program curriculum is constantly under revision to keep up with industry demands. Related subjects such as blueprint reading, drafting, English composition and math provide students with a well rounded education, allowing them to obtain employment in a variety of positions within the construction business or its related fields.

All students participate in framing and finish projects, which provide them with the knowledge and skills to build single or multi-family homes according to standard trade practices. All classes are conducted in an environment that prepares students for the expectations of future employers. The program's commercial curriculum provides students with a broad knowledge of concrete design, placement and testing, and prepares the students for national certification testing conducted yearly in the department. Students also become familiar with erection of steel building by constructing a prefabricated steel building.

*Upon completion of the Construction Technology program, graduates will be able to:*

- Design and build a single-family residence.
- Layout and build a timber-frame structure.
- Demonstrate the proper method of constructing a light commercial steel building.
- Design, place and test concrete.
- Install all interior finish and cabinetry in any structure.
- Estimate all materials needed for a residential and light commercial building.
- Identify and deal with a variety of environmental issues pertaining to the industry.

*Construction Technology Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra, physics, and geometry is recommended.

## *Associate in Applied Science*
## *Construction Technology*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 110 | Technical Physics & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| | | Social Science or Humanities Elective | 3 credits |
| **Major Required Courses** | | | |
| AEDD | 255 | Applied Engineering-Buildings | 3 credits |
| CONS | 105 | Tool Safety | 0.5 credits |
| CONS | 115 | Practical Building Concepts/Leveling | 4 credits |
| CONS | 125 | Framing Methods | 4 credits |
| CONS | 130 | Construction Design | 3 credits |
| CONS | 135 | Advanced Roof Framing & Interior Coverings | 4 credits |
| CONS | 140 | Weatherization for the Building Professional | 4 credits |
| CONS | 145 | Timber Framing & Exterior Finishes | 4 credits |
| CONS | 200 | Kitchen Design and Millwork | 4 credits |
| CONS | 210 | Interior Finish & Stair Construction | 4 credits |
| CONS | 216 | Residential Contracting | 3 credits |

| | | | |
|---|---|---|---|
| CONS | 220 | Commercial Building Systems | 4 credits |
| CONS | 230 | Concrete Construction | 4 credits |
| OSHA | 120 | Construction Safety | 0.5 credits |
| | | Total Credits Required for Degree: | 69 credits |

*Residential Framing Certificate*

The Residential Framing Certificate program provides technical and extensive hands-on experience in light residential construction.

*Upon completion of the Residential Framing Certificate, graduates will be able to:*

- Design and build a single-family residence.
- Layout and build a timber-frame structure.

## *Certificate*
## *Residential Framing*

| Required Courses | | | |
|---|---|---|---|
| CONS | 105 | Tool Safety | 0.5 credits |
| CONS | 115 | Practical Building Concepts/Leveling | 4 credits |
| CONS | 125 | Framing Methods | 4 credits |
| CONS | 130 | Construction Design | 3 credits |
| CONS | 135 | Adv Roof Framing & Exterior Finish | 4 credits |
| CONS | 145 | Timber Framing & Interior Coverings | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| OSHA | 120 | Construction Safety | 0.5 credits |
| | | Social Science or Humanities Elective | 3 credits |
| | | Total Credits Required for Degree: | 30 credits |

*Certificate in Building Science and Sustainability*

The Certificate in Building Science and Sustainability provides a one year in-depth instruction and hands-on experience in all aspects of energy use and efficiency in the typical Maine residential structure. The curriculum provides students with a complete understanding of residential building science, including the knowledge necessary for home energy auditing and the skills needed to weatherize any structure. Graduates will be classroom-certified to serve as MaineHousing weatherization technicians, and will also be prepared to take the nationally recognized Building Performance Institute's Building Analyst certification exam and field test – the credential recognized by both Efficiency Maine and MaineHousing.

*Upon the completion of the Certificate in Building Science and Sustainability, the student will be able to:*

- Understand theories of building science involving the movement of air, the thermal properties of building materials, and the insulating values of various types of insulation;
- Conduct an energy audit of a typical Maine residential structure;
- Identify the energy efficiency solutions appropriate to any home that has been audited;
- Calculate the cost-effectiveness of any energy efficiency solution under a variety of assumptions;
- Skillfully implement retrofits to maximize the energy efficiency of a residential structure;
- Identify safety issues relating to indoor air quality in an air-sealed structure; and
- Understand the successful business approaches in this economic sector.

## *Certificate*
## *Building Science and Sustainability*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| MATH | 140 | College Algebra ***OR*** | |
| MATH | 145 | College Algebra & Trigonometry | 3 - 4 credits |
| PHYS | 110 | Technical Physics I & Lab | 4 credits |
| CONS | 140 | Weatherization for the Building Professional | 4 credits |
| CONS | 141 | Home Energy Auditing | 3 credits |
| **Program Electives (optional – may be used to meet the required 30 credits)** | | | |
| ENVR | 110 | Fundamentals of Environmental Science | 4 credits |
| FIGS | 100 | FIG: Sustainable Energy | 1 credit |
| GISS | 150 | Introduction to Geographic Information Systems | 3 credits |
| **Please select one area of focus from of the following disciplines:** | | | |
| **Construction Technology (12 credits)** | | | |
| CONS | 105 | Tool Safety | 0.5 credits |
| OSHA | 120 | Construction Safety | 0.5 credits |
| CONS | 115 | Practical Building Concepts/Leveling | 4 credits |
| CONS | 125 | Framing Methods | 4 credits |
| CONS | 130 | Construction Design ***OR*** | |
| AEDD | 115 | Basic Architectural Graphics | 3 credits |
| **Architectural & Engineering Design (12 credits)** | | | |
| AEDD | 100 | Print Reading | 3 credits |
| AEDD | 105 | CAD Graphics | 3 credits |
| AEDD | 115 | Basic Architectural Graphics ***OR*** | |
| AEDD | 165 | Basic Architecture with CAD | 3 credits |
| AEDD | 216 | Sustainable Design | 3 credits |
| **Business Administration (15 credits)** | | | |
| BUSN | 100 | Introduction to Business | 3 credits |
| BUSN | 130 | Entrepreneurship | 3 credits |
| BUSN | 230 | Entrepreneurship II | 3 credits |
| MKTG | 200 | Marketing | 3 credits |
| MKTG | 250 | Advertising | 3 credits |
| **Electrical Engineering (12 credits)** | | | |
| ELEC | 105 | Basic Electricity I | 3 credits |
| ELEC | 110 | DC Circuits | 3 credits |
| ELEC | 140 | AC Circuits | 3 credits |
| ELEC | 265 | Renewable Energy Resources | 3 credits |
| | | **Total Credits Required for Certificate:** | **30 credits** |

# Criminal Justice

The Criminal Justice program provides students with the skills and abilities they need to succeed in dynamic and rewarding criminal justice careers. Students will find career opportunities in law enforcement, forensics, corrections, probation/parole, private security and investigations, and juvenile and adult protective services.

The professional expertise of the faculty provides an important blending of academic accomplishment and practical experience. Students benefit from their professors' real world expertise in police patrol, investigations, evidence technology/forensics, crime scene reconstruction, drug and selective enforcement, supervision, management/leadership, corrections, and criminal prosecution. Career guidance and networking opportunities with criminal justice agencies and practitioners further enhance students' academic preparation and career success.

An internship program is offered to second year students who have maintained a 3.2 GPA. This one semester course offers students the experience of being an active part of a criminal justice, public safety, or social service

agency. The Comparative Criminal Justice course features a one-week trip during the spring semester break to Ireland to compare their law enforcement systems with those of the United States. Two Crime Scene Reconstruction courses build on the Criminalistics course giving students substantial classroom, lab, and hands on experience in this rapidly evolving discipline. Service learning experiences are offered in selected criminal justice courses.

*Upon completion of the Criminal Justice program, graduates will be able to:*

- Demonstrate general knowledge of the structure, process, and relationships between law enforcement, the courts and correctional system.
- Compare and contrast the organization and practices of foreign law enforcement agencies to their American counterparts within the criminal justice system.
- Compare and contrast the juvenile justice and criminal justice systems in American society.
- Explain the Scientific Method as it applies to crime and incident scene reconstruction and analysis.
- Describe the essential laws and legal procedures that define and guide criminal justice practices in a democratic society, e.g. rules of evidence/laws of arrest, search and seizure.
- Identify, analyze and apply current best practices of law enforcement techniques.
- Understand, compare and contrast the prevailing theories of adult and juvenile criminal behavior in American society.
- Explain the historical and current perspective of the laws pertaining to arrest, search and seizure.
- Prepare a case for court presentation through use of appropriate information gathering techniques, report writing, pre-court preparation and proper courtroom procedure.
- Explain essential aspects of the community policing philosophy.

*Criminal Justice Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra is recommended.

## *Associate in Applied Science*
## *Criminal Justice*

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| FIGS | 100 | Freshman Interest Group Elective | 1 credit |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science Elective | 3 credits |
| | | Social Science or Humanities Elective | 3 credits |
| Major Required Courses | | | |
| CJUS | 105 | Introduction to Criminal Justice | 3 credits |
| CJUS | 115 | Introduction to Criminology | 3 credits |
| CJUS | 130 | Laws of Arrest, Search, and Seizure | 3 credits |
| | | Criminal Justice Electives | 30 credits |
| | | Total Credits Required for Degree: | 62 credits |

# Culinary Arts

As the third largest national industry and the largest in the state of Maine, the food industry estimates more than 60,000 additional chefs will be needed each year in the United States. SMCC's Culinary Arts program offers instruction in food preparation and service to supply these demands. The program curriculum covers all aspects of fundamental food preparation including meats, poultry, fish, vegetables, sauces, soups, bread and pastry baking, desserts, specialty cooking, dining room service, and more. Students may also participate in annual European study tours to Austria and Italy as program electives. Related instruction gives emphasis to

management techniques, including inventory control, culinary mathematics, personnel and business management, bookkeeping, accounting and menu planning. General education with coursework in English, math, and social science, and a 400-hour externship rounds out the program. Opportunities for graduates are wide ranging in all areas of both direct food preparation and related management in the food service field.

*Upon completion of the Culinary Arts program, graduates will be able to:*

- Demonstrate the proper application of dry, moist, and combination cooking methods to a variety of food products and test those products for doneness.
- Demonstrate knife cuts and portion control.
- Demonstrate current Food Service sanitation procedures.
- Serve food according to professional industry standards.
- Calculate costs and apply procedures in order to run a cost effective foodservice establishment.
- Create menus that incorporate menu-planning principles that maximize sales and profits.
- Produce a variety of bakery products using standard baking procedures and evaluate the products based on method, timing, appearance, texture, cell structure and overall eating quality.

*Culinary Arts Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra is recommended.

## *Associate in Applied Science*
## *Culinary Arts*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| NUTR | 110 | Normal Nutrition & Lab | 4 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective* | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| ACCT | 105 | Financial Accounting | 3 credits |
| BUSN | 255 | Human Resource Management | 3 credits |
| CULA | 100 | Introduction to Culinary Arts | 3 credits |
| CULA | 110 | Culinary Skills | 4 credits |
| CULA | 120 | Basic Food Preparation | 4 credits |
| CULA | 130 | Basic Baking | 4 credits |
| CULA | 140 | Food and Beverage Purchasing | 4 credits |
| CULA | 200 | Culinary Arts Externship | 3 credits |
| CULA | 210 | Buffet Preparation Techniques | 4 credits |
| CULA | 220 | Advanced Cooking Specialties | 4 credits |
| CULA | 230 | Advanced Pastry and Baking | 4 credits |
| CULA | 240 | Planning/Dining Room Service | 4 credits |
| CULA | 250 | Food Service Management | 3 credits |
| | | **Total Credits Required for Degree:** | **69 credits** |

**It is recommended that students fulfill the Fine Arts or Humanities elective by taking Spanish I.*

# Dietetic Technology

The mission of the Dietetic Technology program is to educate and train generalist dietetic technicians who possess both the skills and work habits to compete in the rapidly changing healthcare community. Graduates are prepared to work under the supervision of a registered dietitian in designing specialized diets, teaching healthy eating habits, and managing institutional food services and nutrition programs. The program combines classroom and laboratory work, as well as supervised clinical placements in area hospitals, nursing homes, school food services, and community health agencies.

Dietetic technicians work in a variety of settings including hospitals, nursing homes and other health-related facilities, subsidized feeding programs, weight control clinics, athletic training facilities, school nutrition programs and such government agencies as VISTA and the armed forces. Job opportunities outpace the number of graduates each year. Graduates are eligible for membership in the American Dietetic Association, to take the registration examination, to become a Dietetic Technician, Registered, and to become licensed in the State of Maine. Graduates who wish to pursue a baccalaureate degree may transfer with junior year status to the University of Maine – Orono's Human Nutrition Program.

*Program Goals and Outcomes:*

The program will prepare students with skills necessary to provide food and nutritional care for diverse individuals and groups in a variety of employment settings.

- 80% of students who enter the program will complete the program within five years of matriculation.
- 80% of graduates will receive a "satisfactory" rating on their competency attainment as identified by employers.
- 80% of graduates seeking employment will report success in finding discipline-related employment within one year.
- The program will enable students who desire advanced study to transfer coursework to other institutions and also motivate students to become lifelong learners.
- 80% of graduates will evaluate their preparation as "satisfactory" or above on the competency-related statements from a graduate survey.
- 80% of graduates will indicate they believe the program prepared them to assume the responsibilities of their current position as "satisfactory" or better.
- Students who transfer to a four year college in Maine will transfer 90% of their courses with a grade of C or better.
- 80% of students will become members of the American Dietetic Association or other professional nutrition or food service organization.

*Upon completion of the Dietetic Technology program, graduates will be able to:*

- Use current technologies for information and communication.
- Document nutrition screenings, assessments and interventions.
- Participate in nutrition care of individuals across the lifespan and a diversity of people, cultures and religions.
- Supervise production of food that meets nutrition guidelines, cost parameters and consumer acceptance.
- Assist with nutrition assessment of individual patients/clients with complex medical conditions.
- Perform ethically in accordance with the values of the American Dietetic Association.

*Dietetic Technology Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra and biology is recommended.

This program is granted Accreditation by the:
**Commission on Accreditation for Dietetics Education of the American Dietetic Association**
120 South Riverside Plaza, Suite 2000
Chicago, IL 60606.
800.877.1600 Extension 4872

***Associate in Science***
***Dietetic Technology***

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 100 | Biology & Lab for Non-Majors | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 110 | Contemporary Mathematics | 3 credits |
| PHIL | 105 | Ethical Dilemmas | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| SOCI | 100 | Introduction to Sociology | 3 credits |
| | | Science Elective with Lab | 4 credits |
| **Major Required Courses** | | | |
| BUSN | 255 | Human Resource Management | 3 credits |
| DIET | 100 | Introduction Dietetics Profession | 1 credit |
| DIET | 110 | Food and Beverage Purchasing | 3 credits |
| DIET | 150 | Principles of Food Preparation & Lb | 4 credits |
| DIET | 155 | Foodservice Systems Field Exp | 3 credits |
| DIET | 160 | Foodservice Sanitation | 1 credit |
| DIET | 200 | Health Care Delivery Systems | 3 credits |
| DIET | 250 | Nutrition Education and Counseling | 3 credits |
| DIET | 255 | Diet Seminar | 1 credit |
| DIET | 275 | Community Field Experience | 4 credits |
| DIET | 280 | Clinical Field Experience | 3 credits |
| NUTR | 110 | Normal Nutrition & Lab | 4 credits |
| NUTR | 210 | Intro to Medical Nutrition Therapy | 3 credits |
| | | Business Elective | 3 credits |
| | | Total Credits Required for Degree: | 68 credits |

## Early Childhood Education

The Early Childhood Education program is designed to prepare individuals as skilled Early Childhood professionals. Graduates will meet state licensing standards for teaching in a variety of settings. The coursework combines theory and practical experience to prepare graduates for immediate entry into the field or transfer to a four-year institution. In conjunction with the Early Childhood Education program, the Spring Point Children's Center provides quality educational experiences for preschool children, ages 3 to 5. This on-campus center is a valuable resource providing a laboratory setting for students in the program.

*Upon completion of the Early Childhood Education program, graduates will be able to:*

- Demonstrate an understanding of young children's typical and atypical characteristics based upon multiple influences on development and learning (birth – age 8).
- Apply theories of child development to plan inclusive, developmentally appropriate curriculum.
- Articulate priorities for the care of infants and toddlers in group settings.
- Create environments that are healthy, respectful, supportive and challenging for all children.
- Understand the value and importance children's families and cultural communities in shaping the development of the child.
- Create materials that reflect an understanding of the importance of early literacy and language rich environments.
- Develop respectful and reciprocal relationships with families that encourage families to be involved in their child's development and learning.
- Identify how community agencies and services support children, families, and providers.
- Demonstrate the skills of observation and recordkeeping as an inherent component of planning for the ongoing development of the child.

- Use the skills of positive guidance in their interactions with children based upon an understanding of the child's social/emotional development.

*Early Childhood Education Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra, chemistry, and biology is recommended.

## *Associate in Applied Science*
## *Early Childhood Education*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 110 | Contemporary Mathematics | 3 credits |
| NUTR | 110 | Normal Nutrition & Lab | 4 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| ECED | 100 | Intro to Early Childhood Education* | 3 credits |
| ECED | 110 | Child Development* | 3 credits |
| ECED | 150 | Infant and Toddler Caregiving* | 3 credits |
| ECED | 160 | Interactive Environments* | 3 credits |
| ECED | 175 | Practicum/Seminar I* | 3 credits |
| ECED | 200 | Children's Literature & Language Art* | 3 credits |
| ECED | 210 | Early Childhood Special Needs* | 3 credits |
| ECED | 220 | Observation and Record Keeping* | 3 credits |
| ECED | 225 | Practicum/Seminar II* | 4 credits |
| ECED | 250 | The Developing Curriculum* | 3 credits |
| ECED | 260 | Early Childhood Program Admin* | 3 credits |
| ECED | 270 | School, Home, & Community Relationships* | 3 credits |
| ECED | 275 | Practicum/Seminar III* | 6 credits |
| | | Total Credits Required for Degree: | 65 credits |

*To receive Departmental credit students must receive a grade of C or better in all Early Childhood Education courses

## *Certificate*
## *Early Childhood Education*

| Required Courses | | | |
|---|---|---|---|
| ECED | 100 | Intro to Early Childhood Education* | 3 credits |
| ECED | 110 | Child Development* | 3 credits |
| ECED | 150 | Infant and Toddler Caregiving* | 3 credits |
| ECED | 160 | Interactive Environments* | 3 credits |
| ECED | 175 | Practicum/Seminar I* | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 110 | Contemporary Mathematics | 3 credits |
| NUTR | 110 | Normal Nutrition & Lab | 4 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Social Science Elective | 3 credits |
| | | Total Credits Required for Degree: | 34 credits |

*To receive Departmental credit students must receive a grade of C or better in all Early Childhood Education courses

# Electrical Engineering Technologies

The Electrical Engineering Technology programs provide the education and training needed to install, maintain and troubleshoot electrical devices and equipment. Students explore topics such as basic circuits, wiring practices, electronics, programmable logic controllers, sensors, hydraulics, motors – devices and principles used in all manufacturing processes. In addition, students are exposed to the practice and regulations of residential and commercial wiring and renewable energy. An emphasis is placed on developing strong and logical troubleshooting skills.

Graduates are eligible to take the State of Maine Journeyman Electrician Exam. Two of the four years on-the-job training that is required for a Journeyman Electrician's license are awarded to graduates upon completing this program. No previous experience in electricity is required, but applicants should have a strong math and science background. Graduates find employment as an industrial electrician/technician for manufacturing companies, engineering assistant, technician with power or communication companies, residential and commercial electrical construction, electrical equipment sales, and many other related areas. Graduates of the associate degree program who wish to pursue a baccalaureate degree may transfer with junior year status to the University of Maine in Electrical Engineering Technology or the University of Southern Maine in the Department of Technology's Electromechanical Systems concentration.

*Upon completion of an Electrical Engineering Technology program, graduates will be able to:*

- Apply circuit analysis, design, and electrical principles to install, test, troubleshoot and maintain electrical and electronic systems.
- Work in the electrical field as an electrical technician or engineering assistant.
- Meet the educational requirements for various limited electrician licenses.
- Apply for the State of Maine Journeyman's Electrician Examination.
- Articulate into a four-year engineering degree program.

*Electrical Engineering Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra and physics is recommended.

## *Associate in Applied Science*
## *Electrical Engineering Technologies*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| AEDD | 105 | CAD Graphics | 3 credits |
| ELEC | 110 | DC Circuits | 3 credits |
| ELEC | 120 | Digital Electronics | 3 credits |
| ELEC | 130 | Programmable Logic Controllers | 3 credits |
| ELEC | 140 | AC Circuits | 3 credits |
| ELEC | 170 | Three-Phase Circuits | 3 credits |
| ELEC | 175 | Wiring Practices | 3 credits |
| ELEC | 215 | Electrical Machinery | 3 credits |
| ELEC | 230 | Industrial Electronics | 3 credits |
| ELEC | 240 | Fluid Power Systems | 3 credits |
| ELEC | 250 | National Electrical Code | 3 credits |
| ELEC | 260 | Motor Controls and Automation | 3 credits |
| ELEC | 265 | Renewable Energy Sources | 3 credits |
| ELEC | 270 | Electrical Communication Systems | 1 credit |

| | | | |
|---|---|---|---|
| ***OPTION I: ELECTRICAL TECHNOLOGY MATH*** | | | ***9 credits*** |
| MATH | 140 | College Algebra | 3 credits |
| MATH | 160 | College Trigonometry | 3 credits |
| MATH | 190 | Pre-Calculus | 3 credits |
| ***OPTION II: ELECTRICAL ENGINEERING MATH*** | | | ***11 credits*** |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| MATH | 190 | Pre-Calculus | 3 credits |
| MATH | 260 | Calculus I | 4 credits |
| | | Total Credits Required for Degree: | 65 - 67 credits |

*Electrician Technology Certificate*

The Electrician Technology program provides the educational courses the State of Maine requires for electrical licensing and will prepare you for exciting and well-paying work in the electrical trade. Circuits, devices and wiring practices will be examined in both the classroom as well as the lab. Students explore topics such as basic circuits, residential and commercial wiring practices, electronics, transformers and motors. It should be noted that this is a part-time evening program and it will take at least two years to complete. Graduation from this program will fulfill the education requirements of the State of Maine Journeyman and Master Electrician License as well as limited electrical licenses. Two of the four years on-the-job training that is required for a Journeyman Electrician's license are awarded to graduates upon completing this program.

Graduates find employment as industrial electrician/technician for manufacturing companies, residential and commercial electrician, electrical equipment sales, self-employed contractor and many other related areas.

*Upon completion of the Electrician Technology Certificate, graduates will be able to:*

- Install, test, maintain and troubleshoot electrical devices, circuits and systems.
- Sit for the State of Maine Journeyman Electrician Exam.
- Prepare and sit for other limited electrical license exams.

### *Certificate*
### *Electrician Technology*

| Required Courses | | | |
|---|---|---|---|
| ELEC | 105 | Basic Electricity I | 2 credits |
| ELEC | 115 | Basic Electricity II | 2 credits |
| ELEC | 150 | Transformers | 2 credits |
| ELEC | 160 | Controls I | 3 credits |
| ELEC | 205 | Basic Electronics I | 3 credits |
| ELEC | 210 | Electrical Topics | 3 credits |
| ELEC | 220 | Electric Motors | 2 credits |
| ELEC | 250 | National Electrical Code | 3 credits |
| ELEC | 255 | Electrical Blueprint Reading | 3 credits |
| ELEC | 280 | Controls II | 2 credits |
| ENGL | 100 | English Composition | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| | | Total Credits Required for Degree: | 32 credits |

## Pre-Engineering

Engineering involves the arrangement and modification of natural materials to produce devices and processes in order to accomplish human goals expeditiously, economically and safely. Engineering education is divided into such fields as aeronautical, agricultural, biomedical, chemical, civil, electrical, industrial, material, mechanical and nuclear.

The pre-engineering program at SMCC is a two year program that helps students determine if they are interested in engineering and prepares them to transfer to the chemical, civil, electrical, or mechanical

engineering program at the University of Maine. The program focuses on developing a fundamental knowledge of physics, chemistry and mathematics, and provides an introduction to engineering. In addition, students take classes in English, communication, the social sciences and humanities.

One major advantage of attending a community college is the possibility of close association with faculty and fellow students. Students who choose to study pre-engineering at SMCC believe that small classes in the basic engineering, science and math courses and the supportive environment and personal attention of a community college are important in giving them a start toward a satisfying career in engineering.

Students in the pre-engineering program can transfer to the university of their choice, but the program has been designed to provide a variety of transfer opportunities between the University of Maine and SMCC, including a 2+2.

*Upon completion of the Pre-Engineering program, graduates will be able to:*

- Have a working knowledge of the theories and principles of physics in the areas of Newtonian Mechanics, gravitation, electricity and magnetism, wave motion and physical optics.
- Be acquainted with standard methods of mathematical analysis including trigonometry and analytic geometry, differential and integral calculus, matrices and linear algebra, and the solutions to differential equations.
- Understand the role of chemistry in our physical and biological environment as it pertains to atomic and molecular structure, the laws of thermodynamics and how energy is exchanged between systems.
- Work effectively in a group to accomplish an objective and make a significant contribution to its outcome.
- Combine the knowledge of physics and chemistry, together with the analytical skills of mathematics to find solutions to technical problems that benefit society.
- Use the computer to store and process technical data, to access information remotely over the internet, and as a computational tool related to the engineering process.
- Feel and appreciation for the physical world and the laws that govern it.
- Enjoy the beauty of mathematics and elegance of physical theories.
- Appreciate the importance of professional ethics as practiced by engineers as they apply their knowledge and skills to serve society.

*Pre-Engineering Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra and physics is recommended.

## *Associate in Science*
## *Pre-Engineering*

| General Education Requirements | | | |
|---|---|---|---|
| CHEM | 120 | General Chemistry I & Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 190 | Precalculus | 3 credits |
| MATH | 260 | Calculus I | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 6 credits |
| **Major Required Courses** | | | |
| CHEM | 125 | General Chemistry II & Lab | 4 credits |
| CMPT | 275 | Programming in C | 3 credits |
| ELEC | 110 | DC Circuits | 3 credits |
| ELEC | 140 | AC Circuits | 3 credits |
| ENGR | 100 | Introduction to Engineering | 2 credits |
| ENGR | 200 | Engineering Statics | 3 credits |
| ENGR | 250 | Strength of Materials | 3 credits |
| MATH | 270 | Calculus II | 4 credits |

| | | | |
|---|---|---|---|
| PHYS | 155 | College Physics II & Lab | 4 credits |
| | | Program Electives* | 6 credits |
| | | Total Credits Required for Degree: | 65 credits |

*Consult advisor for elective recommendations leading to four-year programs in Electrical, Computer, Construction Management, Survey, Biological, Mechanical, Civil or Chemical Engineering

# Emergency Medical Services/Paramedicine

Paramedicine offers an exciting and challenging career within the field of Emergency Medical Services (EMS). Paramedics are members of the health care team that provides advanced level care in the pre-hospital environment under the direction of a physician. Employment opportunities are available with municipal and private ambulances, fire departments, hospitals, clinics, and in industrial settings.

Admission into the Paramedicine program requires that a student be a licensed Emergency Medical Technician (EMTB) for six months with 50 documented EMS calls. Existing paramedics may apply to have certain courses waived if working toward a degree.

Students gain entry-level competency in many new skills, including comprehensive patient assessment, endotracheal intubation, intravenous therapy, medication administration, cardiac rhythm interpretation, and defibrillation. Included in the curriculum (for additional fees) are certifications in ACLS (Advanced Cardiac Life Support), PALS (Pediatric Advanced Life Support), and PHTLS (Pre-hospital Trauma Life Support). The program meets or exceeds all requirements for the DOT National Standard Paramedic curriculum.

The clinical component of the program consists of approximately 700 hours of clinical time in a variety of settings including hospitals, medical facilities, and paramedic services. Students complete a portion of their field internship with a high volume EMS service in a major city.

*Upon completion of the program, graduates will be able to:*

- Perform a comprehensive assessment on a patient and communicate the findings to a physician.
- Demonstrate the ability to comprehend, apply and evaluate clinical information to implement the treatment plan for patients in the pre-hospital settings.
- Demonstrate technical proficiency in all pre-hospital skills including cardiac rhythm recognition, airway management and medication administration.
- Recognize that paramedics are an essential component of the continuum of care and service among health resources.

*Emergency Medical Services Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra, chemistry, and biology is recommended.

## *Associate in Applied Science*
## *Paramedicine*

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| BIOL | 235 | Pathophysiology | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| FIGS | 100 | Freshman Interest Group Elective (FIG) | 1 credit |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| Major Required Courses | | | |
| EMSP | 101 | Introduction to Paramedicine | 3 credits |

| | | | |
|---|---|---|---|
| EMSP | 110 | Paramedic Procedures I | 3 credits |
| EMSP | 150 | Cardiology I | 3 credits |
| EMSP | 160 | Paramedic Procedures II | 3 credits |
| EMSP | 161 | Paramedic Procedures II Lab | 1 credit |
| EMSP | 200 | Clinical Practicum I | 3 credits |
| EMSP | 205 | Trauma Management | 4 credits |
| EMSP | 210 | Medical Emergencies I | 4 credits |
| EMSP | 215 | Pediatric Emergencies | 3 credits |
| EMSP | 220 | Advanced Cardiology | 3 credits |
| EMSP | 225 | Medical Emergencies II | 4 credits |
| EMSP | 250 | Clinical Practicum II | 3 credits |
| EMSP | 260 | Assessment Based Management | 2 credits |
| EMSP | 265 | Rescue Operations | 3 credits |
| EMSP | 270 | Clinical Practicum III | 3 credits |
| EMSP | 275 | Clinical Practicum IV | 1 credit |
| EMSP | 280 | Paramedic Boards Review | 1 credit |
| EMST | 105 | Ambulance Operations/AVOC | 1 credit |
| HLTH | 155 | Pharmacology | 3 credits |
| | | Total Credits Required for Degree: | 78 credits |

*A minimum grade of B- (80) must be achieved in each program (EMSP) course.*

# Fire Science

The Fire Science program is designed to provide both pre-service and in-service students with sound technical and academic experiences, enabling them to assume positions of responsibility as members of fire departments or as technical and supervisory employees of industrial firms and insurance companies. The program focuses on developing skills in comprehensive approaches to fire protection that utilize cost-effective proactive, reactive and management methods. The ultimate goal is to assist the student to develop the appropriate skills and knowledge for professional fire protection. Fire Science courses are available at off campus locations around the state. In addition to the associate in applied science degree, a one-year, 30-credit certificate option is available.

Practical technical instruction is designed to meet fire and life safety needs; responsibilities and obligation of fire protection in engineering, building design, plant protection; fire investigation; and all other fields where a hazard may be involved. Graduates of the program have been employed as municipal and industrial firefighters, EMTs, safety technicians, fire insurance inspectors, wildland fire fighters, inspection bureau representatives, and state fire inspectors, many of whom have earned their degree while employed in their area of specialty.

SMCC Fire Science curriculum follows the National Fire Academy's Fire and Emergency Higher Education (FESHE) collaborative recommendations as far as practicable. Course objectives are based on National Fire Protection Association (NFPA) Professional Qualification Standards and other occupational standards and recommended practices. Course credit is granted for prior learning, work experience and earned state and national certifications.

*Upon completion of the Fire Science program, graduates will be able to:*

- Analyze and apply proactive fire prevention and control methods for safe and cost effective fire protection.
- Analyze and apply reactive fire and emergency scene operations for safe and cost effective fire protection.
- Examine and appraise principles of supervision and management necessary for effective leadership and administration in fire/rescue service.

*Fire Science Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra, chemistry, and physics is recommended.

### *Associate in Applied Science*
### *Fire Science*

| General Education Requirements | | | |
|---|---|---|---|
| CHEM | 103 | Chemistry for Emergency Responders | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| FIGS | 101 | Freshman Interest Group | 1 credit |
| MATH | 140 | College Algebra | 3 credits |
| PHYS | 110 | Technical Physics & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Electives | 6 credits |
| **Major Required Courses** | | | |
| FIRE | 105 | Introduction to Fire Protection | 3 credits |
| FIRE | 110 | Fire Protection Systems | 3 credits |
| FIRE | 115 | Fire Service Building Construction | 3 credits |
| FIRE | 150 | Fire Inspector | 3 credits |
| FIRE | 155 | Fire Service Hydraulics | 3 credits |
| FIRE | 200 | Hazardous Materials | 3 credits |
| FIRE | 215 | Fire Service Leadership | 3 credits |
| FIRE | 250 | Fire Ground Operations | 3 credits |
| FIRE | 260 | Fire Administration | 3 credits |
| | | Fire Science Electives | 9 credits |
| | | Total Credits Required for Degree: | 62 credits |

### *Certificate*
### *Fire Science*

| General Education Requirements | | | |
|---|---|---|---|
| CHEM | 103 | Chemistry for Emergency Responders | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| FIGS | 101 | Freshman Interest Group | 1 credit |
| MATH | 140 | College Algebra | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Electives | 3 credits |
| **Major Required Courses** | | | |
| FIRE | 105 | Introduction to Fire Protection | 3 credits |
| FIRE | 110 | Fire Protection Systems | 3 credits |
| FIRE | 115 | Fire Service Building Construction | 3 credits |
| FIRE | 150 | Fire Inspector | 3 credits |
| FIRE | 155 | Fire Service Hydraulics | 3 credits |
| | | Fire Science Electives | 3 credits |
| | | Total Credits Required for Certificate: | 31 credits |

## General Technology

General Technology recognizes that students can learn in many ways by offering the opportunity to earn credit for skills acquired through employment. Applicants for this program must have a minimum of four years of continuous work experience in an area of technical specialty related to one or more technology programs offered at the college. Students begin their application process by developing a portfolio which clearly outlines their work-related competencies. The department chair associated with the technical program of study will conduct a credit assessment of the portfolio and serve as an advisor to plan the remainder of the coursework required. Graduates in this program are usually employed in a variety of settings at the time of entry into the program.

***Associate in Applied Science***
***General Technology***

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science Elective | 6 credits |
| **Major Required Courses** | | | |
| | | Prior Learning Experience (Related to a specific trade) | 24 credits |
| | | Trade Related Electives | 24 credits |
| | | Total Credits Required for Degree: | 61 credits |

## Heating, Air Conditioning, Refrigeration & Plumbing

The Heating, Air Conditioning, Refrigeration & Plumbing programs prepare students to install, repair and maintain refrigeration, heating and air conditioning equipment. Students learn about the components and construction of HVACR systems, temperature control, electronics, and how to read blueprints. This program incorporates a hands-on practical approach through work in the lab on HVAC equipment.

Graduates enter their field with skills and knowledge in basic electricity, heating and refrigeration systems and air conditioning systems, as well as the skills and competencies for journeyman plumbing. Special attention will be given to the integration of green technologies. Advanced courses develop more sophisticated design and application skills such as estimating thermal loads, hydronic piping design and controls for more complex circuits including digital. Heating, ventilation, air conditioning and refrigeration (HVAC/HVACR) technicians can work in private homes, commercial offices, industrial complexes, or any other type of building.

The Heating, Air Conditioning, Refrigeration & Plumbing department offers an associate in applied science degree with two options: Heating, Air Conditioning & Refrigeration, and Heating & Plumbing. The program also offers individual certificates in Plumbing, Heating, and Refrigeration & Air Conditioning. The program is designed to prepare students for entry level employment in the HVAC/Plumbing fields.

### *Heating, Air Conditioning & Refrigeration Option*

Students with previous practical experience may be eligible for more advanced licenses. Students also take the EPA Technician Certification Exam and are eligible to take the ARI GAMA competency exams. Graduates are also eligible to take the State of Maine Natural Gas and Propane License Exam and the Journeyman's Exam for Oil Burners.

*Upon completion of the Heating, Air Conditioning & Refrigeration program, graduates will be able to:*

- Assemble warm air, steam and hot water system.
- Combustion test for maximum operating efficiency.
- Troubleshoot and repair electrical and fuel systems.
- Exhibit knowledge of installation code and safe work practices.
- Assemble, charge, and operate refrigeration and air conditioning systems.
- Troubleshoot and repair refrigeration and AC control systems.
- Recover, recycle and work safely with refrigerants.

*Heating, Air Conditioning, & Refrigeration Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions.

## *Associate in Applied Science*
## *Heating, Air Conditioning & Refrigeration*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| PHYS | 155 | College Physics II & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| AEDD | 100 | Print Reading | 3 credits |
| ELEC | 100 | Basic Electrical Principles - HVAC | 3 credits |
| ELEC | 103 | Basic Electronics for HVAC | 3 credits |
| HVAC | 115 | Residential Heating Systems | 7 credits |
| HVAC | 120 | Basic Refrigeration | 7 credits |
| HVAC | 215 | System Design & Industrial Heating | 7 credits |
| HVAC | 220 | Basic Air Conditioning | 7 credits |
| WELD | 100 | Introduction to Welding | 3 credits |
| | | Total Credits Required for Degree: | 64 credits |

***Heating & Plumbing Option***

Graduates of the Heating & Plumbing option are eligible to take the State of Maine Journeyman's Plumbing exam.

*Upon completion of the Heating & Plumbing option, graduates will be able to:*

- Assemble warm air, steam and hot water system.
- Combustion test for maximum operating efficiency.
- Troubleshoot and repair electrical and fuel systems.
- Exhibit knowledge of installation code and safe work practices.
- Design and layout a typical bathroom.
- Estimate time and materials for jobs.

*Heating & Plumbing Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions.

## *Associate in Applied Science*
## *Heating & Plumbing*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| PHYS | 155 | College Physics II & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| CONS | 160 | Intro to Leveling Instruments | 1 credit |
| ELEC | 100 | Basic Electrical Principles - HVAC | 3 credits |
| ELEC | 103 | Basic Electronics for HVAC | 3 credits |
| HVAC | 115 | Residential Heating Systems | 7 credits |
| HVAC | 215 | System Design & Industrial Heating | 7 credits |
| HVPL | 100 | Blueprint Reading and Sketching | 2 credits |
| HVPL | 105 | Plumbing Application and Methods | 7 credits |

| | | | |
|---|---|---|---|
| HVPL | 205 | Plumbing Application and Code | 7 credits |
| OSHA | 120 | Construction Safety | 0.5 credits |
| WELD | 100 | Introduction to Welding | 3 credits |
| | | Total Credits Required for Degree: | 64.5 credits |

### *Heating Certificate*

The Heating, Air Conditioning, and Refrigeration Department offers a Certificate in Heating which also forms half of the Heating, Air Conditioning & Refrigeration option or the Heating & Plumbing option. The program provides technical and hands-on training emphasizing the practical knowledge and skills required to install and service commercial and residential heating systems. Graduates are also eligible to take the state of Maine Natural Gas and Propane License Exam and the Journeyman's Exam for Oil Burners.

*Upon completion of the Heating Certificate program, graduates will be able to:*

- Assemble warm air, steam and hot water systems.
- Combustion test for maximum efficiency.
- Troubleshoot and repair electrical and fuel systems.
- Exhibit knowledge of installation code and safe work practices.

### *Certificate*
### *Heating*

| Required Courses | | | |
|---|---|---|---|
| AEDD | 100 | Print Reading | 3 credits |
| ELEC | 100 | Basic Electrical Principles - HVAC | 3 credits |
| ELEC | 103 | Basic Electronics for HVAC | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| HVAC | 115 | Residential Heating Systems | 7 credits |
| HVAC | 215 | System Design & Industrial Heating | 7 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| WELD | 100 | Introduction to Welding | 3 credits |
| | | Total Credits Required for Degree: | 37 credits |

## *Plumbing Certificate*

The one-year Plumbing Certificate program, which also forms half of the Associate in Applied Science degree option, is a study of the plumbing trade, residential and commercial, as practiced in the state of Maine. Blueprint reading and sketching for plumbers is covered, combined with working drawings, to learn the technique of sketching pipe layouts isometrically, and blueprint interpretation.

The proper use and safety methods of hand and power tools are covered as the course progresses. Mock-ups are used for actual piping and fixture layout, allowing students the opportunity to design, build and test plumbing installations. Graduates are eligible to take the State of Maine Journeyman's Plumbing exam.

*Upon completion of the Plumbing Certificate program, graduates will be able to:*

- Design and layout a typical bathroom.
- Line size and list pipe and fittings for the job.
- Estimate time and materials for jobs.

### *Certificate*
### *Plumbing*

| Required Courses | | | |
|---|---|---|---|
| CONS | 160 | Intro to Leveling Instruments | 1 credit |
| ELEC | 100 | Basic Electrical Principles - HVAC | 3 credits |
| ENGL | 100 | English Composition | 3 credits |

| | | | |
|---|---|---|---|
| HVAC | 180 | Heating Theory | 3 credits |
| HVPL | 100 | Blueprint Reading and Sketching | 2 credits |
| HVPL | 105 | Plumbing Application and Methods | 7 credits |
| HVPL | 205 | Plumbing Application and Code | 7 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| OSHA | 120 | Construction Safety | 0.5 credits |
| WELD | 100 | Introduction to Welding | 3 credits |
| | | Total Credits Required for Degree: | 33.5 credits |

## *Refrigeration & Air Conditioning Certificate*

The Heating, Air Conditioning & Refrigeration Department offers a Certificate in Refrigeration & Air Conditioning which also forms half of the Heating, Air Conditioning & Refrigeration option or the Plumbing & Heating option. The program provides offers technical and hands-on training emphasizing practical knowledge and skills required to install and service all types of commercial and domestic air conditioning and refrigeration systems.
Students may take ARI GAMA competency exams and EPA technician certification. Approved by the Massachusetts Department of Public Safety, Engineering Division, Bureau of Pipefitters, Sprinkler Fitters and Refrigeration Technicians to fulfill the requirements to sit for the Refrigeration Technician exam. Must produce documentation of 4,000 hours of work as an apprentice or trainee.

*Upon completion of the Refrigeration and Air Conditioning Certificate program, graduates will be able to:*

- Assemble, charge, and operate refrigeration and air conditioning systems.
- Troubleshoot and repair refrigeration and air conditioning systems.
- Recover, recycle and work safely with refrigerants.

### *Certificate*
### *Refrigeration & Air Conditioning*

| Required Courses | | | |
|---|---|---|---|
| AEDD | 100 | Print Reading | 3 credits |
| ELEC | 100 | Basic Electrical Principles - HVAC | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| HVAC | 120 | Basic Refrigeration | 7 credits |
| HVAC | 220 | Basic Air Conditioning | 7 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| WELD | 100 | Introduction to Welding | 3 credits |
| | | Total Credits Required for Degree: | 34 credits |

## Heavy Equipment Operations

The Heavy Equipment Operations certificate program is designed to produce operators trained on earth-moving equipment such as bulldozers, backhoes, excavators, and graders. Training takes place both on lab simulators as well as on an actual lab operation site.

The program prepares graduates to work in county, state, or interstate highway construction, agricultural construction, airport development, and commercial and residential construction. The program utilizes a curriculum recognized by the National Center for Construction Education and Research (NCCER).

Graduates of this certificate program will be qualified to attain employment in the construction, gravel processing, farm operations, equipment dealers and heavy equipment service industries.

*Upon completion of the Heavy Equipment Operations certificate, participants will be able to:*

- Identify and practice safe work habits as required by OSHA and MSHA as a heavy equipment operator.
- Properly operate various pieces of heavy equipment.
- Properly perform light maintenance and service on various pieces of heavy equipment.
- Demonstrate knowledge of construction site operations.

*Heavy Equipment Operations Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. A current, clean, and valid driver's license is required for admission to the Heavy Equipment Operations Certificate program. High school or post-secondary coursework in algebra is recommended.

### *Certificate*
### *Heavy Equipment Operations*

| Required Courses | | | |
|---|---|---|---|
| AUTO | 155 | Electricity and Electronics | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| HEOP | 100 | Construction Safety for HEOP | 1 credit |
| HEOP | 115 | Maintenance and Service | 3 credits |
| HEOP | 130 | Backhoe and Excavator (Sim Lab) | 3 credits |
| HEOP | 145 | Principles of Site Finishing &Grades | 3 credits |
| HEOP | 160 | Bulldozer and Excavator (Sim Lab) | 3 credits |
| HEOP | 175 | Heavy Equipment Operations Internship | 4 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| WELD | 100 | Introduction to Welding | 3 credits |
| | | Total Credits Required for Degree: | 31 credits |

## Horticulture

The Horticulture program prepares graduates to work in a wide variety of horticultural occupations, such as tree, shrub and perennial plant nurseries, arboreta, greenhouses, garden centers, landscape contracting and design, municipal parks, arboriculture, turf production, golf course management, lawn and grounds maintenance, florist shops, interior landscaping, estate gardening, cut flower production, herb and specialty plant production, market gardening, organic food production, horticultural equipment supplies and sales, and horticulture education. Many graduates own businesses and contribute significantly to their communities.

The Horticulture program is a hands-on, broad based curriculum, which provides or sponsors additional opportunities, including: tuition scholarships for students who qualify, educational field experiences, visiting lecturers with expertise in horticulture and related fields, and short courses that introduce students to specialized topics presented by members of the "green industry." Graduates from the horticulture program have successfully transferred credits toward baccalaureate degrees in related areas of study at a variety of colleges and universities.

*Upon completion of Horticulture program, graduates will be able to:*

- Understand and apply the basic principles of plant function and development, emphasizing horticultural applications.
- Identify and analyze soil properties as they relate to plant growth.
- Identify, use, and care for a wide variety of woody and herbaceous plants in the landscape and greenhouse.
- Demonstrate a basic understanding of landscape site analysis and landscape design using appropriate tools, techniques, skills, and knowledge.
- Identify common biotic and abiotic plant pests and disorders, and develop strategies to manage them in an environmentally safe and sustainable manner.

- Apply horticultural skills and knowledge to operate various business entities, including landscape, arborist, greenhouse, nursery, and turf management areas.

*Horticulture Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra, biology, and chemistry is recommended.

### *Associate in Applied Science*
### *Horticulture*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| BIOL | 115 | Botany & Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| | | Social Science or Humanities Elective | 3 credits |
| **Major Required Courses** | | | |
| HORT | 100 | Introduction to Horticulture & Lab | 3 credits |
| HORT | 110 | Woody Plant Materials | 2 credits |
| HORT | 120 | Pruning | 1 credit |
| HORT | 130 | Soils and Soil Fertility | 3 credits |
| HORT | 140 | Integrated Pest Management & Lab | 3 credits |
| HORT | 150 | Arboriculture & Lab | 3 credits |
| HORT | 175 | Placement Training | 4 credits |
| HORT | 180 | Freshman Seminar | 1 credit |
| HORT | 200 | Herbaceous Plant Materials | 2 credits |
| HORT | 210 | Landscape Surveying and Mapping | 2 credits |
| HORT | 220 | Landscape Management | 3 credits |
| HORT | 230 | Nursery & Garden Center Operations | 3 credits |
| HORT | 240 | Turfgrass Management | 2 credits |
| HORT | 250 | Greenhouse Management & Lab | 3 credits |
| HORT | 280 | Senior Seminar | 1 credit |
| HORT | 290 | Landscape Design | 3 credits |
| | | Financial Accounting or Entrepreneurship I | 3 credits |
| | | **Total Credits Required for Degree:** | **64 credits** |

## Hospitality Management

The AAS degree program in Hospitality Management provides students with a solid foundation in theory and current practices of the hospitality industry as well as a core of liberal arts and science courses that will prepare students for flexible career development. This degree focuses on one of the fastest growing industries in the world: hospitality, to include focus areas in food and restaurant operations, lodging industry operations, events management, and tourism.

This hospitality management degree program prepares students for first employment at a supervisory level, or continuation onto a bachelor of hospitality management degree. The program includes a 160 hour externship program in the four most important departments of a hotel; concierge, front desk, events planning, and night audit.

*Upon completion of the Hospitality Management program, graduates will be able to:*

- Students will demonstrate broad knowledge of and proficiency in the core functional and support areas of hospitality businesses.
- Know effective cost control methods and cost-saving techniques for hospitality services.

- Plan menus and purchase, cost, and price product for profit.
- Demonstrate a working knowledge of hotel front office management and hospitality industry marketing.
- Operate as an entry level supervisor in operational departments within the hospitality industry.
- Exhibit solid work ethics, good inter-personal communications, cultural awareness, and teamwork skills.

*Hospitality Management Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra is strongly recommended.

### *Associate in Applied Science*
### *Hospitality Management*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| | | Fine Arts/Humanities Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| ACCT | 105 | Financial Accounting | 3 credits |
| ACCT | 155 | Managerial Accounting | 3 credits |
| BUSN | 255 | Human Resource Management | 3 credits |
| CULA | 250 | Food Service Management | 3 credits |
| DIET | 160 | Food Service Sanitation | 1 credit |
| ECON | 120 | Microeconomics | 3 credits |
| ECON | 125 | Macroeconomics | 3 credits |
| HSPM | 101 | Introduction to Hospitality & Tourism | 3 credits |
| HSPM | 175 | Hospitality Internship | 3 credits |
| HSPM | 230 | Hotel & Lodging Management | 3 credits |
| HSPM | 240 | Hospitality Marketing | 3 credits |
| HSPM | 245 | Events Management | 4 credits |
| HSPM | ELE | Hospitality Management Elective (BUSN, CULA, or HSPM) | 3 credits |
| | | Total Credits Required for Degree: | 63 credits |

## Integrated Manufacturing Technology

The program offers a two-year associate degree program with options in Precision Machining and Precision Welding, as well as certificate in welding, and an Advanced Certificate in Multi-Axis Machining.

### *Precision Machining Concentration*

Precision machinists control, design, maintain, upgrade and operate modern, computer-controlled production equipment and facilities equipment used to manufacture many of the world's goods. The Precision Machining program equips its graduates with an in-depth multi-disciplinary education in mathematics, physics, engineering technology, both manual and CNC machining, manufacturing processes and methods, as well as a broad education in computer studies, business and liberal arts. Our highly skilled graduates have gone on to provide hands-on engineering and managerial service in state-of-the-art high volume and/or high-precision manufacturing enterprises across Maine. Our graduates are currently employed in diverse industries including automotive, packaging, metalworking, power generation, aerospace, medical, defense, bottling and even private consulting companies. Our graduates specialize in precision machining with precision tool making using Computer Numerical Controller (CNC) programming and operations.

*Upon completion of the Integrated Manufacturing Precision Machining program, graduates will be able to:*

- Demonstrate knowledge and skills required to safely set up and operate conventional and CNC machines precision metalworking machinery.
- Demonstrate knowledge and skills required to safely machine precision parts.
- Demonstrate knowledge and skills required using CAM.
- Demonstrate knowledge and skills required to inspect machined parts using various measuring equipment and gauging.
- Demonstrate competency in general education requirements for work and life skills.

*Integrated Manufacturing Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra, physics, and geometry is strongly recommended.

## *Associate in Applied Science Integrated Manufacturing*

Precision Machining Option

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| AEDD | 105 | CAD Graphics | 3 credits |
| AEDD | 170 | Parametric Solid Modeling | 3 credits |
| AEDD | 250 | Mechanical Design | 3 credits |
| CMPT | 101 | Intro to Computer Applications | 3 credits |
| MACH | 105 | Basic Machine Theory | 4 credits |
| MACH | 106 | Basic Machine Lab | 3 credits |
| MACH | 155 | Advanced Machine Theory | 4 credits |
| MACH | 156 | Advanced Machine Lab | 3 credits |
| MACH | 205 | Introductory CNC Machining Theory | 4 credits |
| MACH | 206 | Introductory CNC Machining Lab | 3 credits |
| MACH | 255 | CNC Programming: Solidworks & Camworks | 4 credits |
| MACH | 256 | CNC Machining Lab | 3 credits |
| MACH | 275 | Senior Internship/Practicum | 3 credits |
| WELD | 100 | Introduction to Welding | 3 credits |
| | | Total Credits Required for Degree: | 66 credits |

## *Precision Welding Concentration*

The Integrated Manufacturing Technology Precision Welding concentration offers a two-year associate degree program combining basic machining with welding. During the first year of the integrated manufacturing program, extensive lab work is combined with theory covering the topics of conventional machining: lathes, milling machines, surface grinders, drill presses, power metal cutting saws, layout, and bench work. Through the constant use of blueprints, students become proficient in conforming to industry expectations and program standards. The latest electronic equipment parallels the most modern quality control processes.

Second year students pursuing the Welding option will blend manual machining with a variety of welding processes, while acquiring a broad knowledge of metals, heat treatment, shop organization, lean manufacturing, and foremanship. Applicants with a significant amount of previous machining experience will be evaluated and

assigned special projects appropriate to their demonstrated skill level to advance their knowledge and skills. Some of the job opportunities for graduates include: machine operator and setup person for conventional machining, welder, mill fabricator. Some graduates are self-employed.

*Upon completion of the Precision Welding program, graduates will be able to:*

- Identify and practice safe work habits of a welder in a weld shop, in a machine shop, and at industrial sites.
- Demonstrate knowledge and skills required to safely set up and operate conventional metalworking machinery.
- Describe the rules and processes required for state or employer structural welding.
- Demonstrate knowledge of the requirements for gas metal arc welding/flux core arc welding.
- Demonstrate knowledge of the requirements for gas tungsten arc welding.
- Demonstrate various processes of alloy welding.
- Demonstrate knowledge of welding defects and visual acceptance criteria in accordance with AWS D1.1; visual, liquid penetrant, magnetic particle testing.
- Demonstrate knowledge of carbon arc cutting and plasma arc cutting processes.
- Describe a product concept and business model concisely and persuasively.
- Make business decisions affecting customers, products, vendors, and investors with confidence.
- Prepare a business plan suitable for presentation to interested parties.

*Integrated Manufacturing Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra, physics, and geometry is strongly recommended.

## *Associate in Applied Science Integrated Manufacturing*

Precision Welding Option

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| AEDD | 105 | CAD Graphics | 3 credits |
| CMPT | 101 | Intro to Computer Applications | 3 credits |
| MACH | 105 | Basic Machine Theory | 4 credits |
| MACH | 106 | Basic Machine Lab | 3 credits |
| MACH | 155 | Advanced Machine Theory | 4 credits |
| MACH | 156 | Advanced Machine Lab | 3 credits |
| MACH | 275 | Senior Internship/Practicum | 3 credits |
| WELD | 105 | Structural Welding Theory | 4 credits |
| WELD | 106 | Structural Welding Lab | 3 credits |
| WELD | 155 | Advanced Welding Theory | 4 credits |
| WELD | 156 | Advanced Welding Lab | 3 credits |
| WELD | 200 | Introduction to Welding Fabrication | 3 credits |
| | | Business Electives | 6 credits |
| | | **Total Credits Required for Degree:** | **66 credits** |

## *Advanced Certificate in Multi-Axis Machining*

The Advanced Certificate in Multi-Axis Machining is intended for students interested in pursuing either employment or an advanced degree in the rapidly growing field of Multi-Axis CNC machining. Students

completing this advanced certificate will have acquired necessary machining skills and theoretical background for either employment or transfer to a baccalaureate degree in Industrial Technology or Applied Technical Education (precision manufacturing concentration),

*Upon completion of the Advanced Multi-Axis Machining Certificate, graduates will be able to:*

- Safely set up and operate multi-axis CNC machines.
- Safely operate support machinery.
- Program multi-axis machine tools.
- Demonstrate knowledge and skills required to inspect machined parts using various measuring equipment and gauging.
- Complete competency in general education requirements for work and life skills.

*Advanced Multi-Axis Machining Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. Applicants to the Advanced Certificate must hold an AAS in Integrated Manufacturing or an equivalent degree or experience.

## *Advanced Certificate*
## *Multi-Axis Machining*

| Required Courses | | | |
|---|---|---|---|
| AMAM | 280 | Multi-Axis CNC Programming | 4 credits |
| AMAM | 285 | Multi-Axis CNC Machining | 4 credits |
| AMAM | 290 | Advanced Material Machining | 3 credits |
| AMAM | 295 | Advanced Workholding | 3 credits |
| ITP | 210 | Technical Writing* | 3 credits |
| ITP | 340 | Fundamentals of Quality* | 3 credits |
| ITS | 320 | Occupational Safety and Health* | 3 credits |
| MATH | 190 | Pre-Calculus | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| MATH | 260 | Calculus I | 4 credits |
| | | Total Credits Required for Certificate: | 33 credits |

*Offered through a partnership with the University of Southern Maine's School of Applied Science & Technology

## *Welding Certificate*

The one-year certificate program provides fundamental training in basic welding with a combination of welding processes. With the use of theory, lab and general education classes to prepare students for state and AWS welding certification tests.

*Upon completion of the Welding Certificate, graduates will be able to:*

- Identify and practice safe work habits of a welder in a weld shop, in a machine shop, and at industrial sites.
- Describe the rules and processes required for state or employer structural welding.
- Demonstrate knowledge of the requirements for gas metal arc welding/flux core arc welding.
- Demonstrate knowledge of the requirements for gas tungsten arc welding.
- Demonstrate various processes of alloy welding.
- Demonstrate knowledge of welding defects and visual acceptance criteria in accordance with AWS D1.1; visual, liquid penetrant, magnetic particle testing.
- Demonstrate knowledge of carbon arc cutting and plasma arc cutting processes.
- Describe a product concept and business model concisely and persuasively.
- Make business decisions affecting customers, products, vendors, and investors with confidence.
- Prepare a business plan suitable for presentation to interested parties.

***Certificate***
***Welding***

| Required Courses | | | |
|---|---|---|---|
| CMPT | 101 | Intro to Computer Applications | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| WELD | 105 | Structural Welding Theory | 4 credits |
| WELD | 106 | Structural Welding Lab | 3 credits |
| WELD | 155 | Advanced Welding Theory | 4 credits |
| WELD | 156 | Advanced Welding Lab | 3 credits |
| | | Business Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Total Credits Required for Degree: | 26 credits |

## Liberal Studies

The Liberal Studies program is designed for students who plan to transfer to four-year colleges and universities or who have not yet identified a primary field of study. The curriculum is built on a foundation of general education classes, supplemented with elective courses that develop depth in the prerequisite knowledge required for further study at the baccalaureate level. Students are encouraged to choose elective courses in a discipline in which they may major at the baccalaureate level.

**Please note: A student is only eligible to receive one Associate in Arts in Liberal Studies degree. S/he may not receive a second or subsequent degree in Liberal Studies with a different concentration.**

*Areas of Concentration*

- Art
- Biological Sciences
- Mathematics
- Education (K-8)
- Education (7-12)
- English
- History
- Liberal Studies
- Political Science
- Psychology
- Science
- Social Work
- Sociology

*Upon completion of the Liberal Studies program, graduates will be able to:*

- Demonstrate skills as critical thinkers, readers and writers.
- Describe the interaction of history, culture, literature, economics and science as studied within a broad liberal arts curriculum.
- Analyze and solve quantitative problems.

*Liberal Studies Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions.

*Liberal Studies Subject Listing*

The courses listed below are approved for use as Liberal Studies electives.

| | | | |
|---|---|---|---|
| ACSS | Academic Success | IDST | Interdisciplinary Studies |
| ANTH | Anthropology | LITR | Literature |
| ARTH | Art Appreciation and History | MATH | Mathematics |
| ARTS | Studio Art | MUSI | Music |
| BIOL | Biology | NUTR | Nutrition (NUTR-110 only) |
| BIOM | Marine Biology | OCEA | Oceanography (105 and 205) |
| CHEM | Chemistry | PHIL | Philosophy |
| ECON | Economics | PHYS | Physics |
| ENGL | English | POLS | Political Science |
| ENVR | Environmental Science | PSYC | Psychology |
| FREN | French | SOCI | Sociology |
| GRMN | German | SPAN | Spanish |
| HIST | History | THEA | Theater |

## *Associate in Arts*
## *Liberal Studies*

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | English Communications Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Psychology or Sociology Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Free Electives | 9 credits |
| **Major Required Courses** | | | |
| | | Liberal Studies Electives | 18 credits |
| | | **Total Credits Required for Degree:** | **61 credits** |

## *Art Concentration*

The Liberal Studies: Art concentration is designed to prepare students for a career in the arts. Working in state-of-the-art studio facilities and guided by practicing professional art faculty, graduates from the program can go on to careers in studio art, illustration, graphic design, fashion, art education, arts advocacy and curatorial work in galleries and museums.

The foundation year is a hands-on studio program with a basis in traditional foundation courses of still-life and figure drawing, two-dimensional design, three-dimensional design and art history, in addition to Liberal Arts core courses. The program helps students to develop skills in a variety of art media, while gaining a balanced education through liberal studies and art history courses.

The second year focuses on studio practice in a specific media. Students enroll in a capstone course with their colleagues for group critiques, visits to museums, galleries and artist studios, presentations by guest art professionals, and the development of vital professional skills, such as portfolio presentation and small business management. In the studio, art students develop a finished body of work for a group exhibition that culminates the program.

## *Associate in Arts*
## *Liberal Studies*

Art Concentration

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Art History Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Psychology or Sociology Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| **Major Required Courses** | | | |
| ARTH | 145 | Survey of Western Art History I | 3 credits |
| ARTH | 155 | Survey of Western Art History II | 3 credits |
| ARTH | 295 | Portfolio Seminar | 3 credits |
| ARTS | 110 | Drawing I | 3 credits |

| | | | |
|---|---|---|---|
| ARTS | 130 | 2D Design | 3 credits |
| ARTS | 140 | 3D Design I: Sculpture Studio | 3 credits |
| ARTS | 210 | Drawing II | 3 credits |
| | | Studio Art Elective | 6 credits |
| | | Total Credits Required for Degree: | 61 credits |

## *Biological Science Concentration*

The associate in arts degree in Liberal Studies with a concentration in Biological Sciences is primarily designed to transfer as the first two years of a four-year bachelor of science degree in biology. This curriculum will provide students with a solid background in biological science, plus additional science courses necessary to complete a more advanced degree.

## *Associate in Arts*
## *Liberal Studies*

Biological Science Concentration

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | English Communications Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Psychology or Sociology Elective | 3 credits |
| **Major Required Courses** | | | |
| BIOL | 120 | Biology I | 3 credits |
| BIOL | 121 | Biology I Lab | 1 credit |
| BIOL | 125 | Biology II | 3 credits |
| BIOL | 126 | Biology II Lab | 1 credit |
| BIOL | 212 | Genetics & Lab | 4 credits |
| BIOL | 250 | Microbiology with Lab | 5 credits |
| CHEM | 120 | General Chemistry I with Lab | 4 credits |
| CHEM | 125 | General Chemistry II with Lab | 4 credits |
| MATH | 190 | Pre-Calculus | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| MATH | 260 | Calculus I | 4 credits |
| PHYS | 155 | College Physics II & Lab | 4 credits |
| | | Total Credits Required for Degree: | 74 credits |

## *Elementary Education Concentration (K-8)*

The associate in arts degree in Liberal Studies: Education concentration prepares students to transfer to a baccalaureate program in education or liberal arts. The curriculum is built on a foundation of general education classes, supplemented with elective courses that focus heavily on relevant general education coursework with some specialization in the area of teacher education. Students are encouraged to choose elective courses in a discipline in which they may major at the baccalaureate level, such as English, mathematics, history, science, or other liberal arts disciplines.

## *Associate in Arts*
## *Liberal Studies*

K-8 Education Concentration

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 100 | Biology & Lab for Non-Majors | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| PHIL | 105 | Ethical Dilemmas | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | English Communications Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| **Major Required Courses** | | | |
| EDUC | 100 | Introduction to Teaching | 3 credits |
| EDUC | 105 | Issues in American Education | 3 credits |
| ENVR | 115 | Earth Science | 4 credits |
| MATH | 115 | Fundamentals of Elementary School Mathematics | 3 credits |
| MATH | 116 | Fundamentals of Elementary School Mathematics II | 3 credits |
| PHYS | 110 | Technical Physics & Lab | 4 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| | | Liberal Studies Electives | 6 credits |
| | | Total Credits Required for Degree: | 63 credits |

## *Secondary Education Concentration (7-12)*

The associate in arts degree in Liberal Studies: Education concentration prepares students to transfer to a baccalaureate program in education or liberal arts. The curriculum is built on a foundation of general education classes, supplemented with elective courses that focus heavily on relevant general education coursework with some specialization in the area of teacher education. Students are encouraged to choose elective courses in a discipline in which they may major at the baccalaureate level, such as English, mathematics, history, science, or other liberal arts disciplines.

## *Associate in Arts*
## *Liberal Studies*

7-12 Education Concentration

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | English Communications Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Philosophy Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| **Major Required Courses** | | | |
| EDUC | 100 | Introduction to Teaching | 3 credits |
| EDUC | 105 | Issues in American Education | 3 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| | | Liberal Studies Electives | 18 credits |
| | | Total Credits Required for Degree: | 61 credits |

## *English Concentration*

The English concentration is offered for students interested in pursing a four-year degree in English at a baccalaureate institution. The concentration provides for flexible course selection, allowing students to choose courses that best match the requirements of their desired transfer destination.

## *Associate in Arts*
## *Liberal Studies*

English Concentration

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Psychology or Sociology Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| **Major Required Courses** | | | |
| | | English Electives | 6 credits |
| | | Liberal Studies Electives* | 11 credits |
| | | Literature Electives | 12 credits |
| | | Total Credits Required for Degree: | 63 credits |

*It is highly recommended that students fulfill a portion of their Liberal Studies electives by taking two semesters of the same foreign language (for instance, two semesters of French).

## *History Concentration*

The associate in arts degree in Liberal Studies with a concentration in History is designed to provide a foundation of study that prepares students to transfer to four-year colleges and universities. The curriculum is built on a foundation of general education classes, supplemented with history courses, other social sciences, and introductory foreign language study. This concentration is excellent preparation for a major in history at the baccalaureate level which could lead to careers in law, teaching, government, public relations, museum work and many other areas.

## *Associate in Arts*
## *Liberal Studies*

History Concentration

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| POLS | 105 | Introduction to American Government | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | English Elective | 3 credits |
| | | Fine Arts or Humanities Elective* | 3 credits |
| | | Humanities Elective* | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Psychology or Sociology Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| **Major Required Courses** | | | |
| HIST | 120 | World History to 1500 | 3 credits |
| HIST | 125 | World History since 1500 | 3 credits |
| HIST | 130 | United States History to 1877 | 3 credits |

| | | | |
|---|---|---|---|
| HIST | 135 | United States History Since 1877 | 3 credits |
| | | History Electives | 6 credits |
| | | Liberal Studies Electives | 12 credits |
| | | Total Credits Required for Degree: | 61 credits |

*It is highly recommended that students fulfill the humanities electives by taking two semesters of the same foreign language (for instance, two semesters of French).

## *Mathematics Concentration*

The Mathematics concentration is intended for students with a strong foundation in mathematics who wish to continue their mathematics education at the baccalaureate level. This concentration is also appropriate for those students who wish to teach mathematics and plan to go on to a four-year education degree.

### *Associate in Arts*
### *Liberal Studies*

Mathematics Concentration

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Psychology or Sociology Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| Major Required Courses | | | |
| MATH | 190 | Precalculus | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| MATH | 260 | Calculus I | 4 credits |
| MATH | 270 | Calculus II | 4 credits |
| | | Liberal Studies Electives | 12 credits |
| | | Mathematics Elective | 3 credits |
| | | Total Credits Required for Degree: | 63 credits |

## *Political Science Concentration*

The associate in arts degree in Liberal Studies with a concentration in Political Science is designed to provide a foundation of study that prepares students to transfer to four-year colleges and universities. The curriculum is built on a foundation of general education classes, supplemented with history and government courses, other social sciences, and introductory foreign language study. This concentration is excellent preparation for a major in political science at the baccalaureate level which could lead to careers in law, teaching, government, public relations, and many other areas.

### *Associate in Arts*
### *Liberal Studies*

Political Science Concentration

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| ECON | 125 | Macroeconomics | 3 credits |
| HIST | 125 | World History Since 1500 | 3 credits |
| SOCI | 100 | Introduction to Sociology | 3 credits |
| | | Art or Music Elective | 3 credits |

| | | | |
|---|---|---|---|
| | | English Communications Elective | 3 credits |
| | | Fine Arts or Humanities Elective* | 3 credits |
| | | Humanities Elective* | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| Major Required Courses | | | |
| HIST | 130 | United States History to 1877 | 3 credits |
| HIST | 135 | United States History Since 1877 | 3 credits |
| POLS | 105 | Introduction to American Government | 3 credits |
| POLS | 110 | Introduction to International Relations | 3 credits |
| POLS | 205 | Comparative Politics | 3 credits |
| POLS | 250 | Introduction to Political Theory | 3 credits |
| | | Liberal Studies Electives | 9 credits |
| | | Total Credits Required for Degree: | 61 credits |

*****It is highly recommended that students fulfill the humanities electives by taking two semesters of the same foreign language (for instance, two semesters of French).

## *Psychology Concentration*

The associate in arts degree in Liberal Studies with a concentration in Science is designed to provide a foundation of study that prepares students to transfer to four-year colleges and universities. The curriculum is built on a foundation of general education classes, supplemented with courses in psychological theory and practice, to develop depth in the prerequisite knowledge required for further study at the baccalaureate level.

### *Associate in Arts*
### *Liberal Studies*

Psychology Concentration

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| SOCI | 100 | Introduction to Sociology | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics/Political Science Elective | 3 credits |
| | | English Communications Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| Major Required Courses | | | |
| MATH | 230 | Statistics | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| PSYC | 200 | Abnormal Psychology | 3 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| | | Psychology Electives | 9 credits |
| | | Liberal Studies Electives | 6 credits |
| | | Total Credits Required for Degree: | 61 credits |

## *Science Concentration*

The associate in arts degree in Liberal Studies with a concentration in Science is designed to provide a foundation of study that prepares students to transfer to four-year colleges and universities. The curriculum is built on a foundation of general education classes, supplemented with laboratory science courses, to develop depth in the prerequisite knowledge required for further scientific study at the baccalaureate level.

## *Associate in Arts*
## *Liberal Studies*

Science Concentration

| General Education Requirements | | | |
|---|---|---|---|
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 110 | Oral Communications | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics or Political Science Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Psychology or Sociology Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| **Major Required Courses** | | | |
| CHEM | 120 | General Chemistry I with Lab | 4 credits |
| CHEM | 125 | General Chemistry II with Lab | 4 credits |
| MATH | 230 | Statistics | 3 credits |
| PHYS | 150 | College Physics I & Lab | 4 credits |
| PHYS | 155 | College Physics II & Lab | 4 credits |
| | | Biology I and Biology I Lab or Anatomy and Physiology I & Lab | 4 credits |
| | | Biology II and Biology II Lab or Anatomy and Physiology II & Lab | 4 credits |
| | | Science Elective with Lab | 4 credits |
| | | Total Credits Required for Degree: | 65 credits |

## *Social Work Concentration*

The associate in arts degree in Liberal Studies: Social Work concentration prepares students to transfer to a baccalaureate program in social work or human services. The curriculum is built on a foundation of general education classes, supplemented with elective courses that focus heavily on relevant general education coursework with some specialization. Students are encouraged to choose elective courses in a discipline in which they may major at the baccalaureate level.

## *Associate in Arts*
## *Liberal Studies*

Social Work Concentration

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 100 | Biology & Lab for Non-Majors | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| POLS | 105 | Introduction to American Government | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | English Communications Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Philosophy Elective | 3 credits |
| **Major Required Courses** | | | |
| ECON | 125 | Macroeconomics | 3 credits |
| MATH | 230 | Statistics | 3 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| SOCI | 100 | Introduction to Sociology | 3 credits |
| SWRK | 100 | Introduction to Social Work | 3 credits |
| SWRK | 200 | Introduction to Social Welfare | 3 credits |

| | | | |
|---|---|---|---|
| | | Behavioral Health Electives | 9 credits |
| | | Total Credits Required for Degree: | 61 credits |

### *Sociology Concentration*

The associate in arts degree in Liberal Studies with a concentration in Sociology is designed to provide a foundation of study that prepares students to transfer to four-year colleges and universities. The curriculum is built on a foundation of general education classes, supplemented with core sociology courses, to develop depth in the prerequisite knowledge required for further study at the baccalaureate level.

### *Associate in Arts*
### *Liberal Studies*

Sociology Concentration

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| | | Art or Music Elective | 3 credits |
| | | Economics/Political Science Elective | 3 credits |
| | | English Communications Elective | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | History Elective | 3 credits |
| | | Humanities Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| Major Required Courses | | | |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| SOCI | 100 | Introduction to Sociology | 3 credits |
| SOCI | 201 | Marriage and Family | 3 credits |
| SOCI | 210 | Critical Thinking about Social Issues | 3 credits |
| | | Sociology Electives | 12 credits |
| | | Liberal Studies Electives | 6 credits |
| | | Total Credits Required for Degree: | 61 credits |

## Marine Science

The Marine Science program provides students with the academic background and applied skills required for employment as research assistants and technicians in a variety of aquatic and environmental fields. The curriculum emphasizes hands-on laboratory and field procedures. Skills learned are commonly used by professionals working for companies and organizations involved in aquatic research and ecosystem management. Special attention is given to collecting and identifying a diversity of marine organisms, performing oceanographic sampling procedures aboard our own research vessel, service learning experiences in the southern Maine community, plus microbiology and chemistry laboratory techniques.

Many graduates of the program have found employment with public and private marine biology laboratories, state and federal marine-resource agencies, state and federal environmental protection agencies, environmental consulting firms, and water districts and pollution control facilities.

*Upon completion of the Marine Science program, graduates will be able to:*

- Communicate effectively, using the language, concepts and models of marine biology and oceanography.
- Use the methodology of marine biology and oceanography to define and solve problems independently and collaboratively.
- Use a wide variety of laboratory and field techniques with accuracy, precision and safety.
- Accurately interpret biological and oceanographic information.
- Demonstrate proficient library, mathematical and computer skills in data gathering and analysis.
- Apply scientific concepts to environmental and societal issues.

- Apply their learning in an off-campus professional setting.

*Marine Science Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions.

### *Associate in Science*
### *Marine Science*

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 120 | Biology I | 3 credits |
| BIOL | 121 | Biology I Lab | 1 credit |
| CHEM | 120 | General Chemistry I with Lab | 4 credits |
| CHEM | 125 | General Chemistry II with Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 145 | College Algebra and Trigonometry | 4 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| BIOL | 250 | Microbiology with Lab | 5 credits |
| BIOM | 170 | Invertebrate Zoology | 5 credits |
| BIOM | 180 | Marine Botany with Lab | 4 credits |
| BIOM | 255 | Ecology with Lab | 4 credits |
| BIOM | 265 | Fishery Science with Lab | 4 credits |
| OCEA | 100 | Elements of Nautical Science | 2 credits |
| OCEA | 105 | Elements of Oceanography with Lab | 4 credits |
| OCEA | 125 | Sea Time I | 2 credits |
| OCEA | 215 | Oceanographic Instrumentation | 4 credits |
| OCEA | 225 | Advanced Sea Time | 2 credits |
| OCEA | 290 | Capstone Research | 2 credits |
| | | Biology II and Lab or Statistics | 4 or 3 credits |
| | | Total Credits Required for Degree: | 71-72 credits |

## Medical Assisting

The Medical Assisting program prepares students to perform duties and responsibilities in a variety of medical settings. The duties of medical assistants are flexible and will vary depending on the type of office or work setting, but can include: drawing blood, administering injections, assisting with exams and surgical procedures, taking vital signs, direct patient care, performing electrocardiograms, patient education, telephone triage, receptionist skills, filing, insurance reimbursement and billing procedures, medical coding, correspondence and scheduling appointments.

The program culminates with a 160-hour Practicum during which theory learned in the classroom is applied in an actual medical practice environment.

*Upon completion of the Medical Assisting program, graduates will be able to:*

- Demonstrate competency performing entry-level administrative and clinical skills.
- Project a professional manner and maintain confidentiality.
- Demonstrate responsibility and flexibility.
- Communicate to all levels of patient education.
- Practice within the scope of education and abilities.
- Follow state and federal legal guidelines for practice.

*Medical Assisting Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra and biology is recommended.

## *Associate in Applied Science*
## *Medical Assisting*

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| CMPT | 101 | Introduction to Computer Applications | 3 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 110 | Contemporary Mathematics | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| **Major Required Courses** | | | |
| MDAS | 100 | Medical Terminology | 3 credits |
| MDAS | 105 | Medical Office Procedures | 3 credits |
| MDAS | 110 | Introduction to Medical Assisting and Allied Health | 1 credit |
| MDAS | 150 | Disease Pathology/Diagnostic Lab Tests | 3 credits |
| MDAS | 160 | Intro Clinical Office Procedures | 3 credits |
| MDAS | 205 | Billing Procedures & Administration | 3 credits |
| MDAS | 210 | Clinical Office Procedures II | 3 credits |
| MDAS | 225 | Electronic Medical Records | 3 credits |
| MDAS | 250 | Medical Ethics and Law | 3 credits |
| MDAS | 260 | Medical Office Administration | 3 credits |
| MDAS | 275 | Medical Assisting Practicum | 4 credits |
| HLTH | 155 | Pharmacology | 3 credits |
| | | Total Credits Required for Degree: | 64 credits |

# Health Information Technology

The Associate in Applied Science in Health information Technology (HIT) is designed to prepare medical office managers, work-flow practitioners, clinicians, and IT professionals to manage electronic medical records. This program includes lecture and laboratory classes as well as real world application through an internship. The HIT program provides students with both the theoretical knowledge and practical skills that are essential for careers in today's health care industries. Courses included in this program cover database management, medical office operations, electronic medical records systems and the medical terminology, and billing systems and management information systems.

Students who earn the HIT degree may choose to pursue a bachelor of science degree in Health Information Systems or computer science technology.

*Upon the completion of the Health Information Technology program, the student will be able to:*

- Demonstrate understanding of billing systems and management information systems to organize, prioritize and effectively transmit information following state and federal regulations, policies, and law.
- Describe the process of migration to an EHR from organizational strategy, planning, and analysis of EHR options, decision-making techniques, training, and implementation strategies.
- Compare/Contrast different types of health information systems in terms of their ability to support the requirements of a health care enterprise.
- Demonstrate understanding of the principles of healthcare data exchange and standards, workflow design and assessment, and their relationship to patient care.

- Apply medical terms as they relate to basic anatomy and physiology of each body system, as well as apply medical terms as they relate to common diagnostic tests associated with each body system.
- Understand the technical aspects of networked computer systems used in the management of information in the 21st century and apply knowledge of how to create, maintain, and manage databases.

*Health Information Technology Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High school or post-secondary coursework in algebra is recommended.

## *Associate in Applied Science*
## *Health Information Technology*

| | | | |
|---|---|---|---|
| **General Education Requirements** | | | |
| BIOL | 105 | Human Biology | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 110 | Contemporary Mathematics | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| CMPT | 100 | Introduction to Computer Technology | 4 credits |
| CMPT | 110 | Introduction to Databases | 3 credits |
| CMPT | 125 | Structured Programming | 3 credits |
| CMPT | 220 | Network Systems Management | 3 credits |
| HLTH | 155 | Pharmacology | 3 credits |
| MDAS | 100 | Medical Terminology | 3 credits |
| MDAS | 150 | Disease Pathology/Diagnostic Lab Tests | 3 credits |
| MDAS | 205 | Billing Procedures & Administration | 3 credits |
| MDAS | 225 | Electronic Medical Records | 3 credits |
| MDAS | 250 | Medical Ethics & Law | 3 credits |
| MHIT | 100 | Introduction to Health Care in Public Settings | 3 credits |
| MHIT | 200 | Configuring Electronic Health Record Systems | 3 credits |
| MHIT | 210 | Health Management Information Systems | 3 credits |
| MHIT | 275 | HIT Practicum | 4 credits |
| | | Total Credits Required for Degree: | 66 credits |

# Nursing

The nursing program prepares men and women to become registered nurses at the associate degree level. Upon completion of the program, graduates are eligible to take the NCLEX Registered Nurse (RN) licensure examination.

The Nursing Program is approved by the Maine State Board of Nursing, 161 Capitol Street, 158 State House Station, Augusta, Maine 04333-0158 (207-287-1133) and accredited by the National League for Nursing Accreditation Commission (NLNAC), 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326 (404-975-5000, www.nlnac.org).

The curriculum blends nursing courses with general education courses to provide a sound theoretical base for nursing practice. Clinical experiences are concurrent with didactic experiences during the four semesters. If students are unable to meet clinical objectives or obtain a course grade of C (76) or better, they fail that Nursing course. Students may apply for reinstatement/re-admission to the Nursing program once.

***NOTE: The Maine State Board of Nursing may refuse to grant a license on the basis of the criminal history record information relating to convictions denominated in Title 5, Chapter 341, Section 5301, Subsection 2 of the Maine Revised Statutes Annotated (MRSA).***

*Upon completion of the Nursing program, graduates will be able to:*

- Systematically apply the nursing process to provide care to clients in a variety of health care settings.
- Demonstrate client-centered caring behaviors and actions that result in an environment of respect and trust.
- Adhere to professional behaviors within the legal, ethical, and practice standards.

*Nursing Program Outcomes:*

- At least 75% of entering students complete the Nursing program within three years.
- The licensure exam pass rate is at or above the national mean.
- At least 85% of graduates and employers rate graduates as average or above in demonstrating nursing process, caring, and professional behaviors.

*Nursing Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website http://www.smccme.edu/admissions.

## *Associate in Science*
## *Nursing*

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| BIOL | 250 | Microbiology with Lab | 5 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| NURS | 100 | Dosage Calculations | 1 credit |
| NURS | 125 | Nursing I* | 9 credits |
| NURS | 175 | Nursing II* | 9 credits |
| NURS | 225 | Nursing III* | 9 credits |
| NURS | 275 | Nursing IV* | 9 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| | | Total Credits Required for Degree: | 68 credits |

*To progress to the next course in the nursing sequence, students must receive a grade of C (76) or better. Students are allowed one repeat attempt in the duration of their program.

## *Associate in Science*
## *Nursing*

LPN Upgrade Option

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| BIOL | 250 | Microbiology with Lab | 5 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| **Major Required Courses** | | | |
| NURS | 100 | Dosage Calculations | 1 credit |
| NURS | 110 | Transition to the ADN Role | 3 credits |
| NURS | 175 | Nursing II* | 9 credits |
| NURS | 225 | Nursing III* | 9 credits |

| | | | |
|---|---|---|---|
| NURS | 275 | Nursing IV* | 9 credits |
| PSYC | 220 | Developmental Psychology | 3 credits |
| | | Total Credits Required for Degree: | 62 credits |

*To progress to the next course in the nursing sequence, students must receive a grade of C (76) or better. Students are allowed one repeat attempt in the duration of their program.

# Radiation Therapy

Each year more than a million newly diagnosed cases of invasive cancer are reported in the United States, and approximately 50 percent of those who have cancer will receive radiation therapy. As medical and technological advances combine to improve cancer detection and treatment, the therapeutic and palliative effects of radiation therapy will continue to play a crucial role for these patients. The radiation therapy program utilizes rapidly evolving technology with a combination of radiation therapy and general education courses. Solid clinical foundation with selected medical centers in the area and an emphasis on independent decision-making and critical-thinking skills will challenge students.

Multiple curriculum options exist. Students may enter the two-year associate degree option with or without transfer credit. A 15 month advanced standing option is available for radiographers and other applicants who meet special eligibility requirements. Others may choose to pursue a baccalaureate degree in radiation therapy. Upon completion of the program, graduates are eligible to apply to take the certification examination of the American Registry of Radiologic Technologists (ARRT).

*Upon completion of the program, graduates will be able to:*

- Be a competent, entry-level radiation therapist.
- Possess knowledge, skills, and attitudes necessary to effectively communicate and educate patients, their families, and the public about radiation therapy.
- Apply critical thinking skills required of an entry-level radiation therapist.
- Seek a position in the medical community with other qualified, entry-level radiation therapists.
- Participate in professional development and in professional organizations related to cancer management.

*Radiation Therapy Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website at http://www.smccme.edu/admissions. High School or post-secondary coursework in algebra, physics and biology is recommended.

## *Associate in Science*
## *Radiation Therapy*

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| PHYS | 110 | Technical Physics & Lab | 4 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| **Major Required Courses** | | | |
| RDTH | 100 | Medical Terminology | 1 credit |
| RDTH | 105 | Introduction to Radiation Therapy | 3 credits |
| RDTH | 120 | Clinical Practicum I | 4 credits |
| RDTH | 135 | Radiographic Anatomy I | 1 credit |
| RDTH | 140 | Principles & Practice of Radiation Therapy I | 3 credits |
| RDTH | 141 | Principles & Practice of Radiation Therapy I Lab | 1 credit |
| RDTH | 160 | Clinical Practicum II | 4 credits |
| RDTH | 165 | Radiographic Anatomy II | 1 credit |

| | | | |
|---|---|---|---|
| RDTH | 170 | Radiation Physics | 3 credits |
| RDTH | 180 | Clinical Practicum III | 7 credits |
| RDTH | 210 | Principles & Practice of Radiation Therapy II | 3 credits |
| RDTH | 215 | Physician's Lecture Series | 3 credits |
| RDTH | 220 | Clinical Practicum IV | 7 credits |
| RDTH | 225 | Treatment Planning & Dosimetry | 4 credits |
| RDTH | 230 | Basic Clinical Dosimetry | 1 credit |
| RDTH | 235 | Radiation Cell Biology | 3 credits |
| RDTH | 240 | Clinical Practicum V | 7 credits |
| RDTH | 245 | Radiation Quality Assurance Lab | 1 credit |
| RDTH | 260 | Clinical Practicum VI | 7 credits |
| RDTH | 295 | Radiation Therapy Registry Review | 1 credit |
| | | Total Credits Required for Degree: | 92 credits |

# Radiography

The radiographer, a vital member of the health care team, utilizes sophisticated x-ray equipment to obtain diagnostically valuable images of any body part. In order to perform radiographic procedures, the radiographer must have a good working knowledge of not only human anatomy and radiographic procedures, but also radiation physics, principles of imaging, radiation protection, and quality assurance. Employment opportunities include hospitals, private offices and outpatient clinics, and specialties such as mammography, computerized tomography, vascular and interventional radiography, and magnetic resonance imaging. The curriculum maintains clinical affiliations with many hospitals in southern Maine, as well as several orthopedic offices in Portland.

This program prepares individuals to become radiographers at the associate degree level. Upon completion of the program, graduates are eligible to apply to take the certification examination of the American Registry of Radiologic Technologists, ARRT.

## *Program* Mission

The overall goal of the Radiography program is to educate and train highly skilled, competent, professional radiographers to serve patients using imaging modalities to perform radiographic diagnostic procedures. The didactic and clinical education provides a broad spectrum of professional functions consistent with standards of current professional practice and which include: performance of general radiographic procedures utilizing a variety of equipment, utilization of radiation protection techniques, employment of critical thinking skills, utilization of professional communication skills and observance of confidentiality of information and appropriate patient care skills.

### *Program Goals and Objectives*

Goal 1: To provide an education that promotes ethics, communication, and critical thinking skills necessary to function effectively in both routine and non-routine settings.

1. Students adapt knowledge of positioning and exposure factors to non-routine situations
2. Students uses critics thinking skills to analyze and optimize image quality
3. Students demonstrate ethical values to quality patient care

Goal 2: The graduate students who possess the knowledge and skills of an entry level radiography to perform competently while demonstrating quality patient care.

1. Students perform routine exams.
2. Students pass the ARRT examination on first attempt.
3. Students possess knowledge of procedures, radiation protection and patient care.

Goal 3. To provide students with a learning environment that encourages professional development and growth consistent with the programs mission and expected outcomes.

1. Students participate as members of their professional society, (Maine Society of Radiologic Technologists).

2. Students are oriented to other imaging modalities.
3. Students demonstrate professionalism in didactic and clinical settings.

Goal 4. To graduate competent radiographers who will meet the needs of the health care community.
1. Graduates pass the ARRT examination on the first attempt.
2. Employers indicate overall satisfaction with the graduates' performance.
3. Graduates are employed within 6 months after graduation.
4. Graduates are satisfied with their education and can meet the needs of the health are community.
5. First semester radiography students are retained and will graduate from the program.

*Upon completion of the Radiography program, graduates will be able to:*

- Perform radiographic examinations on pediatric, adult and elderly individuals who present with a variety of challenges.
- Utilize a variety of radiographic and image processing equipment in a variety of clinical settings.
- Utilize appropriate radiation protection techniques for patients and personnel.
- Deliver appropriate patient care in a variety of clinical situations.
- Demonstrate attention to clerical detail relative to all aspects of clinical examinations, including archiving, filing and retrieval of images.
- Interact professionally and competently with other health care personnel.
- Communicate to patients the basic procedural details of special imaging modalities such as interventional angiography, mammography, CT and MRI.
- Be eligible to apply for the American Registry of Radiologic Technologists' examination in diagnostic radiography.

*Radiography Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website http://www.smccme.edu/admissions. High school or post-secondary coursework in chemistry, physics, and algebra is highly recommended and biology is required. All students accepted undergo a criminal background check. Results of the background check are made available to all clinical facilities. If a student is denied access to any of our clinical facilities, he/she will be unable to continue in the program.

## *Associate in Science*
## *Radiography*

| General Education Requirements | | | |
|---|---|---|---|
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| **Major Required Courses*** | | | |
| RADG | 100 | Introduction to Health Sciences | 3 credits |
| RADG | 105 | Radiographic Procedures I | 4 credits |
| RADG | 115 | Radiographic Exposure | 3 credits |
| RADG | 130 | Clinical Practicum I | 5 credits |
| RADG | 155 | Radiographic Procedures II | 4 credits |
| RADG | 160 | Clinical Practicum II | 5 credits |
| RADG | 175 | Radiographic Analysis I | 1 credit |
| RADG | 190 | Clinical Practicum III | 4 credits |
| RADG | 205 | Radiographic Procedures III | 3 credits |
| RADG | 215 | Radiographic Exposures II | 3 credits |
| RADG | 230 | Clinical Practicum IV | 6 credits |
| RADG | 235 | Applied Physics for Radiography | 3 credits |

| | | | |
|---|---|---|---|
| RADG | 245 | Radiographic Pathology | 3 credits |
| RADG | 255 | Principles of Quality Assurance | 2 credits |
| RADG | 260 | Clinical Practicum V | 8 credits |
| RADG | 275 | Radiographic Analysis II | 1 credit |
| | | Total Credits Required for Degree: | 81 credits |

*Inability to meet clinical objectives and a clinical grade of less than 85 or a radiographic didactic course grade less than 75 constitutes failure in that course.

## Respiratory Therapy

Respiratory Therapy is an Allied Health specialty involved with evaluation, treatment, management, diagnosis and preventive care of patients with cardiopulmonary problems. The respiratory therapist is a life-support specialist. During emergency calls, which often indicate a life-and-death situation of cardiac and/or pulmonary arrest, respiratory therapists become responsible for life support of the patient through airway management, artificial ventilation, external massage and other sophisticated emergency support measures. Therapists must be efficient in many areas of specialized and therapeutic respiratory care, such as oxygen, humidification, aerosols, positive pressure breathing, cardiopulmonary resuscitation, mechanical ventilation, airway management, pulmonary function studies and blood gas analysis. With the ever-increasing number of cardiopulmonary disorders and the advancement in respiratory therapy and specialty areas, job opportunities in this dynamic and challenging profession are rapidly expanding. The program is run in close cooperation with clinical affiliates, including Maine Medical Center and Mercy Hospital in Portland; St. Mary's Regional Medical Center and Central Maine Medical Center in Lewiston; Southern Maine Medical Center in Biddeford; and Mid Coast Hospital in Brunswick.

*Upon completion of the Respiratory Therapy program, graduates will be able to:*

- Demonstrate cognitive behavior in the clinical setting consistent with a therapist-level Respiratory Care Practitioner.
- Exhibit psychomotor skills in the clinical setting consistent with a therapist-level Respiratory Care Practitioner.
- Demonstrate attitudes and behaviors, in the clinical setting consistent with a therapist-level Respiratory Care Practitioner.

*Respiratory Therapy Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website http://www.smccme.edu/admissions. High school or post-secondary coursework in chemistry, biology, physics, and algebra is recommended.

### *Associate in Science*
### *Respiratory Therapy*

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| BIOL | 132 | Anatomy & Physiology I & Lab | 4 credits |
| BIOL | 138 | Anatomy & Physiology II & Lab | 4 credits |
| BIOL | 235 | Pathophysiology | 3 credits |
| CHEM | 120 | General Chemistry I with Lab | 4 credits |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| MATH | 140 | College Algebra | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Social Science Elective | 3 credits |
| Major Required Courses | | | |
| RESP | 100 | Respiratory Therapy Patient Care | 2 credits |
| RESP | 101 | Gas, Humidity, and Aerosol Therapy with Lab | 4 credits |
| RESP | 105 | Pulmonary Assessment Technology with Lab | 3 credits |
| RESP | 110 | Airway Management with Lab | 3 credits |
| RESP | 115 | Applied Physics for Health Sciences | 2 credits |

| | | | |
|---|---|---|---|
| RESP | 120 | Cardiopulmonary-Renal Anatomy & Physiology | 3 credits |
| RESP | 125 | Clinical Practicum I | 3 credits |
| RESP | 150 | Microbiology for Patient Care | 2 credits |
| RESP | 160 | Pharmacology | 2 credits |
| RESP | 170 | Intro to Mechanical Ventilation with Lab | 2 credits |
| RESP | 175 | Clinical Practicum II | 4 credits |
| RESP | 200 | Neonatology and Pediatrics | 3 credits |
| RESP | 210 | Cardiovascular Assessment | 3 credits |
| RESP | 220 | Clinical Mechanical Ventilation with Lab | 3 credits |
| RESP | 225 | Clinical Practicum III | 4 credits |
| RESP | 250 | Critical Respiratory Care | 3 credits |
| RESP | 275 | Clinical Practicum IV | 6 credits |
| | | Total Credits Required for Degree: | 82 credits |

## Surgical Technology

A certified Surgical Technologist (CST) is a member of the surgical team in the operating room who works with the surgeon, anesthesiologist and certified registered nurse, delivering direct patient care before, during and after surgery. Surgical technologists perform functions and tasks that provide a safe environment for surgical care and contribute to the efficiency of the operating team by supporting operating surgeons, nurses and others involved in operative procedures. Surgical technologists also work in other patient service settings that call for special knowledge about asepsis, or about methods of making or keeping an environment antiseptic.

The program is a cooperative effort between SMCC and the Maine Medical Center (MMC) in Portland. The first year of the program is a one-year, self-contained surgical technology program provided by MMC. First semester classes are held on the SMCC campus, including basic sciences, care and safety of the patient, and principles of operating room technique. Second semester classes are held at MMC, enabling the student to gain practical experience in the operating room, participating in clinical rotations to several ambulatory surgery sites to maximize the student's clinical experience. Graduates are prepared and eligible to sit for the National Certification Examination offered by the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

Upon completion of the MMC surgical technology program, students can apply to the SMCC associate degree program for a second year of study. The associate degree enhances career opportunities through vertical mobility, practitioner levels refinement, and maximized employment prospects. Upon acceptance to the associate degree program, the candidate is awarded 45 credits advanced standing that serve as the technical core of the associate degree. SMCC then requires a minimum of 22 general education and allied health credits to meet degree requirements. Transfer students should be aware that SMCC requires 15 credits of curriculum-specific coursework be taken at SMCC in order to award a degree. Transfer credits do not count toward this 15-credit minimum.

The MMC School of Surgical Technology is fully accredited by the American Medical Associations Committee on Allied Health Education and Accreditation. SMCC is fully accredited as a post-secondary educational institution by the New England Association of Schools and Colleges.

*Upon completion of the program, graduates will be able to:*

- Provide safe care to the patient in a surgical setting.
- Function as an integral part of a surgical team.
- Demonstrate aseptic technique.
- Practice as a surgical technologist in multiple clinical settings.
- Work in related medical settings such as research, infection control and medical sales.
- Sit for the national certification examination for surgical technologists.

*Surgical Technology Admission Requirements*

For information about Southern Maine Community College health science admission requirements, visit the Admissions area of the website http://www.smccme.edu/admissions. High school or post-secondary coursework in chemistry, biology, physics, and algebra is recommended. All first-year applications are processed through the

MMC School of Surgical Technology. For information and application, please visit http://www.mmc.org/surgtech, call 207-741-5589 or email spaterson@smccME.edu or paters@mmc.org.

### *Associate in Applied Science*
### *Surgical Technology*

| | | | |
|---|---|---|---|
| General Education Requirements – minimum of 15 credits to be taken at SMCC | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| PSYC | 100 | Introduction to Psychology | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Science Elective with Lab | 4 credits |
| | | Social Science Elective | 3 credits |
| Major Required Courses | | | |
| | | Maine Medical Center Surgical Technology Program | 45 transfer credits |
| | | Total Credits Required for Degree: | 67 credits |

## Trade and Technical Occupations

The associate in applied science in Trade and Technical Occupations program is designed to recognize the proficiency of people who are enrolled in, or have completed, a registered apprenticeship program (e.g., journey person status).

Women and men who have completed or are currently enrolled in a registered apprenticeship program or a formal program approved by the College may apply and simultaneously complete both their training program and degree requirements.

A registered apprenticeship program is one approved by the Maine State Apprenticeship and Training Council or the U.S. Department of Labor, Bureau of Apprenticeship and Training. Six credits per year of apprenticeship are allowed. Students earning less than twenty four credits will need to complete remaining credits in related or open electives.

*Trade and Technical Occupations Admission Requirements*

For information about Southern Maine Community College admission requirements, visit the Admissions area of the website http://www.smccme.edu/admissions. Prospective students must be currently enrolled in a registered apprenticeship program or a formal program approved by the college and related to a degree program offered by the college.

### *Associate in Applied Science*
### *Trade & Technical Occupations*

| | | | |
|---|---|---|---|
| General Education Requirements | | | |
| ENGL | 100 | English Composition | 3 credits |
| ENGL | 115 | Introduction to Literature | 3 credits |
| | | Fine Arts or Humanities Elective | 3 credits |
| | | Mathematics Elective | 3 credits |
| | | Physics Elective | 4 credits |
| | | Social Science Elective | 3 credits |
| | | Social Science or Humanities Elective | 3 credits |
| Major Required Courses | | | |
| | | Trade Related Electives | 22 credits |
| | | Trade and Technical Occupations Electives | 24 credits |
| | | Total Credits Required for Degree: | 68 credits |

# COURSE DESCRIPTIONS

## *Accounting Courses (ACCT)*

**ACCT 105 Financial Accounting 3 cr.**
This is an introductory course that prepares a student to become skilled at basic accounting procedures, with the intent of accurately presenting financial information for decision-making The material is vital for all participants in business. Students will learn about balance sheets, income measurement, recording processes involving journals and ledgers, and the accounting cycle. Students will also examine the major elements of financial statements such as cash accounts receivables, inventories, long-term assets, liabilities, and equity. Financial statement analysis occurs throughout.

Prerequisite(s): MATH-020
Corequisite(s): none

**ACCT 155 Managerial Accounting 3 cr.**
Building on fundamentals learned in Financial Accounting, students are introduced to several important analytical tools found in business Topics include the time value of money, the concept of risk, budgeting, costing of products, master and flexible budgeting, debt management, and short-term business decisions. A solid basis in financial accounting will be necessary.

Prerequisite(s): ACCT-105, MATH-050
Corequisite(s): none

**ACCT 205 Intermediate Accounting 3 cr.**
This course is the intensive study of accounting and the use of financial information for business decision making This course is a continuation of the basic accounting principles and theories covered in Financial Accounting and Managerial Accounting. Intermediate Accounting is also a further introduction of accounting as a career profession.

Prerequisite(s): ACCT-105, MATH-050
Corequisite(s): none

## *Academic Success Courses (ACSS)*

**ACSS 104 Academic Success Seminar 3 cr.**
This is a three-unit course Each unit is five weeks. Unit I: Academic Skills for College Success introduces students to the college environment and provides opportunities to strengthen skills necessary for success at the college level. Unit II: Learning Theories and Self-Assessment explores the learning process, learning styles, and student development theory. Unit III: Career Decision Making helps students understand and successfully manage, through readings, writing, and activities, some of their life and career transitions.

Prerequisite(s): none
Corequisite(s): none

## *Architectural & Engineering Design Courses (AEDD)*

**AEDD 100 Print Reading 3 cr.**
This course introduces the concepts of technical drawing, measurement, scale, format, and how they are applied to reading drawings in the fields of mechanical, architectural, civil, structural, and electrical. The relationship between the intent of the drawings, trade practices, ASME standards, and the ability to extract and utilize information found on various kinds of drawings will be stressed.

Prerequisite(s): MATH-020
Corequisite(s): none

**AEDD 105 CAD Graphics 3 cr.**
This course will involve the production of 2D technical drawings that meet industry standards using AutoCAD software. Emphasis will be placed on precision and accuracy, use of symbols, line types, line weights, orthographic projection, multi-view placement, text format, dimensions, section views, auxiliary views, isometric views, and plotting accuracy. A variety of design fields will be reviewed with an emphasis on ASME graphics standards.

Prerequisite(s): MATH-020
Corequisite(s): none

**AEDD 109 Introduction to Marine Design 3 cr.**
This course presents topics required for understanding ship design at an introductory level. Why does it float? What effect will materials have on buoyancy and stability? Students will be introduced to the vocabulary of the marine industry as they develop an understanding of the basic requirements of design and an appreciation for systems engineering principles. The course will cover maritime history, dynamic forces on a ship, and design for manufacture concepts, and will include concepts involving basic geometry and algebra. Students will tour a working shipyard.

Prerequisite(s): none
Corequisite(s): none

**AEDD 135 Civil Design 3 cr.**
This course in civil engineering design will provide a broad based introduction to the principles of civil engineering and landscape architecture. Topics covered will include land survey and description, topography and profiles, location plan design, site

planning and subdivision layout, and landscaping. Adherence to industry standards, drawing accuracy, layout, and quality of work will be stressed.

Prerequisite(s): AEDD-105
Corequisite(s): none

**AEDD 140 Interior Design 3 cr.**
This course will introduce students to interior design, beginning with an historical overview of the profession. Topics will include space planning, color theory, ADA compliance, furnishings, materials, lighting, CAD applications, continuing education and the certification process. There will be a series of required projects that will include research and self-exploration.

Prerequisite(s): MATH-020
Corequisite(s): none

**AEDD 160 CAD Applications 3 cr.**
This course will be based on AutoCAD software. Students develop drawings in a variety of fields of design, including architectural, civil, mechanical, and others. Emphasis will be placed on improving efficiency, advanced layout techniques, annotative scales, plotting, solving problems when working with existing drawings, creating hybrid vector-raster drawings, developing symbols and templates, and using software to solve design problems.

Prerequisite(s): AEDD-105
Corequisite(s): none

**AEDD 165 Basic Architecture with CAD 3 cr.**
This CAD based course offers the fundamentals of architectural design as it relates to light wood construction consistent with, but not limited, to residential construction. Designed for the student with prior drafting and CAD courses, this course introduces building elements, CAD techniques, building code requirements, and professional and regional influences.

Prerequisite(s): none
Corequisite(s): AEDD-100

**AEDD 170 Parametric Solid Modeling 3 cr.**
This course introduces students to the use of SolidWorks or Inventor software to produce parametric models, assemblies, and drawings for the manufacturing industry. Topics will include sketches, reference planes, relations, part modeling techniques, constraints, mates, evaluation tools, redesign, and presentation techniques. Each student will complete an individual design project involving a mechanical assembly with appropriate documentation.

Prerequisite(s): AEDD-105
Corequisite(s): none

**AEDD 175 Kitchen Design 3 cr.**
This is an in-depth course covering the aspects of kitchen design and layout. Industry specific software will be used to generate graphics. Presentation techniques of the design solutions using both CAD and illustration will be covered.

Prerequisite(s): AEDD-100
Corequisite(s): none

**AEDD 185 Civil CAD 3 cr.**
This comprehensive course covers the fundamental tools of CivilCAD and their practical applications in planning, documenting, and creating roadways, subdivisions, and site plans with adherence to industry standards. Understanding and using the software, generating design concepts, drawing accuracy, layout and quality of work will be stressed.

Prerequisite(s): AEDD-105
Corequisite(s): none

**AEDD 190 Interior Architecture Studio I 3 cr.**
This studio will be based on commercial interior architecture and will be taught through synthesis of concepts with site and building conditions. Design development will consist of translation of schematic exploration into: form and space; programming; and space planning. Each student will complete a set of conceptual drawings that include floor plans, reflective ceiling plans, lighting plans, floor pattern plans, elevations, mill work sections, finish schedule, and material boards.

Prerequisite(s): AEDD-140
Corequisite(s): none

**AEDD 205 Technical Illustration 3 cr.**
This comprehensive course covers technical and perspective forms of three-dimensional drawing, one and two point perspective, shade and shadow, color, and rendering. Extensive sketching, a thorough understanding of technical drawing/graphic concepts, and hands-on experience promote the development of artistic talent as it relates to architectural engineering design.

Prerequisite(s): AEDD-100 or AEDD-105
Corequisite(s): none

**AEDD 209 Marine Design II 3 cr.**
This course provides a broad overview of the general marine design skills expected of a middle-grade entry level designer. Students will learn the basics of creating interior and exterior ship designs and to rethink a ship's design if it isn't practical. Topics will include systems engineering considerations, electrical, pipe/machinery, HVAC, structural, hull outfit design,

human factors, Human-Machine interfact and Human-Computer interface, and design for manufacturing. Students will complete a design project and demonstrate oral and written presentation skills.

Prerequisite(s): AEDD-100, AEDD-109, ENGL-100
Corequisite(s): none

**AEDD 210 CAD 3D 3 cr.**
This is a survey course in 3D modeling using a variety of currently used modeling software. Students will produce multiple projects using selected acis and parametric modeling software. Rendering and animation software will be used to produce presentations of the models created.

Prerequisite(s): AEDD-160
Corequisite(s): none

**AEDD 215 Residential Architecture 3 cr.**
Design/planning procedures and presentation techniques presented in AED-165 will be expanded and coordinated into a complete residential design project The project shall conform to code and demonstrate functional, energy, and environmental considerations.

Prerequisite(s): AEDD-165
Corequisite(s): none

**AEDD 216 Sustainable Design 3 cr.**
This course introduces the student to the concepts of green design and construction in residential and commercial projects. The course is presented in modules which will cover sustainable design elements. Presentation of current green technologies will be provided by the instructor through the use of text, mixed media and lectures. Local and global applications of green design will be analyzed, discussed and critiqued.

Prerequisite(s): AEDD-100 or AEDD-105 or CONS-115; and AEDD-115 or AEDD-165 or CONS-130
Corequisite(s): none

**AEDD 219 Marine Parametric Modeling 3 cr.**
This course provides an overview in the use of parametric software for ship modeling. Students will apply surface and solid modeling techniques to manipulate ship models and their systems. They will learn to create and edit parts, assemblies and drawings of the main systems in a ship: hull outfit, structural, electrical, piping, mechanical, and heating and ari conditioning. The goal is to prepare students to become entry level modelers in a ship yard or marine design agency.

Prerequisite(s): AEDD-105, AEDD-109
Corequisite(s): none

**AEDD 220 Architectural BIM 3 cr.**
Students will use architectural software widely used in the field to produce architectural models and working drawings. Building information management, design development, construction documentation and planning techniques as they relate to the software will be emphasized.

Prerequisite(s): AEDD-165, AEDD-105
Corequisite(s): none

**AEDD 240 Building Systems 3 cr.**
This course provides an overview of the systems needed in buildings with an emphasis on applicable codes and green design. Topics will include electrical system design and code compliance, basic homeowner wiring practices, heat calculations, heating systems, municipal and rural water systems, plumbing system design and codes, site planning, and Leadership in Environmental and Energy Efficient Design (LEED).

Prerequisite(s): AEDD-165
Corequisite(s): none

**AEDD 250 Mechanical Design 3 cr.**
This course provides an overview of the elements of mechanical design that are used in manufacturing industries. Topics will include ASME Y14.5 standards of technical graphics, geometric dimensioning and tolerancing (GDT), classes of fit, surface finishes, weld callouts, representation of fasteners, characteristics of materials, power transmission, and development of working drawings. Students may submit work using appropriate 2D or parametric CAD drawings.

Prerequisite(s): AEDD-105
Corequisite(s): none

**AEDD 255 Applied Engineering-Buildings 3 cr.**
This course is a non-calculus introduction to the combined study of mechanics and strength of materials as it relates to building construction using Allowable Stress Design methods. Up to date values in wood, laminates/composites, steel and engineering applications are covered. It is intended for architects, builders, carpenters, designers, and code enforcement officers requiring only a background in algebra. This is a comprehensive basic engineering course with a focus on proper material selection.

Prerequisite(s): MATH-140
Corequisite(s): none

**AEDD 260 CAD Management 3 cr.**
This course will provide an introduction to the management of AutoCad using the current version of the software. Students will learn advanced techniques in geometry creation, management of CAD systems,

development of macros, use of scripts, programming for automation, customizing the software's interface, updating multiple drawings, managing externally referenced files, and other management tools.

Prerequisite(s): AEDD-160
Corequisite(s): none

**AEDD 265 Commercial Architecture 3 cr.**
This advanced course in architectural planning and presentation for commercial structures and applications introduces the student to client interaction, planning a renovation, rehabilitation, or a new design, generating a set of plans and part of a specification in preparation for work assisting an architect/engineer. Current codes, Barrier Free Design, and design elements will be discussed.

Prerequisite(s): AEDD-115 or AEDD-165
Corequisite(s): none

**AEDD 290 AutoLISP Programming 3 cr.**
This course provides students an opportunity to use the AutoLISP and Visual Basic programming languages to develop applications for automating the use of AutoCAD. Proficiency with AutoCAD is necessary for success, as this course is designed for the very competent AutoCAD user. Topics will include creation of new functions, command creation, using the VLISP editor, managing variables, looping functions, association table manipulation, and an introduction to objects, properties, classes, and methods in VBA.

Prerequisite(s): AEDD-160
Corequisite(s): none

## *Advanced Multi-Axis Machining Courses (AMAM)*

**AMAM 280 Multi-Axis CNC Programming 3 cr.**
This course compliments AMAM-285 Multi-Axis CNC Machining. Emphasis is on advanced multi-axis computerized numerical control (CNC) programming of CNC milling machines and CNC lathes. Students will work on process development. This course is designed for the student who holds an AAS degree in Integrated Manufacturing Technology of equivalent or has significant CNC machining experience.

Prerequisite(s): Program acceptance
Corequisite(s): AMAM-285

**AMAM 285 Multi-Axis CNC Machining 3 cr.**
This lab complements the theory taught in AMAM-280 Multi-Axis CNC Programming. Students will apply skills reviewed in AMAM-280 including: programming of CNC milling machines and CNC lathes, machine set-up planning, machining of parts and process development. Development of best work practices including safe work habits, building student confidence, and advanced CNC machining skills will be emphasized. This course is designed
for the student who holds an AAS degree in Integrated Manufacturing Technology or equivalent or has significant trade experience.

Prerequisite(s): Program acceptance
Corequisite(s): AMAM-280

**AMAM 290 Advanced Material Machining 3 cr.**
This course emphasizes advanced material machining. Students will study the mechanical, chemical and thermal properties of materials including metals, alloys, ceramics, polymers and composites. Labs will include tooling, fabrication, machining, assembly, quality assurance, and repair of various materials. Development of best work practices including; safe work habits, building student confidence and advanced machining skills will be emphasized. This course is designed for the student who holds an AAS degree in Integrated Manufacturing Technology or equivalent or has significant CNC machining experience.

Prerequisite(s): AMAM-280, AMAM-285
Corequisite(s): none

**AMAM 295 Advanced Workholding 3 cr.**
This course emphasizes workholding systems for machining of advanced materials. Students will explore advanced techniques used to hold high precision components and advanced materials for precision machining to assure quality. Students will evaluate and utilize hydraulic, pneumatic, modular, and manual clamping devices to design, build, and qualify technical workholding fixtures. Students will explore, design, and build a workholding device. This course is designed for the student who holds an AAS degree in Integrated Manufacturing Technology or equivalent or has significant CNC machining experience.

Prerequisite(s): AMAM-280, AMAM-285, AMAM-290
Corequisite(s): none

## *Anthropology Courses (ANTH)*

**ANTH 105 Intro to Cultural Anthropology 3 cr.**
This course explores the diverse ways in which people organize and give meaning to their existence and the social, political and economic contexts in which they do so. We examine how structures of power and social relations over time shape inequalities by studying anthropological methods and perspectives. Our goal is to understand two common components in anthropological inquiry: 1) the ways in which human beings are differentiated, via history, geography, and culture differentiates such as subsistence patterns, kin

relations, and social stratification, and 2) what human beings share across those boundaries.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

## *Art History and Appreciation Courses (ARTH)*

**ARTH 105 Introduction to Visual Art 3 cr.**
The class serves as an introduction to the world of visual art. Through the use of a unique thematic approach we will explore topical threads that cross cultural and historical boundaries, leading from cave drawings to the present. Each class will feature a different inspirational theme: memory, structure, humor, etc.; which will be explored through presentations, readings, writings, field trips, and studio projects in a variety of different media. This course is designed for students with little or no experience in visual arts and is not recommended for students who intend to enroll in the Art Concentration.

Prerequisite(s): none
Corequisite(s): none

**ARTH 125 Visual Art and Society 3 cr.**
This course will explore the many facets where Visual Art and Society collide though lecture, discussion, film and hands-on art making. Topics such as revolution, humanism, dissidents, and public art will be viewed with a global approach through historical and contemporary lenses. Students will develop fundamental art concepts and skills through projects such as creating public art models, photo documentary, and independently guided projects.

Prerequisite(s): none
Corequisite(s): none

**ARTH 135 Documentary Photography 3 cr.**
From the faded black and white photographs of the Civil War battlefield to the digital images on online newspapers and magazines, the stillness of a photograph remains a powerful influence on how we view the world. In this course students will focus on documentary photography, examining the works of photographers who have mastered this fine art of visual storytelling. Through readings, films, slide shows, and fieldwork, students will gain a better understanding of the medium. The class will explore and emulate different areas of social documentary, photo essays, photojournalism, and visual narrative. This course also invites students to question the context, purpose, and point of view of photographs. In addition, this is a hands-on photography class open to students of varying skills. Photographic processes both film and digital will be discussed, but shooting assignments will require a digital camera. Students will learn digital image editing and work on a semester-long photo documentary project: A photo essay of a chosen subject in the community.

Prerequisite(s): none
Corequisite(s): none

**ARTH 145 Survey of Western Art History I 3 cr.**
Survey of Western Art History is a two-semester sequential survey of Western Art History with a concentration on artistic developments in the context of history, culture, and institutions, as well as visual analysis and technical knowledge. On completion of this course, students will have a basic knowledge of the development of Western Art History, be able to identify and discuss broad topics within the history of art, and relate these studies to studio coursework. Part I covers the following topics: Prehistory, Egypt & the Ancient Near East, the Ancient Aegean, Etruscan, Greek & Roman, Early Christian & Byzantine, Early Medieval, Romanesque & Gothic.

Prerequisite(s): none
Corequisite(s): none

**ARTH 155 Survey of Western Art History II 3 cr.**
Survey of Western Art History is a two-semester sequential survey of Western Art History with a concentration on artistic developments in the context of history, culture, and institutions, as well as visual analysis and technical knowledge. On completion of this course, students will have a basic knowledge of the development of Western Art History, be able to identify and discuss broad topics within the history of art, and relate these studies to studio coursework. Part II covers the following topics: Late Gothic, Italian & High Renaissance, Mannerism & Northern Renaissance, Southern Baroque, Northern Baroque, Rococo, Neoclassical, Romanticism, Realism, Impressionism & Post-Impressionism, and Modern & Contemporary Art.

Prerequisite(s): ARTH-145
Corequisite(s): none

**ARTH 215 History of 20th Century Art 3 cr.**
This History of 20th Century Art course is a study and evaluation of the development of Modern Art and Artists. We will trace and uncover the evolution of influences, themes, traditions and contradictions within historical, social, political, technological and religious contexts. Class lectures will include image presentations, movie/film screenings, visiting artists, active discussion, writing exercises, museum and gallery visits. Topics to be covered will include Multimedia, Video Art, Photography, Junk Sculpture, Happenings, Architecture, Installation, Assemblage

and Environments, Social Realism, Pop Art, Op Art, Urban Art, Regionalism, Surrealism, Dada, the Bauhaus, de Stijl, Constructivism, Expressionism, Futurism, Fauvism, Cubism, and more as time allows.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**ARTH 225 World Art 3 cr.**
This survey of Non-Western art and architecture serves as an introduction to the visual cultures of Asia, Oceania, Africa, and Native North and South America. This course will give an overview of the stylistic development and cultural context of the historical artistic production of Non-Western cultures around the world. Themes which unite these various cultures will be discussed, including the ornament of architecture, the importance of visual aids in ceremony and ritual, the creation and use of masks, connection to the landscape, the development of writing methods, and the continuation of art-making traditions. The course will include a focus on those cultures that continue to have some relation on modern and contemporary art history.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**ARTH 235 Contemporary Art Theory and Methods 3 cr.**
This course is an introduction to the critical and philosophical texts of the last century, and the art historical development of contemporary art practice. The course will introduce major theoretical concepts that have shaped and defined Modernism and Postmodernism through readings, written assignments, field trips, and oral presentations. Designed for the further education of art majors, the course will examine contemporary art theory in relation to creative practice.

Prerequisite(s): ENGL-100, ARTH-155
Corequisite(s): none

**ARTH 295 Portfolio Seminar 3 cr.**
In the Portfolio Seminar students work to develop artwork and professional materials that meet their individual goals. In addition to ongoing critiques of student work, the class will focus on the development of professional skills, including photographing artwork, building a web presence, and developing of resumes, artist statements and cover letters. Students will learn to research and apply for exhibitions, artist residencies, grants, and jobs within the art field, and explore contemporary issues in art through readings, discussions, and visits to galleries, museums and studios. The course will also feature guest critiques and lectures by local artists and curators. The seminar culminates with a student exhibition, artist talk, and the presentation of a thesis paper. The Portfolio Seminar is required for graduation from the Art Concentration.

Prerequisite(s): ARTH-145, 155, ARTS-130, 140, 210
Corequisite(s): none

## *Studio Art Courses (ARTS)*

**ARTS 110 Drawing I 3 cr.**
This class will teach the fundamentals of observational drawing, beginning with the basic elements: line, shape, gesture, value and composition, and advancing to the use of non-traditional materials and the origination of creative ideas through class projects, journal-keeping, and looking at art. Field trips to local museums and galleries will enhance the students' ability to put their own studio work in the context of the greater art world. The role of visual art as a tool for communication and expression will be explored.

Prerequisite(s): none
Corequisite(s): none

**ARTS 120 Ceramics I 3 cr.**
This course is an introduction to ceramics class that will give students the basic skills to create work in clay. The students will learn hand building, wheel-throwing and glazing techniques, in addition to learning about the history of clay and the different methods of firing that have evolved over time. This course will be held at Portland Pottery, located at 118 Washington Ave in downtown Portland. Students will be responsible for purchasing a required supply kit consisting of tools and clay. The supplies will be pre-packaged and sold directly to students at Portland Pottery on the first day of class.

Prerequisite(s): none
Corequisite(s): none

**ARTS 129 Drawing on Nature 3 cr.**
Explore the oceanfront grounds of the SMCC campus during its most radiant time of year and take on the artistic challenges that working from nature presents: changing light, weather and tides, capturing movement and change, working quickly from life, completing outdoor works inside, etc. Students will be encouraged to develop a personal means of art-making, such as strict observational realism, expressionism, abstraction or conceptual. A variety of media and working methods will be explored including pencil, ink, watercolor, gouache, mixed media and more. Open to students with some drawing or painting background who are interested in building their confidence and abilities in working from nature.

Prerequisite(s): none
Corequisite(s): none

**ARTS 130 2D Design 3 cr.**
The objective of this class is to examine two-dimensional design as a cornerstone for further studies in art. We live in an increasingly visual world and the elements of design can be found in organic and manufactured structures all around us. Through detailed study of design concepts, presentations, group critiques, field trips and the creation of compositions in cut paper, marker, acrylic paint, colored pencil, collage and ink, we will learn to create artwork that is unified and effective in concept, form and purpose and learn how design principles are practically applied every day, from websites to airplanes to handbags. Students will master the verbal and visual vocabulary essential for success in their chosen field of visual expression.

Prerequisite(s): none
Corequisite(s): none

**ARTS 140 3D Design I: Sculpture Studio 3 cr.**
This course introduces the fundamentals of three-dimensional design and will ask students to construct and question visual relationships. Emphasis will be on developing an understanding of the basic elements of design: line, plane, volume, mass, movement, shape, form, space, value, texture and color. We will look closely at design organizational principles such as proportion, repetition, rhythm, emphasis, balance, symmetry and hierarchy. A range of materials (paper, cardboard, clay, plaster, wire and found object) and processes (constructing, modeling, carving, casting and fabricating) will be utilized to introduce a variety of approaches to 3D problem solving. Students will also be introduced to three-dimensional critical vocabulary where focus will be on communicating ideas and forming distinctions and connections through verbal and written formats. This class is open to all levels and from all departments within the college community.

Prerequisite(s): none
Corequisite(s): none

**ARTS 147 Papermaking: Surface and Structure 3 cr.**
In this introductory studio class, students will learn traditional techniques of basic sheet forming, laminating, watermarking, embedding sheets with both organic and found/industrial patterns, and image making with pulp painting. Students will collect local plant samples as well as prepare and use dried Asian fibers from Japan, Philippines, Thailand, and Nepal to create translucent yet strong sheets of handmade papers for a variety of uses such as drawing surface, printmaking, book arts, collage, and light structures. Students will also be introduced to fibers such as cotton, flax, sisal, and abaca, as well as learn how to transform recycled paper into a vocabulary of handmade sheets and forms. During this course, students will explore several sculptural approaches of working with handmade paper forms that focus on mass and volume without weight. Construction of dimensional sculptural forms will be achieved through the following techniques: paper pulp spraying onto fabric, screening, wire forms, and assembled found object; paper casting into plaster mono molds and ready-made molds to produce multiples and editions, and direct hollow fabrication, Students will learn how to translate a design from clay to plaster and into paper. Papermaking is a full 3 credit course with an intense pace of learning, discovery, exploration, and production. Students will read a variety of handouts on the methods of historic papermaking and contemporary uses. Slide lectures, videos, and samples of contemporary practice will be included, as well as information on setting up a functioning home paper studio. Experienced or beginning students are welcomed.

Prerequisite(s): none
Corequisite(s): none

**ARTS 148 Structural Papermaking 3 cr.**
During this intense week of preparing and producing sheets of Asian fibers for handmade papermaking, students will explore several sculptural approaches of working with handmade paper forms that focus on mass and volume without weight. Construction of dimensional sculptural forms will be achieved through the following techniques: paper pulp spraying onto fabric, screening, wire forms, and assembled found objects create unified "skin" over an armature - pulp spraying can also produce large, thin sheets of textured paper; paper casting into plaster mono molds and ready-made molds produce multiples and editions - students will learn how to translate a design from clay to plaster and into paper; paper fabrication will allow students to work with already dried sheets to construct hollow, dimensional forms. Students will read a variety of handouts on the methods of historic papermaking and contemporary uses. Slide lectures, videos, and samples of contemporary practice will be included as well as information on setting up a functioning home paper studio.

Prerequisite(s): none
Corequisite(s): none

**ARTS 149 Botanical Papermaking 3 cr.**
In this course students will collect local plant samples as well as use and prepare dried Asian fibers from Japan, Philippines, Thailand, and Nepal to create translucent yet strong sheets of handmade papers for a variety of uses such as drawing surface, printmaking, book arts, collage, and light structures. Students will learn traditional techniques of basic sheet forming, producing laminations, embedding sheets with both

organic and found/industrial patterns, and, mixing and using over-beaten pulp slurry as a drawing/painting medium on top of wet handmade papers. Using the beautiful seafront location of our studio classroom, we will make a seaweed paste to create the lines for pulp drawings. Students will have a unique opportunity to work on one large scale handmade paper panel (approximately 5 ft x 5 ft) as well as produce a wide array of mid to small paper sheets. Botanical Papermaking is a full 3 credit course with an intense pace of learning, discovery, exploration, and production. Handouts, slide lectures, films, and lectures on both the history of papermaking and contemporary practice for studio artists and designers. Experienced or beginning students are welcomed.

Prerequisite(s): none
Corequisite(s): none

**ARTS 150 Metal Arts I 3 cr.**
This course is designed to provide a safe outlet for artistic expression using metal as the medium. Basic sheet metalworking, hand tools, bending equipment, cutting equipment and welding power source usage will be studied. Students will utilize the studied art forms to design and build individualized works using primarily mild steel as the medium, and will develop their artistic expression and aesthetic awareness while learning the safe use of metalworking through creative projects.

Prerequisite(s): MATH-020
Corequisite(s): none

**ARTS 160 Printmaking I 3 cr.**
This course will introduce students to a wide variety of approaches to fine art printmaking. Students will explore monoprinting techniques, block printing (including linoleum blocks and woodcuts), collograph and drypoint. Some non-toxic approaches to etching on copper plates may also be included in the class. Students will learn to print by hand and also become skilled in the use of the printing press. Projects will focus on the exploration of visual themes through a series of prints and by creating editions. Visits to local print workshops and exhibitions will enrich the students' studio experience.

Prerequisite(s): none
Corequisite(s): none

**ARTS 170 Photography I 3 cr.**
This class will introduce and explore the technical, historical, and contemporary concerns of photography as a form of artistic expression. Much of the work will be done in the digital environment, but projects will include other forms of making photographs. Students will gain a working knowledge of Adobe Photoshop as it relates to more traditional modes of image making. The central goal of the class is for students to learn and expand the vocabulary and grammar of the medium and find their own way of using it creatively to express original visual ideas and unique perspectives. Discussions will focus on gaining an understanding of the contemporary and historical contexts from which we work. Class time will be devoted to lectures, demonstrations, critiques, slide talks, and visits to galleries and museums. Students should have their own camera or access to a camera for the duration of the course.

Prerequisite(s): none
Corequisite(s): none

**ARTS 179 Alternative Photographic Processes 3 cr.**
Focusing on historical and alternative (pre-digital) forms of photography, this class will explore the historic arc of picture making from the birth of the medium to digital intervention. Students will be exposed to the plastic camera, the pinhole camera, black and white film processing, and historic printing processes like the Cyanotype, Gum Bichromate and the Kallitype. Emphasis will be placed on using these historic photographic tools to create emergent physical forms of photographic and student expression. Students will be encouraged to combine and move between individual photographic processes and presentation, and to work together as individuals and collectives. There are no prerequisites for this class, however students must be willing to actively build and create.

Prerequisite(s): none
Corequisite(s): none

**ARTS 180 Painting I 3 cr.**
This introduction to painting is designed for both beginners and more experienced painters. Using water-based oils and acrylic paints, the class will lead students through the basics of color theory, color mixing and paint application on a variety of surfaces. There will be a focus on creative approaches to observational work, using studio set-ups and the rich natural environment around SMCC. Class trips to Portland will introduce students to the resources of galleries and museums as well as the private studios of practicing artists.

Prerequisite(s): none
Corequisite(s): none

**ARTS 189 Watercolor 3 cr.**
The objective of this class is to use watercolors to paint from nature, gaining mastery of the technique and exploring the environment. Costal Maine has been an influential landscape for artists throughout the past century: John Marin, Marsden Hartley, Rockwell Kent, Fairfield Porter, and many others found it an inspiring

place to investigate modern painting, and watercolor was the medium that allowed them the freedom to explore. Southern Maine Community College's coastal location will allow us to follow this tradition as we learn how to use watercolor outdoors to paint from observation. Students will learn skills needed to paint in watercolor, such as paper preparation, lifting color, and optical color mixing, and the emphasis will be on engagement with the surrounding environment and a willingness to experiment. Work will take place in the Art Studio and outdoors around the SMCC campus. A field trip to Peaks Island will allow for further exploration, and a second field trip to the Portland Museum of Art and local galleries will provide students with examples of other artists' reactions to the Maine environment.

Prerequisite(s): none
Corequisite(s): none

**ARTS 190 Illustration 3 cr.**
This course is an exploration of the relationship between pictures and words, balancing an emphasis on concept and individual expression with the development of skills in a variety of wet and dry art media. Students will complete projects that address the many different usages of illustration: editorial, book, advertising, product and sequential art. Demonstrations, discussions and critiques on the creative process, professional development and individual style will be led by the instructor, guest artists and students.

Prerequisite(s): none
Corequisite(s): none

**ARTS 210 Drawing II 3 cr.**
This class explores in greater depth the concepts and techniques covered in introductory drawing courses. Students will further develop their observational drawing skills and will work towards developing personal means of expression through expressionistic and conceptual drawing exercises. A significant amount of time is devoted to working from live models. A broad range of drawing materials including mixed-media will be utilized. Time will be spent preparing a well organized and presented portfolio.

Prerequisite(s): ARTS-110
Corequisite(s): none

**ARTS 220 Photography II 3 cr.**
Photography II builds on the techniques and content delivered in Photo I. Students will gain a deeper understanding of the mediums ability to describe and their own forms of personal expression through individually developed projects, and an expanded understanding of the varying photographic tools including; plastic cameras, pinhole cameras, 35 mm cameras, digital cameras, medium format cameras, large format 4x5 cameras, color negatives, black and white negatives, scanning, and Inkjet printing. Students will produce a variety completed projects in multiple forms including, published books, web based portfolios, and Inkjet prints. Class time will explore the class material through lectures, demonstrations, critiques, lab time, visits to galleries, museums, artist studio's and places of photographic interest. Students should have their own camera or access to a camera for the duration of the course.

Prerequisite(s): ARTS-170
Corequisite(s): none

**ARTS 230 Painting II 3 cr.**
This course builds on the skills and techniques explored in Painting I, with a stronger focus on creative approaches to figurative painting and individual expression. Using water-based oils and acrylic paints, the class will lead students to explore advanced color theory, color mixing and paint application on a variety of surfaces. Class trips to Portland will introduce students to the resources of galleries and museums as well as the private studios of practicing artists. Out of class work will be expected.

Prerequisite(s): ARTS-180
Corequisite(s): none

**ARTS 240 3D Design II: Sculpture Studio 3 cr.**
This course will continue the visual and conceptual investigations introduced in 3D I: Sculpture Studio, with a focus on expanding and redefining a student's ideas and experiences of art making. Students will work on idea generation and development which will move from varying states in the design process: definition of the visual problem, search (brainstorming, multiple sketching, association), selection of materials and techniques, execution (production and fabrication), and evaluation. Students will use a range of materials including clay, plaster, wire, cement, earth, paper, mixed media, found object and wood. Fabrication methods may include mold making, casting, fiber techniques of coiling and wrapping, carving, and additive work.

Prerequisite(s): ARTS-140
Corequisite(s): none

**ARTS 250 Metal Arts II 3 cr.**
This course will explore visual and conceptual aspects of sculpture through the use of steel. A series of structured and independent assignments, material demonstrations, lecture, and critique will enable students to investigate the potential for this media to offer a wide range of prospects in terms of context

(object, installation, and environment) to support the content of their work. Students are expected to integrate this knowledge with their subjective concerns in order to further the depth and understanding of their studio practice. The content and physical nature of the work will be self-directed; however, there will be a series of technical assignments that build on the knowledge gained through ARTS 155.

Prerequisite(s): ARTS-150
Corequisite(s): none

**ARTS 260 Printmaking II 3 cr.**
This course will expand on topics introduced in Printmaking I. In addition to basic techniques such as collograph, monotype and the relief print, students will investigate woodblock printing and etching on copper plates. The focus will be on creating larger work and extended series of prints as well as printing on non-traditional surfaces. Students will refine their presentation skills through exhibitions of their prints. Out of class work will be expected.

Prerequisite(s): ARTS-160
Corequisite(s): none

**ARTS 270 Ceramics II 3 cr.**
In this intermediate ceramics class students will continue to build on their vocabulary of ceramic techniques, methods and materials to create both sculptural objects and utilitarian vessels. Students begin to learn to fire the kiln and learn some of the technical basics of clay and glazes. Emphasis will be placed on personal aesthetic problem solving and successful design implementation, along with a focus on contemporary and historical ceramics.

Students will need their Ceramics I supply kit and will be responsible for purchasing clay and additional tools. The supplies will be pre-packaged and sold directly to students at Portland Pottery on the first day of class.

Prerequisite(s): ARTS 120
Corequisite(s): None

**ARTS 290 Advanced Studio Projects 3 cr.**
In this course students embark on an individualized studio exploration in an artistic medium of their choice. After the initial creation of a project plan that outlines goals and methods of evaluation for the semester, students work closely with the instructor to create an advanced body of artwork, culminating in a final faculty critique and written self-evaluation.

Prerequisite(s): Department Chair Permission
Corequisite(s): none

## *Automotive Courses (AUTO)*

**AUTO 105 Auto Maintenance & Light Repair 3 cr.**
This introductory prerequisite course will introduce students to workplace safety in the automotive shop. Safety topics will include shop hazards such as fire, airborne gases, blood borne pathogens, and chemical hazards. Equipment instruction will include the safe operation of an automotive lift and an introduction to oxygen-acetylene torches, among other shop equipment. Students will be introduced to the basics of identifying failures on the automobile and how to perform basic maintenance. Students will research vehicle information utilizing electronic technical information to determine the correct service procedures and specifications.

Prerequisite(s): Automotive program acceptance, MATH-020
Corequisite(s): none

**AUTO 106 Clean Air & Energy Independence 1 cr.**
This course will introduce students to eight alternative fuels and advanced technology vehicles. Topics include each fuel's source and its use in transportation, the basic scientific principles behind each type of vehicle and its components, advantages and disadvantages of each fuel and vehicle including performance issues, and infrastructure requirements of each fuel and vehicle type. This course will consider how well each alternative helps achieve the goals of cleaner air and energy independence for the United States. Students will examine the availability of the fuels, the vehicles and service for the vehicles.

Prerequisite(s): none
Corequisite(s): none

**AUTO 110 Steering and Suspension 3 cr.**
This course is the study of the steering and suspension systems of modern vehicles, with practical experience in analyzing problems and replacement of worn parts. Included will be the study of front and rear wheel alignment and wheel balance. Students will inspect and diagnose steering and suspension systems to determine necessary actions. Students will apply critical judgment to determine effective diagnostic procedures based on available vehicle data and service information.

Prerequisite(s): Automotive program acceptance
Corequisite(s): AUTO-205

**AUTO 115 Automotive Brake Systems 4 cr.**
This course teaches the theory, diagnosis, and repair of hydraulic, mechanical, vacuum, and electronic systems of automobile brakes Students will check hydraulic components for internal and external leaks

and determine necessary action; measure and adjust brake pedal height and parking brake linkage; and conduct drum brake and disc brake diagnosis and repair. Students will also inspect and test power booster and anti-lock brake system (ABS) components and determine necessary action.

Prerequisite(s): none
Corequisite(s): AUTO-205

**AUTO 125 Maine State Inspection Exam Prep 1 cr.**
This elective course is a study of the Maine motor vehicle safety inspection standards and the law. This course will prepare students to sit for the exam with the Maine State Police and become a licensed Maine Motor Vehicle Safety Inspection technician, Class A and E. This course will focus on the responsibilities of the inspection technician, correctly performing a safety inspection, as well as interpretation and presentation of the law from the Maine State Inspection Manual. Students must pay the applicable fee and complete an application to the Maine State Police at the beginning of the semester to be eligible to sit for the exam at the end of the course and receive the manual utilized in the course. See automotive faculty for a current application.

Prerequisite(s): Automotive program acceptance
Corequisite(s): none

**AUTO 155 Electricity and Electronics 4 cr.**
This course will introduce the fundamentals of electrical/electronics theory. Students will learn the fundamentals of electricity including the study of voltage, amperage, resistance, wattage and Ohm's Law. Students will understand the fundamentals of an electrical circuit, common failures and diagnostic procedures, as well as how to determine the appropriate corrective actions while utilizing a digital volt Ohm meter. Additionally, students will learn the basics of starting and charging systems as well as how to utilize a wiring diagram.

Prerequisite(s): none
Corequisite(s): AUTO-105 or HEOP-100

**AUTO 160 Automotive Business Operations 3 cr.**
This course introduces students to basic business operations, such as business plan writing and finance, managing materials and supplies, OSHA regulations, human resources, payroll, cash flow, and risk management issues. Case studies and simulation activities may be included.

Prerequisite(s): none
Corequisite(s): none

**AUTO 170 Automotive HVAC 3 cr.**
This course is an examination of automotive heating, ventilation, and air conditioning systems, with a focus on identification of malfunctioning parts and the repair of these systems. Students will diagnose the heating and air conditioning system and determine necessary action for unusual operating noises and inoperative conditions. Students will diagnose temperature control problems and failures in the electrical controls of heating, ventilation, and air conditioning systems and determine necessary action.

Prerequisite(s): AUTO-205 or HEMA acceptance
Corequisite(s): none

**AUTO 174 Advanced Level Lab 3 cr.**
The advanced level lab provides the student with an alternative track to the internship. The lab will allow students to develop additional skills or fine tune skills studied in previous courses. Students may elect this course in lieu of AUTO-175, Cooperative Education.

Prerequisite(s): AUTO-110, AUTO-115, AUTO-205
Corequisite(s): none

**AUTO 175 Cooperative Education 3 cr.**
Cooperative Education Placement is on-the-job training, providing the student with a work experience in the areas of preventative maintenance; steering and suspension; brakes; heating, ventilation and air conditioning; or related field of specific interest to the student. Students will function as part of a team in an automotive repair facility and will assist in the inspection, diagnosis, and repair of faulty parts. The student is primarily responsible to the employer for the various work responsibilities established, and is also responsible to the course instructor to complete the internship requirements.

Prerequisite(s): AUTO-110, AUTO-115, AUTO-155, AUTO-170
Corequisite(s): MATH-125

**AUTO 176 Externship/Cooperative Education 3 cr.**
This course involves job shadowing, providing the student with exposure to work as an automotive technician in a repair facility. The externship will expose students to concepts studied in previous courses. Students will interact with a mentor who performs inspections, maintenance, diagnosis, and repair of vehicles. The students I primarily responsible to the employer for the various responsibilities established, and is also responsible to the course instructor to complete the externship requirements.

Prerequisite(s): AUTO-110, AUTO-115, AUTO-205
Corequisite(s): none

**AUTO 205 Electricity and Electronics II 4 cr.**
The second of two courses, this course examines the electrical and electronic systems of automobiles. Students will study inputs, outputs and processors of electronic systems. Students will diagnose starting, charging and ignition systems, and remove and install starters and generators. Students will also diagnose incorrect operation of chassis and body electrical and electronic systems and determine necessary actions.

Prerequisite(s): AUTO-105, AUTO-155
Corequisite(s): none

**AUTO 210 Engine Repair 4 cr.**
This course will introduce the theory, operation and repair of the four stroke gasoline. Students will perform compression tests, cylinder leakage tests and vacuum tests to identify failed areas of the engine and required service procedures. Students will disassemble engines and identify internal components and their function within the engine. Students will learn to make measurements of bearing journals, cylinder bores, pistons, camshafts and other internal components necessary to determine failures and the appropriate repair and service procedures.
Prerequisite(s): none
Corequisite(s): AUTO-255

**AUTO 215 Manual Transmissions & Drivelines 4 cr.**
This course will cover manual drive train and axles theory, diagnosis and repair. Students will learn to remove and reinstall transmission/transaxles. Students will inspect and repair manual transmission systems, inspect and reinstall power train, and perform clutch diagnosis and repair. Students will apply critical thinking skills, utilizing service information, to diagnose problems with transaxles, clutches, and drive shafts and determine necessary corrective action.

Prerequisite(s): AUTO-105
Corequisite(s): none

**AUTO 255 Advanced Automotive Diagnostics 4 cr.**
The second of two courses, this course is a comprehensive overview of automotive electronic fuel injection systems and vehicle emission systems. Students will learn to utilize proper diagnostic procedures and determine appropriate corrective procedures to repair, replace or install components that cause poor engine performance. Students will be introduced to emission controls, their purpose on OBDII engines and their effect on engine performance when they are not operating properly.

Prerequisite(s): AUTO-210
Corequisite(s): none

**AUTO 260 Engine Performance I 4 cr.**
The first of two courses in automotive engine performance, this course is the study of mechanical engine performance and ignition systems. Students will learn to utilize proper diagnostic procedures and determine appropriate corrective procedures to repair, replace or install components that cause poor engine performance. Students will be introduced to ignition components and controls and their effect on engine performance when they are not operating properly.

Prerequisite(s): AUTO-205
Corequisite(s): AUTO-210

**AUTO 265 Auto Transmissions & Transaxle 4 cr.**
This course will cover automatic transmission theory, diagnosis, and repair Students will perform full in-vehicle and off-vehicle transmission inspection and apply critical thinking skills, utilizing service information, to diagnose problems and determine necessary corrective action. Students will disassemble an automatic transaxle, inspect for failed parts and rebuild transaxle to operating condition.

Prerequisite(s): AUTO-205, AUTO-215
Corequisite(s): none

**AUTO 270 Engine Performance II 4 cr.**
The second of two courses, this course is a comprehensive overview of automotive electronic fuel injection systems and vehicle emission systems. Students will learn to utilize proper diagnostic procedures and determine appropriate corrective procedures to repair, replace, or install components that cause poor engine performance. Students will be introduced to emission controls, their purpose on OBDII engines and their effect on engine performance when they are not operating properly.

Prerequisite(s): AUTO-255
Corequisite(s): none

## *Behavioral Health and Human Service Courses (BHHS)*

**BHHS 100 Intro to Human Services 3 cr.**
This course offers a broad overview of the human service field. Topics of study include the history of human services, theoretical approaches to human service work, human service systems, ethics, and future trends. The course provides a well-rounded look at the many career options available in human services and discusses the challenges that human-service workers face in day-to-day work.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**BHHS 102 Personal Growth and Development 3 cr.**
A comprehensive course that integrates personal growth and self-understanding with personal and professional choices, this course will cover self-advocacy and positive communication skills; assessing assumptions, biases, and what we take personally; evaluating our individual and societal values and ethical standards; considering our personal family history and its impact on us; and appraising our cross cultural competence. Emphasis is placed on self-knowledge, its value and effect on our lives.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**BHHS 105 Crisis Intervention 3 cr.**
This course provides an introduction to observing and analyzing behavioral symptoms in persons with behavioral health disabilities Emphasis is placed on recognizing common behavioral elements and in utilizing interventions appropriate to specific situations. Diagnostics, behavioral management approaches, crisis intervention methods, and links between analysis and intervention will be presented. The course is taught in three modules: a) observation, analysis, assessment; b) management and modification of behavior; c) crisis management, intervention and safety. Note: This course meets the MHRT/Community Requirement - Crisis Identification and Resolution.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**BHHS 110 Psychosocial Rehabilitation 3 cr.**
This course will examine a coherent model of psychosocial rehabilitation (PSR) as a core organizing principle of all behavioral health care. The core philosophy and values of PSR and their application in essential client services is examined. The experience of disability and recovery are emphasized. The key processes of PSR are explored conceptually and experientially. The application of PSR within the behavioral health care system is examined. Note: This course meets the MHRT/Community Requirement - Psychosocial Rehabilitation.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**BHHS 150 Special & Diverse Populations 3 cr.**
This course will address behavioral symptoms in various special populations and the care, treatment, and rehabilitation approaches relevant to each Beyond a general introduction to various groups served, students will become familiar with several populations with special care and rehabilitation needs. The course will also focus on the unique care environments created to respond to the behavioral health needs of these various groups. Note: This course meets the MHRT/Community requirement - Cultural and Diversity Awareness.
Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**BHHS 170 Behavioral Health/Early Childhood 3 cr.**
This course (offered jointly with the Early Childhood Education Department) is intended to provide childcare providers and other early childhood professionals with an introduction to the principles and practices of behavioral health for young children Course content is presented in three modules. Module One: Perspectives on the Behavioral Health of Young Children. Module Two: Promoting Healthy Emotional and Social Development. Module Three: Children with Challenging Behaviors - Assessment and Intervention.
Prerequisite(s): BHHS-100
Corequisite(s): none

**BHHS 175 Behavioral Health and Aging 3 cr.**
This course provides an overview of the physical and psychosocial aspects of the typical and atypical aging process Special populations, various systems of care, the role of the public sector, and the role of advocacy are also covered. Note: This course meets the MHRT/Community Requirement - Mental Health and Aging.

Prerequisite(s): BHHS-100
Corequisite(s): none

**BHHS 215 Death and Dying 3 cr.**
This course will focus on the questions rooted at the center of the human experience and also increase the students' knowledge of death and dying in the positive framework of viewing death as a celebration of life Readings and course content will combine many diverse points of view from the sociological, emotional, individual, experiential and scholarly to provide a balanced perspective on said topic. The course will include, but is not limited to, the following topics: trends and patterns in death and dying, including historical perspectives, death in popular culture, medical technology and dying, the dying patient's perspective, and ethical dilemmas.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**BHHS 220 Interviewing and Counseling 3 cr.**
This course introduces students to the fundamentals of interviewing and counseling through a combination of reading, experiential exercises, presentations, and lecture Students will learn basic counseling skills, while obtaining a conceptual framework for understanding the process of counseling. The emphasis is on building

basic skills (i.e., fundamentals of interviewing, communication and relationship building) while exploring helping theory and its application to special populations. Note: This course meets the MHRT/Community Requirement - Interviewing and Counseling.

Prerequisite(s): BHHS-100
Corequisite(s): none

**BHHS 225 Direct Service Practicum I 3 cr.**
This practicum course is required for all students matriculated in the associates degree program It is designed to give students a structured experience in the field of human services through field work in a local organization. As part of the practicum experience, students will examine their own interests and preferences, learn how to use supervision effectively, and familiarize themselves with their host organization.

Prerequisite(s): BHHS-100, BHHS-105, BHHS-150
Corequisite(s): none

**BHHS 230 Substance Abuse 3 cr.**
This course provides students with an introduction to the delivery of substance abuse services to various populations It reviews the physical, psychological, and social impact of substance abuse as well as the strategies used to care for various populations. Note: This course meets the MHRT/Community Requirement - Substance Abuse.

Prerequisite(s): BHHS-100
Corequisite(s): none

**BHHS 250 Addictions Counseling 3 cr.**
This course provides students with an overview of the knowledge, skills, and attitudes of professional practice in addictions counseling Students will integrate theory with practice and develop specific skills necessary to become an effective addiction counselor.

Prerequisite(s): BHHS-230
Corequisite(s): ENGL-100

**BHHS 255 Co-Occurring Disorders 3 cr.**
This course provides students with an introduction to the delivery of co-occurring mental health and substance abuse services to various populations It reviews relevant models, organizational structures and practice implications for providing effective co-occurring services. The course is designed to heighten students' awareness of the impact that co-occurring disorders have on individuals' lives and on the systems and approaches designed to provide needed services.

Prerequisite(s): BHHS-230, ENGL-100
Corequisite(s): none

**BHHS 260 Group Process 3 cr.**
This course introduces students to the basics concepts of group dynamics and group work in the human service field Students will study such topics as leadership, group dynamics, group theory, ethics, diversity in groups, and group development. Note: This course meets one the MHRT Community Requirement - Group process.

Prerequisite(s): BHHS-100
Corequisite(s): none

**BHHS 265 Trauma, Sexual Abuse, & Recovery 3 cr.**
This course introduces students to the fundamentals of child sexual abuse and Traumatic Stress Disorders: Post Traumatic Stress Disorder (PTSD) and Acute Stress Disorder (ASD) through a combination of reading, experiential/small group exercises, presentations, and lecture Students will learn basic concepts of a trauma theory, Constructivist Self Development Theory (CSDT), the signs and symptoms of PTSD/ASD, and how traumatic events affect an individual's thoughts and behaviors. The emphasis is on developing basic knowledge (i.e., fundamentals of how trauma affects an individual, signs and symptoms of trauma reactions, appropriate level treatment options and self-care techniques for the client and worker). Application to special populations will be explored. Note: This course meets the MHRT/Community Requirement - Trauma, Sexual Abuse, and Recovery.

Prerequisite(s): BHHS-100
Corequisite(s): none

**BHHS 270 Case Management 3 cr.**
This course introduces students to the fundamentals of case management practice Students will review different models of case management and learn about common case management functions such as outreach, engagement, assessment, planning, accessing resources, coordination, and disengagement. Note: This course meets the MHRT/Community Requirement - Case Management.

Prerequisite(s): BHHS-100
Corequisite(s): none

**BHHS 275 Direct Service Practicum II 3 cr.**
This practicum course is required for all students matriculated in the associate degree program It is designed to build upon a student's earlier field experiences through more advanced work in a local human service organization.

Prerequisite(s): BHHS-225
Corequisite(s): none

## *Biology Courses (BIOL)*

**BIOL 100 Biology & Lab for Non-Majors 4 cr.**
This lab science course provides a survey of the domains and kingdoms of bacteria, archaea, protists, plants, animals and fungi and the basic principles and unifying concepts of biology for non-majors. Major topics are basic chemistry, cell biology, metabolism, and genetics, with evolution as the unifying theme. The laboratory component emphasizes the application of scientific methodology to the study of the natural world with hands-on and interactive activities. Students consider how biology impacts their personal life and community.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): MATH-050

**BIOL 105 Human Biology 4 cr.**
This introductory course is available to any student needing a lab-science class. The course will cover basic body anatomical structures and functions. A body system approach will be used beginning with organizational structure, and continuing through each of the eleven human organ systems. All major topics will be supported by appropriate laboratory activities. It should be noted that this class is NOT a substitute for Anatomy & Physiology I & II.

Prerequisite(s): none
Corequisite(s): none

**BIOL 110 Introduction to Biotechnology 4 cr.**
This is an introductory science class designed to introduce biology majors and non-majors to the field of biotechnology. Biotechnology is a discipline generally based on recent advances in the field of recombinant DNA technology. It may be defined as any technology that uses living organisms or parts of organisms to make or modify products. This definition opens up the field to many thousands of years of human experimentation from wine and cheese making, to animal and plant breeding programs. The course will emphasize the applications of the various technologies including molecular genetics, microbiology, immunology, and cell biology in human society. Laboratory work, outside speakers, and field trips will be used to supplement lecture presentations. Examples of Biotech projects and companies in the State of Maine will be emphasized.

Prerequisite(s): MATH-020
Corequisite(s): none

**BIOL 115 Botany 4 cr.**
This is an introductory course designed to introduce students to the structures and functions of plants and the science of plant systems. Course content provides lecture and laboratory topics in plant anatomy, morphology, and physiology, as well as the history of plant science. The objective of the course is to provide students with the fundamentals of plant biology, ecology, and taxonomy that will foster greater confidence and success identifying, growing and maintaining plants.

Prerequisite(s): none
Corequisite(s): none

**BIOL 120 Biology I 3 cr.**
This is the first semester lecture of a two-semester Biology sequence intended for biology/science majors or students looking to transfer laboratory science credits. Biology I lecture concentrates on the molecular aspects of biology, cell structure and function, homeostasis, energy transformations, and genetics.

Prerequisite(s): ENGL-050, ENGL-075, MATH-050
Corequisite(s): BIOL-121

**BIOL 121 Biology I Lab 1 cr.**
This is the first semester laboratory of a two-semester Biology sequence intended for biology/science majors or students looking to transfer laboratory science credits This laboratory component is intended to provide students with experiential learning in support of concepts and principles introduced in the lecture class.

Prerequisite(s): ENGL-050, ENGL-075, MATH-050
Corequisite(s): BIOL-120

**BIOL 125 Biology II 3 cr.**
This is the second semester lecture of a two-semester Biology sequence intended for biology/science majors or students looking to transfer laboratory science credits Biology II lecture concentrates on living organisms at structural levels above the molecular and cellular levels addressed in Biology I. Specific topics include taxonomy and the principles of biological diversity, evolution, and ecology.

Prerequisite(s): BIOL-120
Corequisite(s): BIOL-126

**BIOL 126 Biology II Lab 1 cr.**
This is the second semester laboratory of a two-semester Biology sequence intended for biology/science majors or students looking to transfer laboratory science credits This laboratory component is intended to provide students with experiential learning in support of concepts and principles introduced in the lecture class.

Prerequisite(s): BIOL-121
Corequisite(s): BIOL-125

**BIOL 127 Biology II Lab – Viral Genomics 2 cr.**
This course is the laboratory portion of BIOL-125 and should be taken concurrently. This is the second semester of a two semester series in viral genomics, beginning with BIOL 120/122 Biology I and Lab—Genome Research. Students in this course will annotate the DNA sequence they prepared in the first semester. Students will use genomics software to align DNA sequences, identify genes, and determine the function of proteins coded for by the genes.
This course is being run in cooperation with the Howard Hughes Medical Institute Science Education Alliance and the University of Pittsburgh.

This class fulfills the requirement of the standard section of BIOL-126. However, BIOL-127 is a 2 credit class that meets twice a week instead of the standard section of BIOL-126 which meets once a week and where students earn 1 credit.

Prerequisite(s): BIOL-120, BIOL-122
Corequisite(s): BIOL-125

**BIOL 130 Anatomy & Physiology I 3 cr.**
This course is designed for first-year students preparing for a career in the medical field. Fundamental concepts will be introduced, and the course will focus on the tissues, integument, skeleton, joints, muscle, and nervous system of the human body. It is strongly recommended that students taking this course have recently finished a biology course.

Prerequisite(s): BIOL-131
Corequisite(s): none

**BIOL 131 Anatomy & Physiology I Lab 1 cr.**
This laboratory course uses models, prepared microscope slides and preserved specimens to complement the lecture in Anatomy & Physiology (BIOL-130). The focus will be on human tissues, integument, skeleton, joints, muscles and nervous system.

Prerequisite(s): BIOL-130
Corequisite(s): none

**BIOL 132 Anatomy & Physiology I & Lab 4 cr.**
This four-credit lecture/lab course is designed for first-year students preparing for a career in the medical field. Emphasis will be on anatomical terminology, fundamental biochemistry, and structure and function of the following components of the human body: cells, tissues, integument, skeleton, joints, muscles, and nervous system. The laboratory portion of the course complements and reinforces the lecture through the use of additional resources, focusing on closer examination of the body's components. Students who have not passed a college biology course are strongly encouraged to take BIOL-100 General Biology or BIOL-105 Human Biology before attempting BIOL-132.

Prerequisite(s): MATH-050
Corequisite(s): ENGL-100

**BIOL 135 Anatomy & Physiology II 3 cr.**
This course is a continuation of BIO-130, building on many of the fundamentals. Emphasis will be on the nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary, and reproductive systems of the human body.

Prerequisite(s): BIOL-136
Corequisite(s): none

**BIOL 136 Anatomy and Physiology II Lab 1 cr.**
Laboratory work in this course is devoted to studying the many systems discussed in Anatomy & Physiology II (BIOL-135): nervous II, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary, and reproductive.

Prerequisite(s): BIOL-135
Corequisite(s): none

**BIOL 138 Anatomy and Physiology II & Lab 4 cr.**
This four-credit lecture/lab course is a continuation of BIOL 132, building on many of the fundamentals. Emphasis will be on the structure and function of the following organ systems in the human body: nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary, and reproductive. The laboratory portion complements and reinforces the lecture, focusing on closer examination of these system structures via live and virtual dissection, and demonstration of their functions via simple testing. Anatomical models, prepared microscope slides, and online resources may also be incorporated.

Prerequisite(s): BIOL-132
Corequisite(s): None

**BIOL 190 Natural History of Casco Bay 4 cr.**
This course brings together the various disciplines of biology, botany, zoology, ecology, geology, hydrology, and oceanography to study the biodiversity of the Casco Bay area Students will gain field and laboratory experience as naturalists in the identification, taxonomy and natural history of selected plants, animals, fungi and ecosystems common in this bioregion. Ecological relationships are explored, and concepts such as evolution are examined. The importance of appreciating and conserving our local biodiversity is emphasized.

Prerequisite(s): MATH-020
Corequisite(s): none

**BIOL 209 Genetics Short Course 1 cr.**
This is a hands-on laboratory course in molecular biology, focusing experimental procedures including RNA and DNA extraction, Polymerase Chain Reaction and DNA sequencing. The curriculum will mix intensive, hands-on laboratory work with several informal seminars. This course is funded by the INBRE (IDeA Networks of Biomedical Research Excellence) grant that SMCC has received from the NIH (National Institute of Health) to promote the Biomedical Research capacity for the State of Maine.

Prerequisite(s): Instructor approval
Corequisite(s): none

**BIOL 212 Genetics & Lab 4 cr.**
The two major branches of genetics, molecular and classical genetics, are studied in detail. The first half of this course focuses on studying structure and function of genes at the molecular level, including discussions on recombinant DNA and DNA analysis techniques. Classical, or Mendelian, genetics encompasses the second half of the course and centers on transmission of traits from one generation to the next. Other topics include transposable elements, bacterial and viral genetics. The laboratory experiments are designed to provide students with hands-on activities to further elucidate the concepts discussed in lecture. Additionally, field trips to local research institutions and biotechnology companies will be scheduled during lab time.

Prerequisite(s): BIOL-120, BIOL-121
Corequisite(s): none

**BIOL 235 Pathophysiology 3 cr.**
This course is designed to provide the student with an introduction to the study of disease, both congenital and acquired. Emphasis is placed on the alteration of normal physiology in the presence of disease processes to include signs and systems as well as physical consequences and laboratory findings.

Prerequisite(s): BIOL-135, BIOL-136
Corequisite(s): none

**BIOL 250 Microbiology 5 cr.**
This course studies the principles and techniques utilized in microbiology. Consideration will be given to microbial structure, growth, physiology and the reaction of microorganisms to their physical, chemical and biological environment. Laboratory emphasis will be placed on development of proper laboratory techniques and the identification of microorganisms.

Prerequisite(s): BIOL-100 or BIOL 120/121 or BIOL 130/131
Corequisite(s): none

**BIOL 255 Cell Biology 3 cr.**
Students will develop an understanding of how eukaryotic cells function, along with an appreciation of the experimental approaches that are behind this knowledge. The course will focus on cell architecture, the structure and function of proteins, genetics and molecular biology, biomembranes, transport across cell membranes, the integration of cells into tissues, control of transcription, and signaling pathways. Critical reading and discussion of journal articles is introduced in the course. Methods in molecular and cellular biology are also introduced.
Prerequisite(s): BIOL-100, BIOL-120
Corequisite(s): none

**BIOL 275 Biotechnology Internship 2 cr.**
This course is an opportunity for students to work in a professional laboratory setting. This work-based learning will enhance students' abilities well beyond the scope or capabilities of the academic program at SMCC and will provide students with valuable real life experience and the opportunity to refine career objectives. The student is primarily responsible to the employer for the various work responsibilities established and is also responsible to the course instructor to complete specific academic requirements. This course may be repeated for credit.

Prerequisite(s): BIOL-125, BIOL-126, BIOL250
Corequisite(s): none

## *Marine Biology Courses (BIOM)*

**BIOM 110 Marine Biology 3 cr.**
This course is designed for students needing an introductory college level science class. In order that the student gain an understanding of the environment that the biology inhabits, the course begins with a brief overview of basic physical, chemical and geologic oceanography. A discussion of major phyla in each of the kingdoms that live in the sea will include taxonomy, evolution, ecology, as well as, where appropriate, concerns relating to future survival/extinction of groups under consideration. Laboratory exercises are designed to give a "hands-on" opportunity to further enhance students' appreciation of the incredible diversity of sea life.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s): BIOM-111

**BIOM 111 Marine Biology Lab 1 cr.**
Laboratory exercises are designed to give a "hands-on" opportunity to further enhance students' appreciation of the incredible diversity of life in the sea.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s): BIOM-110

**BIOM 170 Invertebrate Zoology 5 cr.**
This course will familiarize students with invertebrate life of the sea. Emphasis will be placed on natural history, taxonomy, identification, anatomy and ecological relationships. Wherever possible, local specimens will be used in the laboratory.

Prerequisite(s): BIOL-100 or BIOL-120 and BIOL-121
Corequisite(s): none

**BIOM 180 Marine Botany 4 cr.**
This course is designed to introduce students to major groups of marine algae that are found along the North Atlantic shore. Emphasis will be placed on the methods of study, taxonomy, morphology, zonation, and physiology of principal groups of algae.

Prerequisite(s): BIOL-100 or BIOL-120 and BIOL-121
Corequisite(s): none

**BIOM 255 Ecology 4 cr.**
This course covers the basic principles of general ecology: the physical environment, populations, communities, ecosystems, and global issues. Fundamentals of the scientific method, the impact of limiting factors, biogeochemical cycles, and the significance of human activity will also be stressed. Sampling techniques are described and practiced during the laboratory.

Prerequisite(s): BIOL-100 or BIOL-125 and BIOL-126
Corequisite(s): none

**BIOM 265 Fishery Science 4 cr.**
This course covers the taxonomy and life history of important families of fishes, aspects of anatomy and physiology that are unique to the fishes, fish culture and topics in fisheries management. There is a strong field component to this course. Field trips will include beach seining and fisheries surveys aboard a vessel in Casco Bay.
Prerequisite(s): BIOL-100
Corequisite(s): none

**BIOM 290 Biological Research Practicum 4 cr.**
This course is designed to be a capstone course for students in Applied Marine Biology & Oceanography and Liberal Studies with a Biological Concentration. The course teaches students how to carry out a scientific investigation. Topics include writing a proposal, researching the scientific literature, designing and conducting an experiment, analyzing data and reporting the result. Projects are conducted at SMCC's Aquaculture lab and often investigate reproductive cycles of aquatic organisms. This course has been designated as a writing-intensive course.

Prerequisite(s): BIOL-100, ENGL-100
Corequisite(s): none

## *Business Courses (BUSN)*

**BUSN 100 Introduction to Business 3 cr.**
A rigorous examination of the key decisions that business organizations face, with particular emphasis on the role that technology and society play when making those decisions. Students examine numerous situations involving products, processes, ethics, teamwork, and markets to familiarize themselves with the choices that face business owners and their employees. A short entrepreneurial, product-design project and longer negotiation module are included.

Prerequisite(s): MATH-020
Corequisite(s): none

**BUSN 115 Personal Finance 3 cr.**
This course helps students to overcome difficulties with managing personal finances Foremost emphasis is placed on methods of measuring and evaluating expenditures with a budget so that the individual will maximize the use of their earnings. Included is an evaluation of occupations and income potential; investments and mutual funds, use of credit and the borrowing of money, taxes and estate planning, purchase of major assets, including home, vehicle and appliances, and also various types of insurance.

Prerequisite(s): MATH-020
Corequisite(s): none

**BUSN 130 Entrepreneurship 3 cr.**
This course will explore the foundations and principles of entrepreneurship and the relationship to small business. The basic concepts of business and the application in operating a new or existing business will be discussed. Benefits, challenges and key elements of entrepreneurship, ownership options, planning, marketing, financial plans and management will be explored. Course homework and projects will focus on strategic planning, market plan development and the rudiments of the overall business plan. A business plan will be developed in theoretical exercises and practical plans for students intending to enter a defined business venture.

Prerequisite(s): MATH-020
Corequisite(s): none

**BUSN 150 The Selling Process 3 cr.**
This course is designed to merge into a logical framework the activities used when marketing a product or service with the personnel selling process Students learn basic marketing management skills and then use those to design sales plans, manage territories, uncover customer needs, prepare proposals, make presentations, implement a closing process, and gather marketing intelligence. Direct

marketing, telemarketing, and Internet marketing techniques are included.

Prerequisite(s): none
Corequisite(s): none

**BUSN 230 Entrepreneurship II 3 cr.**
This course is for students who may want to start, manage or grow a business. Beginning with the identification of the business opportunity, students establish goals, objectives, resources and the team, which form the foundation of the business. The course integrates various business functions with the intent of helping students understand start-up, growth, venture capital, the role of talent, operations, and marketing.

Prerequisite(s): ACCT-105 or BUSN-100 or BUSN-130
Corequisite(s): none

**BUSN 255 Human Resource Management 3 cr.**
Specific attention is placed in this course on the day-to-day administrative and management procedures necessary to support the workforce Included are matters of recruiting, selecting and hiring personnel, legal requirements that govern records and interactions with employees, rules and regulations covering termination, task definition, and training.

Prerequisite(s): none
Corequisite(s): none

**BUSN 260 Business Law 3 cr.**
This course will provide a foundation for business managers to operate within the legal environment in which all businesses in our society function It provides an overview of the law and our legal system, covering topics such as Tort Law, contract and sales law, negotiable instrument law, agency and employment law, business organizations and property law.

Prerequisite(s): ENGL-100
Corequisite(s): none

**BUSN 265 Business Problem Solving 3 cr.**
A capstone course for the second year student, this study plan is fast-paced and dynamic Students are challenged to use their learning to confront structured and unstructured problems with confidence and creativity. Experience in using multi-disciplinary skills is stressed. While problems are primarily business oriented, themes also include the interaction between business and government or business and society.

Prerequisite(s): BUSN-100; ECON-120 or -125
Corequisite(s): none

**BUSN 275 Business Internship 3 cr.**
This course is designed to introduce the student to the practical work environment in their interested field of business study The internship will be supervised, approved and monitored during the semester. A minimum of 180 hours must be worked during the semester. The student will keep a weekly log of their activities and experiences and will prepare an in-depth research paper on their organization to be reviewed by the instructor.

Prerequisite(s): ACCT-105, BUSN-100
Corequisite(s): none

## *Cardiovascular Courses (CARD)*

**CARD 100 Intro to Cardiovascular Tech 3 cr.**
This course is designed to provide students with an overview of cardiovascular procedures, the history of cardiovascular medicine, professional organizations and affiliations, internships, legal and ethical responsibilities in patient care, clinical indications for cardiac testing, medical terminology, HIPAA standards in healthcare, and living wills.

Prerequisite(s): Program Acceptance
Corequisite(s): none

**CARD 105 Medical Instrumentation 3 cr.**
This course is designed to give entry-level cardiovascular students an overview of electronic circuits, their components and the manner in which they function and operate medical equipment Students will have a working knowledge of physiologic recording systems and the various functions they provide, with emphasis placed on electrical safety in the healthcare setting.

Prerequisite(s): Program Acceptance
Corequisite(s): none

**CARD 115 Non-Invasive Testing 3 cr.**
This course emphasizes electrocardiogram (EKG) arrhythmia recognition in the health care setting. Review of the cardiac conduction system and its relation to mechanical events in the cardiac cycle will provide the basis for understanding interpretation of cardiac rhythm strips and 12 lead electrocardiograms. Assessment of normal and abnormal rhythms will be completed. Additionally, the utilization of ambulatory EKG monitoring and exercise testing will be discussed.

Prerequisite(s): Program Acceptance, BIOL-135, BIOL-136
Corequisite(s): none

**CARD 125 Clinical Practicum I 1 cr.**
All students will rotate through the clinical affiliate hospitals. Students will be assigned to select departments (cardiac catheterization, echo-cardiography, non-invasive cardiology, and the ambulatory cardiac care unit). The rotations are

primarily observational and provide students with the opportunity to see the diagnostic and interventional tests and procedures performed on patients with cardiovascular disease. Limited performance of non-invasive tasks under direct supervision is permissible.
Prerequisite(s): BIOL-135, BIOL-136
Corequisite(s): CARD-100, CARD-105

**CARD 150 Invasive Cardiovascular Tech I 3 cr.**
This course is designed to provide an in-depth study of cardiovascular physiology, including circulatory hemodynamics, cardiac output and control mechanisms, electrophysiology and myocardial mechanics. The course will also include a review of angiographic techniques, right and left heart catheterization protocols for diagnosis of ventricular function abnormalities, assessment of coronary anatomy, and hemodynamic waveform morphology analysis in the clinical setting.

Prerequisite(s): CARD-100, CARD-105, CARD-115, HLTH-155
Corequisite(s): NURS-100, CARD-155

**CARD 155 Invasive Cardiovascular Tech Lab I 1 cr.**
This laboratory is designed to provide a simulation experience in which students will learn to prepare manifold systems, cardiac catheters, guide wires, needles and sheaths Students will also utilize cardiac output machines, oximeter and defibrillator/cardioverters. Students will acquire a working knowledge of pacemakers and ICD's, and will learn hemodynamic analysis data.

Prerequisite(s): CARD-100, CARD-105, CARD-115, HLTH-155
Corequisite(s): NURS-100, CARD-150

**CARD 160 Cardiovascular Physiology/Patho I 2 cr.**
This course includes the review of cardiovascular anatomy and structural relationships with the cardiopulmonary and vascular system The function and regulation of the heart and blood vessels, cellular structure and function, electrical activity and cardiovascular integration and adaptation will be discussed. Heart sounds and murmurs will be reviewed as will blood pressure regulation. The study of cardiovascular pathophysiology will include an in-depth review of various cardiac diseases, related etiology and treatment options including: ischemic cardiac disease, heart failure, and valvular heart disease.

Prerequisite(s): CARD-100, CARD-105, CARD-115, BIOL-135, BIOL-136
Corequisite(s): none

**CARD 165 Ultrasound Physics 3 cr.**
This course is an introduction to the principles of ultrasound physics, instrumentation and theory relevant to the Cardiac Sonographer and Ultrasonographer. Concepts discussed will include: math for physics review; ultrasound physics; transducer construction and characteristics; sound beam formation and characteristics; instrumentation; image storage and display; Doppler instrumentation and principles; artifacts and bio-effects.

Prerequisite(s): RESP-115
Corequisite(s): CARD-170

**CARD 170 Echocardiography I 3 cr.**
This course is designed to provide Cardiovascular Technology students with the foundations of Echocardiography. The course will provide an explanation of cardiac ultrasound and its use in the evaluation of normal and abnormal cardiac anatomy. The course will also provide students with the knowledge necessary to determine the presence of cardiac diseases and pathology as seen during an echocardiographic exam. A review of the various medical and surgical treatments used in the care of patients with cardiac disease will be included in the course. Basic machine mechanics, basic physics as related to ultrasound, two-dimensional, M-mode, Doppler, and Color Doppler techniques will be covered.

Prerequisite(s): BIOL-135, BIOL-136
Corequisite(s): CARD-165

**CARD 175 Clinical Practicum II 4 cr.**
This course includes 240 clinical hours. The students will learn and practice skills in aseptic technique, infection control, patient monitoring, as well as pre and post-procedure patient care, for invasive and non-invasive diagnostic and therapeutic procedures. This 6-week summer clinical rotation will include clinical assignments in open-heart surgery, cardiac rehabilitation, cardiac catheterization and/or echocardiography. Lab assignments will take place at Southern Maine Community College and clinical rotations will include hospitals experiences throughout Southern and Central Maine and Southern New Hampshire.

Prerequisite(s): CARD-150, CARD-155, CARD-160, CARD-165, CARD-170, HLTH-155
Corequisite(s): none

**CARD 180 Rehabilitation and Prevention 3 cr.**
This course is designed to introduce students to the cardiac rehabilitation continuum of care, and to help students acquire an applied knowledge and appreciation for cardiovascular disease prevention. Relevant risk factors will be discussed and examined.

The function of exercise in disease prevention will be emphasized and studied, as well as the role nutrition plays in optimizing cardiovascular health.

**CARD 200 Invasive Cardiovascular Tech II 3 cr.**
This course is designed to provide an in-depth study of Interventional Cardiology and complements materials from Invasive Cardiovascular Technology I. Instruction includes: percutaneous coronary intervention, permanent pacemakers, bi-ventricular cardiac devices, cardiac biopsy, intra-aortic counterpulsation, electrophysiology studies, and cardiac ablation.

Prerequisite(s): CARD-150, CARD-155
Corequisite(s): none

**CARD 210 Cardiovascular Physiology/Patho II 2 cr.**
This course continues the evaluation of cardiovascular physiology and disease from Cardiovascular Physiology and Pathophysiology I and provides in-depth review of hypertensive heart disease, cardiomyopathy, diseases of the pericardium and congenital malformations. Neurohumoral control of the heart and microcirculation mechanisms will be reviewed.

Prerequisite(s): CARD-160
Corequisite(s): none

**CARD 215 Vascular Imaging and Pathology 3 cr.**
This course provides fundamental knowledge for vascular diagnostic & interventional testing and vascular pathology. An overview of current testing techniques in ultrasound imaging, angiography, vascular MRI and Computed tomography (CT) will be provided. This course includes a review of vascular pathophysiology and current medical therapy. Physiology and hemodynamics of normal and diseased vessels will be reviewed. Risk factors associated with vascular disease will complete the course.

Prerequisite(s): CARD-150, 155 or CARD-165, 170
Corequisite(s): none

**CARD 220 Echocardiography II 3 cr.**
This course is a continuation of the principles learned in CARD-170. The echocardiography student will learn more detailed applications for the use of Doppler ultrasound and in the determination of systolic and diastolic dysfunction; review disease pathologies such as cardiac tumors; and learn performance techniques for the evaluation of pericardial disease. Students will also be introduced to the echo findings commonly associated with of congenital heart disease in the adult and child. An introduction to advanced applications associated with of echocardiography will include: Transesophageal Echo (TEE), stress echo, vascular ultrasound, contrast echocardiography use and 3-D echocardiography.

Prerequisite(s): CARD-165, CARD-170
Corequisite(s): none

**CARD 225 Clinical Practicum III 6 cr.**
This clinical rotation is designed for students who have chosen one of the four clinical areas as a career-training path. Students will spend 24 hours per week in the hospital setting gaining knowledge and expertise in one of the following areas: cardiac cath lab, echocardiography, non-invasive electrocardiography, or anesthesia monitoring within the operating room.

Prerequisite(s): CARD-175
Corequisite(s): none

**CARD 275 Clinical Practicum IV 12 cr.**
This clinical course is for students wishing to purs ue a career in one of the four employment opportunities within the CV Technology program The student will spend 40 hours per week in their designated specialty: cardiac cath lab, echocardiography, non-invasive testing, or as a member of the anesthesia monitoring team.

Prerequisite(s): CARD-225
Corequisite(s): none

## *Chemistry Courses (CHEM)*

**CHEM 103 Chemistry/Emergency Responders 3 cr.**
This survey, non-laboratory class, is designed to acquaint students with the broad principles of chemistry as they relate to hazards in the emergency response field. This survey includes basic chemistry terminology, structure of matter, atomic bonding, molecular theory of matter, chemical and physical change, and the general states of matter (gases, liquids and solids). Discussion of more common elements, compounds they form, and the resulting hazards completes this course.

Prerequisite(s): none
Corequisite(s): none

**CHEM 100 Fundamentals of Chemistry 4 cr.**
Fundamentals of Chemistry is a one-semester, stand-alone survey course for non-science majors. Fundamental principles, terminology, and applications of inorganic, organic, and biochemistry are introduced, as well as basic laboratory techniques. The course relates chemical concepts to everyday life through analysis and discussion of fundamental principles, and will enable students to make better-informed decisions regarding their health, their community, and the world they live in.

Prerequisite(s): ENGL-050, ENGL-075, MATH-050
Corequisite(s): none

**CHEM 120 General Chemistry I 4 cr.**
This is the first semester of a two-semester college chemistry sequence. The topics discussed begin with physical and chemical property definitions and dimensional analysis. Chemical reactions and reaction stoichiometry are studied in the context of aqueous solutions. Types of aqueous reactions are investigated (i.e., acid/base, oxidation/reduction) as well as quantitative aspects of the reactions (i.e., molar solutions, dilutions, titrations, limiting reagents, reaction yields). Topics in gaseous-state chemistry and introduction to basic thermodynamics, quantum theory, electronic structure of atoms, basic chemical bonding, molecular geometry and molecular orbitals follow the reaction chemistry section.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): MATH-140 or MATH-145

**CHEM 125 General Chemistry II 4 cr.**
This course is the second semester of a two-semester college chemistry sequence. Topics covered start with a brief discussion of the physical properties of liquids, solids and solutions. The major focus of this course will be chemical equilibriums and the applied aspects in solution chemistry. Topic areas include reaction kinetics, equilibrium reactions and calculations as applied to solutions, gas-phase reactions, acid/base reactions, buffers, and solubility. Also, entropy, free energy and equilibrium will be discussed before covering electrochemistry.

Prerequisite(s): CHEM-120
Corequisite(s): none

## *Criminal Justice Courses (CJUS)*

**CJUS 105 Intro to Criminal Justice 3 cr.**
This course offers an orientation to careers in law enforcement — their philosophic base and historic development; agencies and processes; technical and legal problems, and the role of criminal justice in a democratic society.

Prerequisite(s): none
Corequisite(s): none

**CJUS 106 Introduction to Homeland Security 3 cr.**
An introduction to the public and private sector dimensions of the theory and practice of homeland security at the national, regional, state, and local level. An overview of the administrative, legislative, and operational elements of homeland security programs and processes including a review of homeland security history, policies, and programs is provided. Topics include the threat of terrorism and countermeasures, including intelligence, investigation, and policy that support U.S. homeland security objectives.

Prerequisite(s): none
Corequisite(s): none

**CJUS 107 Transportation and Security Management 3 cr.**
This course provides an overview of modern border and transportation security challenges, as well as different methods employed to address these challenges. The course covers a time period from post 9-11 to the present. The course explores topics associated with border security and security for transportation infrastructure, to include: seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines, and buses.

Prerequisite(s): CJUS-106
Corequisite(s): none

**CJUS 110 Police Operations 3 cr.**
This course deals with the everyday problems, situations and operations of the police department and the police officer. Included in the course is a study of the different career paths open in this area. It is basically a study of the patrol officer's function with a background to the entire organization. The deployment of personnel, tactical operations and the use of specialized equipment will be presented. Ethical and legal standards related to the patrol function will be covered.

Prerequisite(s): none
Corequisite(s): CJUS-105

**CJUS 115 Introduction to Criminology 3 cr.**
This course will define crime and evaluate the various ways crime is measured. Students will be provided with an overview of the more popular criminological theories, emphasizing the biological, psychological and sociological schools of thought. In addition, crime control and prevention strategies as they relate to each theory will be examined in terms of theory, practice and effectiveness.

Prerequisite(s): none
Corequisite(s): CJUS-105

**CJUS 120 Introduction to Corrections 3 cr.**
This course takes a practical approach to introducing students to the ideas and practices of modern corrections and skills required to succeed in the field. Included in this course are society's goals for correctional institutions, an overview of the correctional function, the everyday operations of correctional prisons and jails, and procedures of parole and probation. A central theme throughout the course will be professionalism in corrections.

Prerequisite(s): none
Corequisite(s): CJUS-105

**CJUS 125 Criminalistics 3 cr.**
This course deals with the study of the scientific investigation of crime scenes, criminal evidence and evidence handling techniques. This course deals with the theory and application of police and scientific principles involved in solving crimes.

Prerequisite(s): none
Corequisite(s): CJUS-105

**CJUS 130 Laws of Arrest, Search,& Seizure 3 cr.**
This course is designed to present the background and current information about the laws pertaining to arrest, search and seizure. It will explore the development of standards in the police field by examining the issues involved in the Fourth, Fifth, and Sixth Amendments to the U.S. Constitution, State Laws and Court interpretations.

Prerequisite(s): none
Corequisite(s): CJUS-105

**CJUS 135 Case Preparation 3 cr.**
This course is designed to teach students proper methods in which to prepare a case for possible court presentation. Included in the course will be appropriate information gathering techniques; report writing; and pre-court preparation. Proper courtroom procedures, witness styles and behavior will also be discussed. Legal standards related to acquiring information by police officers will be presented.

Prerequisite(s): none
Corequisite(s): CJUS-105

**CJUS 140 Juvenile Justice System 3 cr.**
An examination of the impact of family, school, community and abuse on the conduct of juveniles will be undertaken. Past and current theoretical approaches to delinquency will be discussed. General topics of: gangs; delinquency and violence in schools; the Juvenile Court system; behavior modification programs; federal funding; law enforcement's role; as well as juvenile corrections and probation will be studied. The Maine Juvenile Code will be examined.

Prerequisite(s): CJUS-105, CJUS-115
Corequisite(s): none

**CJUS 200 Rules of Evidence 3 cr.**
This course is designed to acquaint the student with the Rules of Evidence. The purpose of these rules is to determine the admissibility of evidence during the criminal trial process and the legal challenges available to the opposing side. It also covers the legal requirements for a wide range of evidence, i.e.: real and circumstantial; best evidence rule; privileged communication; the Hearsay Rule; etc.

Prerequisite(s): CJUS-105, CJUS-130
Corequisite(s): none

**CJUS 205 Criminal Investigation 3 cr.**
Criminal Investigation is an observation or inquiry into allegations, circumstances or relationships in order to obtain factual information. This course deals with the duties and responsibilities of the investigator/detective/patrol officer in the course of an investigation.

Prerequisite(s): CJUS-105
Corequisite(s): CJUS-135

**CJUS 215 Substantive Criminal Law 3 cr.**
This course is designed to acquaint the student with the history of criminal law, the necessary elements of an offense which must be proven to sustain a criminal conviction, and the defenses to criminal conduct. A comprehensive study of Maine's Revised Criminal Code, Title 17-A is a major part of this course.

Prerequisite(s): CJUS-105, CJUS-130
Corequisite(s): none

**CJUS 220 Seminar in Criminal Justice 3 cr.**
This course is designed to acquaint the student with a variety of issues, some controversial, that confront the criminal justice community. The emphasis will be on reading about these issues and then in-depth discussion in a seminar setting. In addition, classroom time will be spent on preparing the student for employment. In furtherance of this goal, there will be discussion of the employment procedure, with emphasis on the application process and oral interviews. Prospective employers will be invited to participate in discussions with students.

Prerequisite(s): CJUS-105
Corequisite(s): none

**CJUS 225 Community Policing 3 cr.**
This course studies the evolution of policing to the present day. Community policing is compared and contrasted with traditional policing organizations and management styles. Community policing theory and the identification of community problems underlying crime will be examined relating to the process and strategy of change. Problem solving effectiveness of community policing as a law enforcement strategy will be considered. A community service learning project for each student is an integral part of this course. This course has been designated as a writing-intensive course.

Prerequisite(s): CJUS-105, ENGL-100
Corequisite(s): none

**CJUS 230 Crime Scene Reconstruction I 4 cr.**
This course provides students with the knowledge of the principles of effective crime scene management. Topics include: physical evidence collection and preservation, laboratory analysis, legal and practical documentation of evidence, and criminal investigation protocols. Students will engage in extensive laboratory work and analysis, review of case studies, and hands-on work at mock crime scenes, which will prepare them to present the results of their crime scene investigations in court. The course is designed for students pursuing a career as a crime scene technician.

Prerequisite(s): CJUS-105, CJUS-125 (C or better), CJUS department approval
Corequisite(s): none

**CJUS 235 Crime Scene Reconstruction II 4 cr.**
The second course in the crime scene reconstruction sequence, this course will build on the work in Crime Scene Reconstruction I. Students will examine additional and more advanced techniques related to the collection, preservation and analysis of crime scene evidence used in a court of law. This course provides students with the knowledge of the principles of effective crime scene management. Topics include physical evidence collection and preservation, laboratory analysis, legal and practical documentation of evidence, and criminal investigation protocols. Students will engage in extensive laboratory work and analysis, review of case studies, and hands-on work at mock crime scenes, which will prepare them to present the results of their crime scene investigations in court. The course is designed for students pursuing a career as a crime scene technician.

Prerequisite(s): CJUS-105, CJUS-125 (C or better), CJUS-230, CJUS department approval
Corequisite(s): none

**CJUS 240 Comparative Criminal Justice 3 cr.**
Comparative Criminal Justice is an observation of the varying forms of law enforcement as practiced on an international basis. This course addresses the organization and practices of foreign law enforcement agencies and how they compare with the American system of criminal justice. Students will travel to Ireland to compare the policing experience of Ireland during the one-week spring semester break to that of the United States.

Prerequisite(s): CJUS-105
Corequisite(s): none

**CJUS 250 Criminal Justice Internship 3 cr.**
This course provides an opportunity for a student to work in the field of criminal justice. Students will spend a prescribed period of time working within a local criminal justice or public safety agency.

Prerequisite(s): CJUS-105, 3.2 GPA, and
CJUS department approval
Corequisite(s): none

## *Computer Technology Courses (CMPT)*

**CMPT 100 Intro to Computer Technology 4 cr.**
This course is an introduction to the technical aspects of the systems used in the management of information in the 21st century. Topics to be discussed shall include microcomputer system hardware, file systems, operating systems, network configuration, topology and security, various aspects of the Internet and how to manage and manipulate the myriad types of information that is accessed by these systems. The class time is a combination of lecture and hands-on activities.

Prerequisite(s): none
Corequisite(s): none

**CMPT 101 Intro to Computer Applications 3 cr.**
This course provides a comprehensive study of the basic skills needed to manage, maintain and operate microcomputer hardware and software. The majority of the course includes an overview to a graphical user interface and an integrated software applications package, including information management programs such as word processing, electronic spreadsheets and presentation graphics that will be used to develop practical problem solving skills at the entry level. Topics include an overview of the components of a microcomputer system; hardware and software; storage devices and media; interpretation of error messages; a computer literate vocabulary and the uses of the computer.
Prerequisite(s): none
Corequisite(s): none

**CMPT 105 Intro to Web Programming 4 cr.**
This course is designed to introduce the student to the HTML and PERL scripting languages while using a live CD as the operating system platform. The student will develop an understanding of the basic concepts used to display information and products on the Internet. First, through the use of html programming the student will develop his / her skills to present ideas, concepts and products on the Internet in a professional manner. Secondly, the student will learn to effectively create back-end programs to present and collect data inputted by the user through the use of Perl scripting. By completion of the course the student will have an understanding of the basic

scripting structure, components and syntax. Students registering for this course are expected to be familiar with the common functions of microcomputer operating systems and applications.

Prerequisite(s): none
Corequisite(s): none

**CMPT 110 Introduction to Databases 3 cr.**
This course provides an introduction to Databases using Access 2007 as the interface tool. Topics include creating, querying, and maintaining a database; creating a data access page, reports, forms, combo boxes; using OLE fields, hyperlinks, and sub forms; and creating an application system using the Switchboard Manager. This course will utilize working in groups to emphasize how to plan, create and implement a project in the business setting. A student can expect to spend 4 hours on homework outside the classroom a week. Students registering for this course are expected to be familiar with the common functions of microcomputer operating systems and applications.

Prerequisite(s): none
Corequisite(s): none

**CMPT 115 Microcomputer Hardware 4 cr.**
This is a hands-on course where the student shall practice disassembly, reassembly, and configuration of X86 based microcomputer system units. Topics discussed during this course shall include: microcomputer hardware components including CPU's, hard drives, memory, CPU sockets, video cards, sound cards, NIC's, monitors and printers; microcomputer hardware assembly and disassembly techniques; safe working procedures; microcomputer hardware configuration using various operating systems; microcomputer hardware troubleshooting; microcomputer hardware maintenance and repair. The class time for this course is a combination of lecture and hands-on exercises.

Prerequisite(s): CMPT-100
Corequisite(s): none

**CMPT 120 Open Source Operating Systems 4 cr.**
This course will provide the student with a chance to explore an Open Source operating system technology. It will stress the use of command line in installing and configuring a Linux server. The student will develop skills in using command line maintenance of users, files, directories and permissions. The student will learn to create print servers, troubleshoot system problems, setup network connectivity and seamlessly integrate the Open Source server with Windows clients. This course will provide the student with online reference materials and hands-on exercises based on real world examples.

Prerequisite(s): none
Corequisite(s): none

**CMPT 125 Structured Programming 3 cr.**
This course provides an introduction to Java Programming. Topics include creating a Java application and applet, manipulating data using methods, decision making and repetition with reusable objects, arrays, loops, and layout managers using external classes, creating menus and button arrays using the abstract windows toolkit, swing interfaces with sorting and searching, and writing data to a sequential data file. Students registering for this course are expected to be familiar with the common functions of microcomputer operating systems and applications. Students should expect to spend a minimum of six hours a week outside of class time working on assignments and concepts to be successful.

Prerequisite(s): none
Corequisite(s): none

**CMPT 151 Spreadsheet Applications 3 cr.**
The purpose of this course is to familiarize students with electronic spreadsheet development using Microsoft Excel. In this intensive hands-on course, students will create various types of worksheets for personal and professional uses. Emphasis will be placed on problem solving and developing quality worksheets using concepts and techniques found in most spreadsheet software. This course covers all basic skills and techniques and several advanced topics including how to design and print graphs and charts; develop worksheets for "what-if", "goal-seek" and "sensitivity" analysis; generate reports; use mathematical, financial, statistical, logical as well as date and time functions; generate reports; use database operations; and develop and use macros.
Prerequisite(s): MATH-020, ENGL-050
Corequisite(s): none

**CMPT 210 Applications in Software 3 cr.**
This course will cover advanced topics in database software development. Students will learn normalization of data structures, prototyping applications, events, dynamic arrays, error handling, key violations, interactive windows and special topics dealing with database programming on a network. The student will be able to write complete, complex "turn-key" applications that are ready to run.

Prerequisite(s): CMPT-110, CMPT-125
Corequisite(s): none

**CMPT 215 Microsoft Operating Systems 3 cr.**
This course covers the installation, configuration, and maintenance of Microsoft Windows. The operating systems utilized in this course include various current

versions of Microsoft Windows operating systems. Other topics covered in this course shall include Windows desktop deployment, Windows desktop restrictions, and networking in peer to peer and client server environments. The class time for this course is a combination of lecture and hands-on practice.

Prerequisite(s): CMPT-100
Corequisite(s): none

**CMPT 220 Network System Management 3 cr.**
This course is an introduction to network operating systems with an emphasis on the management of network objects eg. users, groups, volumes, print servers and other shared network resources. Other topics to be covered in this course will include: physical and logical network topologies, network media and network distribution devices. The operating systems utilized in this course include various current versions of Microsoft Windows client and server operating systems. The class time is a combination of lecture and hands-on practice.

Prerequisite(s): CMPT-100
Corequisite(s): none

**CMPT 225 Network Engineering 3 cr.**
This course looks at networking from a design perspective. Topics will include, but not be limited to TCP/IP, DNS, DHCP, BOOTP, firewalls, routers, bridges, switches, wiring, ethernet, web servers, virtual hosting, SNAT/DNAT, and IP sub-netting. The OS for this class will be Linux (Slackware distribution). The class will be a combination of lecture/lab.

Prerequisite(s): CMPT-115, CMPT-120, CMPT-125
Corequisite(s): none

**CMPT 230 Senior Internship 3 cr.**
This course is designed to give the student practical experience to enter the job market. Students will be required to complete 135 documented hours of work as an intern in the information technology department of a company, institution, or organization.

Prerequisite(s): 30 credits toward major
Corequisite(s): none

**CMPT 235 Senior Seminar 3 cr.**
This Senior Seminar will provide the student an opportunity to explore areas of individual interest, share research and lead discussions. Students will research, prepare and present a major topic during the semester. Students will also prepare an electronic portfolio showcasing skills they have developed. During the first few weeks, the instructor will assign several mini-projects for the students to research and complete within a given time period.

Prerequisite(s): CMPT-120, CMPT-125, CMPT-215
Corequisite(s): none

**CMPT 240 Power Linux 3 cr.**
This course looks at the Linux operating system and various open source applications that run on Linux. Since Linux came on the scene in 1992, it is rapidly becoming a viable alternative to Microsoft. The class will take an in-depth look at Slackware, Red Hat and Mandrake Linux distributions. The topics shall also include working with a wide variety of open source applications that have made Linux so popular. The class will be a combination of lecture / lab.
Prerequisite(s): CMPT-100, CMPT-105
Corequisite(s): none

**CMPT 245 Web Server Management 3 cr.**
This is a course on the installation and configuration of Internet Information Server service to create a virtual web server that is a host for multiple Web sites. Topics to be covered in this course shall include the management and configuration of SharePoint Server, Front Page Extentions, Web-based IIS administration tools, DNS service, and the FTP, POP3, and SMTP services.

Prerequisite(s): CMPT-215, CMPT-220
Corequisite(s): none

**CMPT 250 Advanced Server Management 3 cr.**
Server Operations is a course that deals with the management of Active Directory Services in Windows Server domains and is based upon the sections of the MSCE exam. Topics to be covered shall include active directory DHCP, DNS; AD system state maintenance, recovery, and restore; FSMO (Flexible Single Master Operations), AD migration, and other common scenarios. The course time will be a combination of lecture and hands-on lab work.

Prerequisite(s): CMPT-100, CMPT-105, CMPT-215, CMPT-220
Corequisite(s): none

**CMPT 255 Network Security 3 cr.**
Network security has become of paramount importance in the 21st century. The securing of network services, network devices, and network traffic can be a full-time job. In this course the student shall build on their existing knowledge of operating systems, hardware and network systems management as the student acquires the specific skills to implement security services on any type of computer network. This course is a combination of lecture and hands-on exercises and will emphasize network security issues in Microsoft Windows products. The course content is based upon the Comp TIA Security+ exam.

Prerequisite(s): CMPT-215, CMPT-220
Corequisite(s): none

**CMPT 260 Java Programming 3 cr.**
This course will address the fundamentals of the Java Programming language. This course will cover the basics of concepts and methods of object-oriented programming and object-oriented design and emphasize the development cycle as a means of creating applications. Illustrating well-written and readable programs using disciplined coding styles will also be discussed. The course time will be a combination of lecture and hands-on lab work.

Prerequisite(s): CMPT-110, CMPT-125, CMPT-120
Corequisite(s): none

**CMPT 265 C# Programming 3 cr.**
The goal of this course is to provide a comprehensive introduction to programming using C#. This course introduces the basic programming constructs of simple sequence, selection, and iteration. The course shows how to create a number of different types of applications including console-based Windows based applications. The event-driven programming model, which is based on interactively capturing and responding to user input on Windows and Web forms, is covered. It includes instruction on developing applications using rapid application development techniques illustrating the drag-and-drop construction approach. From the beginning, the course illustrates how to use the .NET predefined types, their member methods, data fields, and properties using an object-oriented approach to development. The course also illustrates how to create user-defined classes and stand-alone class libraries, and introduces a number of advanced object-oriented concepts.

Prerequisite(s): CNMS-110 or AEDD-105 or CMPT-210
Corequisite(s): none

**CMPT 285 Network Hardware 3 cr.**
This course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. It also introduces routing protocols, network standards, LAN / WAN transmission technologies, and other related topics. The course will consist of lectures and hands-on exercises, in configuration, installation, and troubleshooting.
Prerequisite(s): CMPT-220, CMPT-225
Corequisite(s): none

## *Communications and New Media Courses (CNMS)*

**CNMS 105 Intro to Mass Communication 3 cr.**
We can watch the media as detached outsiders—as observers, we can praise them when they perform well and blame them for our social predicaments. Or we can become active participants—we can analyze the impact and investigate the consequences of the stories that media industries tell and sell. We can challenge our media to perform at high levels and steer them to serve and preserve democratic ideals. And as involved citizens, we can be aware of the consequences of the business of media and we can give voice to the issues that matter most to us and that most affect our daily lives. Each week in this class, students will be armed with the tools necessary to navigate this cultural terrain. Students will be asked to participate in the critical work of evaluating mass media and shaping their direction.

Prerequisite(s): Program acceptance
Corequisite(s): none

**CNMS 111 Digital Imaging, Design & Illust. 3 cr.**
Students will be introduced to the tools used in digital drawing, imaging and design, using the Adobe Creative Suite. Through the use of step-by-step tutorials, individual classroom instruction, guest lecturers and class discussions, students will be exposed to many facets of this powerful graphics package and its use in the industry. Examples of recent work by computer graphic artists will be shown and discussed. Students will examine the ever-growing applications of computer graphics and learn to recognize techniques used in the industry today.

Prerequisite(s): Program Acceptance
Corequisite(s): none

**CNMS 115 Foundations of Visual Design 3 cr.**
This course introduces students to the principles of 2D design and the role of images and forms as a means of communication. Through a series of hands on projects, students will develop a critical eye towards evaluating effective design. Topics include Gestalt theory, additive and subtractive color theory, design research techniques and effective communication strategies.

Prerequisite(s): Program acceptance
Corequisite(s): none

**CNMS 120 Introduction to Digital Imaging 3 cr.**
This introductory course will focus on the creation, compositing and manipulation of digital images using Adobe Photoshop and Illustrator Topics to be covered will include digital color theory, scanning techniques, masking, optimizing images for the web and advanced

brush and filter techniques. A series of hands on tasks will develop the student's ability to work with digital imagery.

Prerequisite(s): CNMS-111
Corequisite(s): none

**CNMS 125 Writing for Media 3 cr.**
Students will learn to apply basic communication skills to the A/V medium Those skills include identifying audiences and developing effective concepts for programs. Organizational formats for both formal and informal presentations are examined in detail. Students will develop a treatment, content list and two levels of scripts. Final written documentation and oral presentations will be used to develop portfolio level work.

Prerequisite(s): ENGL-100
Corequisite(s): none

**CNMS 135 Introduction to Digital Design 3 cr.**
Students will become knowledgeable in the use of Adobe In Design to produce documents which are of professional typesetting quality using a laser printer and a color ink jet printer Students will work with templates, prepare and use style sheets, import graphics, place text, select fonts and prepare a variety of desktop publishing projects.

Prerequisite(s): CNMS-111
Corequisite(s): none

**CNMS 155 History of Mass Communication 3 cr.**
From cave art to the internet; mass media have shaped human history and perception But avenues of communication to an audience also follow their own timeline, driven in large part by technological revolutions. Students will trace that evolution up to the present moment, as one-way communication to groups is being replaced by inter-activity. Oral and written assignments will foster an understanding of the link between culture and media, and the important turning points in media history. Students will also write personal narratives about the way media has shaped their memories, or the memories of an earlier generation, and they will track down examples of vintage media to share with classmates.

Prerequisite(s): none
Corequisite(s): none

**CNMS 160 Video & Audio Production Basics 3 cr.**
This course is an introduction to basic video production skills in a studio environment Topics include; camera operation, audio mixing, lighting, use of microphones and use of special effects systems. Strong emphasis is placed on developing critical viewing skills (technical and conceptual). Students are also expected to research and report on changes in the television industry.

Prerequisite(s): Program acceptance
Corequisite(s): none

**CNMS 165 Website Production 3 cr.**
This is an intermediate level course designed to provide students with the basic skills to author HTML web pages Students will learn to code HTML, incorporate images in web pages and embed various types of media. Web page layout with CSS, JavaScript and CGI forms will also be covered. An emphasis will be placed on emerging XHTML and XML technologies.

Prerequisite(s): CNMS or CSCI program acceptance
Corequisite(s): none

**CNMS 180 Intro to Digital Illustration 3 cr.**
Students will learn all about vector graphics and how to use Adobe Illustrator. Examples and complete exercises will demonstrate Illustrator's most important features such as drawing, creating logos and graphics, creating special effects and manipulating type. Graphics can then be used for export to InDesign, Photoshop and Flash.

Prerequisite(s): CNMS-111
Corequisite(s): none

**CNMS 205 Advanced Digital Imaging 3 cr.**
This course explores advanced production techniques using Adobe Photoshop for the production of images for print, web and video production. Students will learn advanced design and image manipulation techniques, generate original art works, will participate in peer reviews of work and observe the history and social impact of digital manipulation. Hands on demonstrations, lectures and class studio time will be supplemented by tutorials and lessons from a variety of sources.

Prerequisite(s): CNMS-120, CNMS-115
Corequisite(s): none

**CNMS 210 Adv. Video & Audio Production 3 cr.**
This course concentrates on teaching students how to design and organize a professional video or multimedia project The role of a project Producer/Director will be followed in depth. Students will learn how to work with clients, build a budget and create a production flow-chart.

Prerequisite(s): CNMS-125, CNMS-160
Corequisite(s): none

**CNMS 211 Adv. Video & Audio Applications 3 cr.**
This advanced production course is designed for students who have developed and pre-produced

projects as part of the CNMS-210 Advanced Video/Audio Production course. Students will work together as a production unit and will be assigned a variety of crew positions needed to support the acquisition of material needed to complete a designed project. Projects may involve both "location" and studio shoots. The class will meet on a weekly basis to develop production schedules and discuss relevant issues related to the projects. Students will be expected to work outside of the scheduled course meeting time and should be prepared to adjust schedules as needed. Students are expected to be working at an "advanced level" and should be prepared to work with a wide variety of subject matter.

Prerequisite(s): CNMS-125, CNMS-160
Corequisite(s): CNMS-210

**CNMS 215 Video & Audio Streaming Tech 3 cr.**
This course is designed to introduce New Media students to the production of video for Internet and broadband technologies Emphasis is placed on digital video technology theory including: bandwidth, capturing video, compression and streaming architectures.

Prerequisite(s): none
Corequisite(s): none

**CNMS 225 Interactive Multimedia Basics 3 cr.**
This course is designed to introduce students to multimedia production techniques Students will use a flowchart program to layout project concepts. Multimedia authoring will be done with Macromedia Flash 8. Topics to be covered include animation, interactive scripting, video & audio assets and Shockwave publishing techniques. Weekly reading assignments and in-class tutorials will provide hands on approach to learning.

Prerequisite(s): CNMS-111 or 120
Corequisite(s): none

**CNMS 230 Video on Location Basics 3 cr.**
Working outside of the studio environment, students will learn basic ""on location"" video production skills. Using basic field production equipment students will shoot and edit simple exercises designed to build good on location habits. Through the exploration of a wide range of audio and video tools, commonly used on location, students will learn how to recognize and solve potential problems. Emphasis will be placed on developing strong pre-production planning and research skills.

Prerequisite(s): CNMS-160
Corequisite(s): none

**CNMS 240 Non-Linear Editing Essentials 3 cr.**
This course is an introduction to video editing theory and techniques, and involves extensive work with non-linear editing systems and related digital post-production equipment Students may choose to edit material they have shot in the field or use tutorial footage. The course will take a hands-on, project approach to learning the techniques of non-linear editing.

Prerequisite(s): CNMS-160
Corequisite(s): none

**CNMS 250 Introduction to Documentary 3 cr.**
"Reality Programming from Nanook of the North to Survivor". Documentaries or "reality television" are becoming the programming of choice for television networks and cable channels - they are also being used to manipulate, persuade, and entertain us. It is becoming increasingly difficult to tell the difference between fiction or non-fiction television - how can we tell when we are being fooled? This class will help students develop a critical sense that will make them more discerning viewers of non-fiction television. Using examples from classic documentaries students will learn about the history of documentary filmmaking, what makes them different from other types of films and what gives documentary films their unique voice. Using historical, controversial films, we will discuss how documentaries address the social and political issues of our time and what are some of the ethical dilemmas that face non-fiction filmmakers. At the end of this class students will be able to recognize the films that manipulate and persuade through propaganda and those that deliver a gift of truth to their viewer.

Prerequisite(s): Program acceptance
Corequisite(s): none

**CNMS 251 Intro to Narrative Cinema 3 cr.**
This course explores the art of storytelling in the history of film in American cinema. Starting with The Great Train Robbery in 1903 on up to current cinema, the course will show a variety of landmark films by American directors. PowerPoint presentations will provide a context for the films viewed. Discussions and reading will center on how a story is told in film by bringing together story, character, visual design and music to create the magic of movies. The competing forces of the director's desire to create art and the pressures of commercial success at the box office will be analyzed.

Prerequisite(s): CNMS program acceptance
Corequisite(s): none

**CNMS 255 Multimedia Programming Basics 3 cr.**
This course introduces students to multimedia programming using popular interactive software. Programming concepts such as variables, looping, conditional statements and arrays will be covered. Students will develop several projects including simple games and database search engines.

Prerequisite(s): CNMS-225
Corequisite(s): none

**CNMS 260 Advanced Digital Design 3 cr.**
Course Description: Advanced Digital Layout and Design focuses on two areas of development for students: the application of the principles and elements of design and advanced technical skills in using Adobe InDesign CS4, the leading graphic design software used in the industry today. The course consists of 3 in class hours per week of refining technical skills and two hours per week applying theory through critiques, guest lectures, slide demonstrations and business and/or museum visits. Students will complete the class with a number of portfolio pieces as well as training in client management.

Prerequisite(s): CNMS-135, ENG-115
Corequisite(s): none

**CNMS 261 Typography I 3 cr.**
Typography is a study and demonstration of traditional and digital typography and layout principles. This course covers the use of software and aesthetic issues needed to produce effective communication for electronic media. Typography also covers the basic history of typography, structure and its evolution.

Prerequisite(s): CNMS-111 and CNMS-115
Corequisite(s): none

**CNMS 265 Advanced Website Architecture 3 cr.**
This is a second level course that extends the media skills covered in the first year's curriculum within a team environment. Designed to emulate a commercial website project, teams of students will be presented with a client concept and develop various components of the production. Students will learn to organize flowcharts, budgets and workflow data as well as produce web content within the scope of their project. Students are expected to have experience in web content development including HTML, digital imaging and Shockwave applications.

Prerequisite(s): CMPT-105 *or* CNMS-165
Corequisite(s): none

**CNMS 270 Advanced Video on Location 3 cr.**
This course is an introduction to portable video production techniques, and involves extensive work with portable video gear and related lighting/sound equipment in typical field settings Material shot in this class will be integrated into the editing class in an attempt to give the student a realistic learning experience. The course will take a hands-on, project approach to learning the techniques of producing video material outside of the studio setting.

Prerequisite(s): CNMS-230
Corequisite(s): none

**CNMS 275 Dreamweaver, SQL & PHP 3 cr.**
This second level course introduces students to web application servers and their integration with databases. An introduction into relational databases will be explored as well as an explanation of basic SQL language and functions. An overview of server applications such as ASP, PHP and Perl will be presented. Students will cover a variety of topics including connecting to data sources, retrieving and inserting data, designing dynamic tables from a data source, password & security issues, database search forms and e-commerce applications. Students are expected to have a thorough knowledge of HTML and experience authoring in an HTML editor.

Prerequisite(s): CMPT-105 *or* CNMS-165
Corequisite(s): none

**CNMS 280 Advanced Digital Illustration 3 cr.**
This course is designed for the advanced student who wishes to go beyond the basics of Adobe Illustrator in order to enhance vector artwork quality and complexity. We will focus on advanced design and illustration techniques that are applicable to the student interested in combining Adobe Illustrator with the rest of the Adobe Creative Suite. Design topics will include good and effective use of color, shape, line and type in logo, package and corporate identity design.

Prerequisite(s): CNMS-115, CNMS-180
Corequisite(s): none

**CNMS 290 Advanced Non-Linear Editing 3 cr.**
This course will take expand upon the skills learned in CNMS 240: Non-Linear Editing Essentials. Emphasis will be placed on furthering the student's FCP knowledge base, becoming familiar with the finer points of the program, such as the audio mixing tool and the color correction tool. Final Cut Pro Studio 7 will be the primary software. Students will have limited in class assignments so that they can focus on two of their own pieces to be used within their reel. As a result of this course you will be able to: Work within FCP at an accelerated pace, Color Correct videos and

become a stronger editor by using the expanded features covered in class.

Prerequisite(s): CNMS-240
Corequisite(s): none

**CNMS 295 Senior Capstone Project 3 cr.**
Students who apply for the Senior Capstone Project will present proposals prior to the start of the semester outlining a project to be completed in their final semester as a capstone to their study in the program. An application is available through their faculty advisor. Students may work alone or in small groups. Students may also integrate an internship into their capstone project. Students must complete the capstone application, receive approval from the department faculty and be maintaining a 3.0 GPA. Projects shall be made available for presentation to the faculty, the department and the college. Space in this course is limited.

Prerequisite(s): CNMS department approval
Corequisite(s): none

**CNMS 296 Senior Portfolio 3 cr.**
This course covers the theory and production of an effective portfolio showcasing the specific skills of each student. A portfolio is a critical asset in the pursuit of a career or transfer to another college or university. The course will focus on the professional and aesthetics practices in the Communications and New Media Design field. It will address the art of self-promotion, relevant employment and life skills necessary in finding employment in this competitive industry. Course materials will be presented through student presentations, lectures, peer and professionally reviewed critiques.

Prerequisite(s): CNMS department approval
Corequisite(s): none

## *Composite Courses (COMP)*

**COMP 100 Introduction to Composites 3 cr.**
This course is an introduction to the science of composites and fabrication. Students will familiarize themselves with the components of composites, including the most commonly used matrix systems, reinforcements and core materials. A variety of fabrication methods and manufacturing processes will also be explored. For each method, the appropriate tools, equipment and safety measures are studied and used.

Prerequisite(s): none
Corequisite(s): none

**COMP 105 Closed Mold Manufacturing and Mold Making 4 cr.**
This course will introduce students to the basics of closed mold technology, including the vacuum infusion process, vacuum bagging, light resin transfer molding, and temperature controlled molding. An introduction to tooling, mold preparation and mold are will also be covered

Prerequisite(s): none
Corequisite(s): COMP-100

**COMP 110 Composite Repair 2 cr.**
This introductory course will include both structural and cosmetic composite repair theory and repair experience. Students will gain an understanding of inspection, documentation and composite repair. The techniques covered will include patch repair, taper sanded or scarf repair, step sanded repair, repairing delamination, mold repair and gel coat repair.

Prerequisite(s): none
Corequisite(s): COMP-100

**COMP 115 Technical Graphics for Composites 3 cr.**
This course will provide students with an introduction to print-reading, technical graphics, and the use of CAD software used in composites design and manufacturing. ASME Y14.5M – 2009 standards will be emphasized in interpreting prints from a variety of related industries. Students will become familiar with several computer-aided-design programs used for 2D design, 3D solid modeling, and 3D surface modeling in composites manufacturing. Both technical drawings of products and process drawings used for controlling sequences in manufacturing will be used.

Prerequisite(s): COMP-100
Corequisite(s): none

**COMP 150 Composite Materials 3 cr.**
This course provides an in-depth look at the range of composite materials, including curing and post-curing of epoxies, vinyl esters, phenolics, imides and other specialty resins; a comparison of resin properties; the properties of ceramics, metals, fibers and fiber forms; and an introduction to thermoplastics and thermo hardeners. Students will examine the concept and design of sandwich structures, joints and post-processing operations.

Prerequisite(s): COMP-115, CHEM-120 or COMP-120
Corequisite(s): none

**COMP 160 Fundamentals of Quality & Testing 3 cr.**
In this course students will examine current quality control theories and best practices to gain an understanding of continuous quality improvement

methods (CQI). Topics include establishing and monitoring performance measures, organizational leadership and adopting a CQI model. Standard methods for testing composites using both destructive testing and non-destructive test methods will be included, beginning with methods to evaluate reinforcing fibers and characterize matrix materials and methods to determine mechanical properties of laminates.

Prerequisite(s): COMP-105, COMP-110, COMP-115
Corequisite(s): none

**COMP 200 Advanced Composite Processes 3 cr.**
In this advanced level course, students will make complex composite parts using a variety of manufacturing processes including filament winding, tube rolling, pultrusion and thermoplastic molding. They will explore the concepts and equipment needs of compression molding and the advantages of using an autoclave for curing a vacuum bagged part.

Prerequisite(s): COMP-105
Corequisite(s): COMP-150

**MTSC 100 Introduction to Material Science 3 cr.**
In this course students will incorporate elements of applied physics and chemistry as they explore the mechanical and physical properties of metals, ceramic, concrete and wood. Basic theoretical principles will provide an understanding of the behavior of materials and enable students to predict properties. Students will become familiar with terminology and general principles of nanotechnology and failure analysis.

Prerequisite(s): MATH-050
Corequisite(s): none

**COMP 205 Polymer Technology 3 cr.**
This course provides an overview of thermoset and thermoplastic polymers. Basic concepts are reviewed, with attention to physical properties and the role of structure and properties on processing behavior. The influence of environmental conditions, such as temperature and humidity, and the significance of geometry will be included.

Prerequisite(s): none
Corequisite(s): COMP-200; MATH-050

**COMP 210 Lean Manufacturing 3 cr.**
This course will introduce the process of continuous quality improvement to optimize productivity and reduce waste within a manufacturing facility. Using case studies, simulations and site visits, students will examine the productions processes in factories and apply continuous improvement techniques to improve quality and productivity.

Prerequisite(s): BUSN-100, COMP-160
Corequisite(s): none

**COMP 250 Composites Internship 3 cr.**
This end-of-program internship is an on-the-job training opportunity, providing the student with work experience in an area of composite technology or related manufacturing experience of specific interest to the student, and mutually beneficial to the employer. The student is primarily responsible to the employer for the various work responsibilities established and is also responsible to the course instructor to complete specific objectives necessary to satisfy the requirements for student evaluation.

Prerequisite(s): all program requirements
Corequisite(s): none

## *Construction Courses (CONS)*

**CONS 105 Tool Safety 0.5 cr.**
This 12-hour course is a study of the safe operation of hand and power tools that are of required usage in the workplace

Prerequisite(s): none
Corequisite(s): CONS-115, CONS-125

**CONS 115 Practical Building Concepts/Leveling 4 cr.**
This course is an introduction to basic hand drafting of building components and the proper setup and use of levels, transits and lasers commonly used within the industry. Students will be introduced to reading basic house plans and drafting details from given criteria using a scale ruler. Leveling will include the proper use of builder's level, water level, laser level and transit. The course includes a variety of activities involving the use of the instruments. This course introduces floor framing practices commonly found in the residential construction industry today. Topics of discussion will include safe use of hand, power, and air tools, the correct layout cutting, building, and estimating of a simple floor system.

Prerequisite(s): none
Corequisite(s): CONS-105, CONS-125

**CONS 125 Framing Methods 4 cr.**
This course is an introduction to the framing practices commonly found in the residential construction industry today. Topics of discussion will include safe use of hand, power, and air tools, the correct layout, cutting, building, and estimating of a simple wall and roof systems.

Prerequisite(s): CONS-105
Corequisite(s): CONS-115

**CONS 130 Construction Design 3 cr.**
This course is the study of residential design. The student will learn how to properly generate the plans for a single family residence using SoftPlan software. The student will learn how to draw all plans necessary for a given project to be constructed according to all building and energy codes. The student will learn how to evaluate a given piece of property and design a home for the property that uses the least amount of energy as possible.

Prerequisite(s): none
Corequisite(s): none

**CONS 135 Advanced Roof Framing & Interior Coverings 4 cr.**
This course takes an in-depth look at advanced roof framing and interior coverings currently practiced in residential construction. Students will calculate, layout and install hip and valley rafters. The design and installation of trusses, construction of dormers, roofs with unequal pitches, cornice design and fabrication, roof ventilation, roof flashing, and various roofing materials and their installation will also be covered. Interior coverings will address building insulation and energy efficiency and interior wall coverings including gypsum board installation

Prerequisite(s): CONS-105, CONS-115, CONS-125
Corequisite(s): CONS-145

**CONS 140 Weatherization for the Building Professional 4 cr.**
This course is an introduction to residential weatherization and insulation remediation. Students will learn about building science, energy movement within buildings, ventilation and indoor air quality, surface and air transported heat loss, R and U values, types of building framing, types of insulation used, and proper installation techniques as well as remediation options. The course includes a variety of activities involving the use of the blower door, manometer, infared imaging camera and other instruments.

Prerequisite(s): none
Corequisite(s): none

**CONS 141 Energy Auditing 3 cr.**
Maine has embarked on an ambitious plan to audit and weatherize every residential structure by the year 2030. This introductory course to building science and energy auditing will prepare students to pass the BPI Building Analyst certification, the energy auditing professional designation recognized by Efficiency Maine and Maine State Housing. After completing this course, students will be able to conduct accurate building analyses and document findings, as well as make recommendations for improvements, including financial benefits and investment payback.

Prerequisites: None
Corequisites: None

**CONS 145 Timber Framing & Exterior Finishes 4 cr.**
This course is an introduction to the study of early American house and barn framing. Using traditional joinery, the class will fabricate and erect a small timber frame building. Proper sizing of timber frame components will be discussed, along with the proper use of joinery tools, timber handling, and frame erection. Exterior finishes include preparing exterior walls for window, door, and corner trim, proper layout of a story pole for installation of siding, and installing a variety of siding types. Students will prepare, prime and paint finish coat on all trim work.

Prerequisite(s): CONS-105, CONS-115, CONS-125
Corequisite(s): CONS-135

**CONS 160 Intro to Leveling Instruments 1 cr.**
This course is a study of the proper use of leveling instruments, such as, builder levels and transits, pop levels, and lasers, as they relate to laying out a building site, determining lot profiles, etc.

Prerequisite(s): none
Corequisite(s): none

**CONS 200 Kitchen Design and Millwork 4 cr.**
This course is the study of efficient kitchen design, acquisition and installation of pre-fabricated kitchen cabinets. The course will also cover fabrication and installation of plastic laminate countertops, as well as familiarizing students with solid surface, stone and tile countertops. Students will also create custom designed millwork projects. Estimating of all components will be covered.

Prerequisite(s): CONS-105, CONS-115, CONS-125, CONS-135, CONS-145
Corequisite(s): CONS-210, CONS-220, CONS,230

**CONS 210 Interior Finish & Stair Construction 4 cr.**
This course is the study of the various types of interior trim commonly used both in the residential and commercial building industry. Topics will include door installation and trim, window trim, base applications, shelving systems, and the construction of a variety of interior stairs. The proper methods of determining the appropriate-sized windows for a given building will be discussed. Estimating of all components will be covered.

Prerequisite(s): CONS-105, CONS-115, CONS-125, CONS-135, CONS-145
Corequisite(s): CONS-200, CONS-220, CONS-230

**CONS 216 Residential Contracting 3 cr.**
This course introduces students to the proper procedures to be used when contracting a typical residential job. Students will learn how to deal with clients, gather needed information, estimate materials, and to develop specifications and contracts.

Prerequisite(s): CONS-105, CONS-115, CONS-125, CONS-135, CONS-145
Corequisite(s): CONS-200, CONS-210 or CONS-220, CONS-230

**CONS 220 Commercial Building Systems 4 cr.**
This course is a study of various commercial building systems. Students will layout and place concrete footings, complete with anchor bolts, according to plan, after which they will construct a pre-engineered building. Students will learn proper fabrication, rigging and erection techniques. Installation of metal roofing and siding will be covered. The course includes an introduction to masonry, whereby the students will learn the history of masonry, how to mix mortar, the various patterns and bonds of masonry material, and the technique of laying brick and block. Estimating of all components will be covered.

Prerequisite(s): CONS-105, CONS-115, CONS-125, CONS-135, CONS-145
Corequisite(s): CONS-230, CONS-200, CONS-210

**CONS 230 Concrete Construction 4 cr.**
This course is the study of the proper design, mixing, testing and placement of concrete. Students will learn how to design concrete using a variety of admixtures to meet or exceed specific job site specifications. Student will learn how to properly analyze aggregate and test concrete after it has been exposed to a variety of climactic conditions. Completion of the concrete testing portion of the course prepares the student to take the "Concrete Field Testing Technician Grade 1 Certification" test offered by the American Concrete Institute (ACI). The course also investigates the various types of concrete floor finishes, their applications, and methods of reinforcement. Completion of the concrete flatwork portion of the course prepares the student to take the "Concrete Flat Work Technician Certification" test, also offered by the American Concrete Institute (ACI). The design and fabrication of site-built forms, erection of patented forms, and the use of stay-in-place insulated forms will be covered. Estimating of all components will be covered.

Prerequisite(s): CONS-105, CONS-115, CONS-125, CONS-135, CONS-145
Corequisite(s): CONS-220, CONS-200, CONS-210

**OSHA 120 Construction Safety 0.5 cr.**
The OSHA 10 Hour Construction Industry Safety course is the study of safe operating procedures that are required to be performed in the construction industry. Students will be instructed how to interpret the OSHA safety standards as they pertain to daily tasks performed in the construction industry. Students will receive OSHA Construction safety cards after attending all 10 hours of classes.

Prerequisite(s): none
Corequisite(s): none

**OSHA 130 Construction Safety - 30 hour 2 cr.**
The OSHA 30 Hour Construction Industry Outreach Training course is a comprehensive safety program designed for anyone involved in the construction industry. The program provides complete information on OSHA compliance issues. OSHA recommends Outreach Training Programs as an orientation to occupational safety and health for workers covered by OSHA 29 CFR 1926. Construction workers must receive additional training, when required by OSHA standards, on specific hazards of the job. Students will learn the essentials for construction safety.

Prerequisite(s): none
Corequisite(s): none

## *Computer Science Courses (CSCI)*

**CSCI 104 Introduction to Robotics 3 cr.**
This course introduces students from all backgrounds to the fun of designing, building, programming, and operating interactive robots. Students receive a technical introduction to basic electronics, analog circuit design, microcontrollers, and programming, as well as to design concepts and philosophies. Students will complete several individual robots that respond to various sensory inputs.

Prerequisite(s): MATH-050
Corequisite(s): none

**CSCI 105 World of Computing 3 cr.**
This course is a broad overview of the Computing discipline. It introduces students to number systems, hardware concepts, data representation, algorithms, low-level and high-level programming, and various information systems. Most of these topics are designed to provide students with the tools that are useful when encountering computers in today's workplace. Furthermore, they are designed to enhance students' problem-solving and logical reasoning abilities.

Prerequisite(s): MATH 050
Corequisite(s): none

**CSCI 110 Principles of Computer Science 4 cr.**
This course teaches students how to design and write computer algorithms to solve a variety of problems in the context of multimedia. Algorithms will be implemented as programs in Python. Programs will be written to manipulate photographs, sound clips, and video clips. Topics include primitive data types and operations in Python, three types of control statements, methods, arrays and introduction of object-oriented concepts such as classes and encapsulation.

Prerequisite(s): MATH 050
Corequisite(s): none

**CSCI 160 Object Oriented Design and Programming 4 cr.**
This course is an in-depth treatment of the concepts of object-oriented design and programming using Java. The Java language will be taught along with the concepts of object orienting programming. Design of programming solutions using UML is emphasized along with programming using designs provided by the instructor. Topics will include: classes and methods, branching and method design, loops and external files, arrays, collections, recursion and object oriented software engineering.

Prerequisite(s): CSCI 110
Corequisite(s): none

**CSCI 230 Mobile Application Development 3 cr.**
This project-oriented course examines the principles of mobile application design and development. Students will learn application development on the Android or iOS platform. Topics will include memory management, user interface design, user interface building, input methods, data handling, network techniques, and URL loading. Projects will be deployed in real-world applications. Course work will include project conception, design, implementation, and pilot testing of mobile phone software applications.

Prerequisite(s): CSCI 160
Corequisite(s): none

**CSCI 250 Computer Organization 3 cr.**
This course introduces the hardware components of a computer. It focuses on their function, design, and performance characteristics, including discussions of recent developments. Students will examine the hardware-to-software interface, where high-level language statements are reduced to a sequence of assembly language statements, each of which represents a single primitive instruction of the processor. Students will learn binary and hexadecimal numbers and how variables, arithmetic/logic operations, branching, loops, arrays, and function calls are written in the "native language" of a microprocessor (in this case the MIPS R3000 32-bit RISC instruction set). Advanced topics include performance features such as processor caches and pipelining.

Prerequisite(s): CSCI 160
Corequisite(s): none

**CSCI 260 Database Management Systems 3 cr.**
This course introduces fundamental concepts of database management, including data modeling, query languages, database design, transaction processing, data integrity and security. In addition, students will write Web applications using SQL.

Prerequisite(s): CSCI 160
Corequisite(s): none

**CSCI 275 Programming in C++ 3 cr.**
A study of the C++ programming language on Linux including: control structures, functions, pointers, structures, Linux programming commands, good programming practices. The class will include a fair number of programming projects.

Prerequisite(s): CMPT-125 or MATH-190
Corequisite(s): none

**CSCI 290 Data Structures 4 cr.**
This course is an in-depth study of abstract data types using the Java programming language. Topics include: stacks, queues, recursion, priority queues, lists, binary search trees, heaps, graphs, and an exploration and evaluation of sorting and searching algorithms Most of these topics are designed to enhance your problem-solving and logical reasoning abilities.

Prerequisite(s): CSCI 250
Corequisite(s): none

**CSCI 298 Topics in Computer Science 3 cr.**
This course covers topics of special interest to the faculty or students. The topics will be cutting edge or special technologies that are not covered in other CSCI courses, or new programming languages or programming paradigms not covered by other courses.

Prerequisite(s): Permission of instructor.
Corequisite(s): none

## *Culinary Arts Courses (CULA)*

**CULA 100 Introduction to Culinary Arts 3 cr.**
This course is designed to introduce students to the history, culture, philosophy, structure, organization and opportunities in the hospitality field, especially as they relate to food service Also included in this course is the ServSafe program in food safety, culminating in the National Certification Exam.

Prerequisite(s): none
Corequisite(s): none

**CULA 110 Culinary Skills 4 cr.**
This course includes the theory and practical application of kitchen orientation, knife skills, proper cutting techniques, breakfast cookery, salad preparation, vegetable cookery, potato, pasta and rice cookery, and soups and sandwich preparation The course also includes proper presentation and service of those items. Instruction includes lectures, demonstrations, films, class discussions and lab preparations. Students are required to be in uniform and to have culinary tool kit with them at every class.

Prerequisite(s): none
Corequisite(s): CULA-100, MATH-050

**CULA 120 Basic Food Preparation 4 cr.**
This course teaches the basic preparation and cooking methods of meat, fish and poultry and the preparation of sauces and stocks The preparations, services and techniques of basic cooking methods, with emphasis on kitchen sanitation and safety, are presented. Instruction includes demonstrations, lectures and films, as well as a high degree of hands-on practices. Students are required to be in uniform and to have culinary tool kit with them at every class.

Prerequisite(s): none
Corequisite(s): CULA-100, MATH-050

**CULA 130 Basic Baking 4 cr.**
This course is concerned with the basic principles of mixing, scaling and baking, methods and techniques of bread, cake, frosting, cookie and pie production, and laminated dough. Written and performance exams are given to evaluate student progress. Students are required to be in uniform and to have culinary tool kit with them at every class.

Prerequisite(s): none
Corequisite(s): CULA-100, MATH-050

**CULA 140 Food and Beverage Purchasing 4 cr.**
This course is designed to teach the proper procedures for receiving, ordering through computerized and conventional methods, inventory control and storage of all restaurant/hotel products (including cleaning, ware, and linens). Emphasis will be placed on establishing specifications, determining food cost, comparative shopping, and ordering with a computer and conventional methods. Additionally, Culinary Math is covered. The class also cleans and maintains all dry goods, freezer space and cold storage used to house all items coming into the Culinary Arts Department. Students are required to be in uniform in every class.

Prerequisite(s): none
Corequisite(s): CULA-100, MATH-050

**CULA 200 Culinary Arts Externship 3 cr.**
This course is designed to give students exposure to the hospitality industry in order that they may practice skills gained in their first year at SMCC and gain knowledge of a segment of the industry that is of particular interest to them. Students must complete a minimum of 400 hours of work experience and a portfolio documenting their experience. Students are required to be in uniform as employer requires.

Prerequisite(s): none
Corequisite(s): CULA-100

**CULA 210 Buffet Preparation Techniques 4 cr.**
This course is designed to give students a basic understanding and working knowledge of planning and preparation of buffets of all types, using many types of foreign cuisines and local specialties including charcuterie. Instruction will include actual preparation and weekly service demonstrations, lectures, and films. Students are required to be in uniform and to have culinary tool kit with them at every class.

Prerequisite(s): CULA-100, CULA-110, CULA-120
Corequisite(s): none

**CULA 220 Advanced Cooking Specialties 4 cr.**
This is a course in a la carte preparation and service utilizing meat, fish, poultry, soups, sauces and gravies, as well as lab preparation of foods served in the CA dining room. Students are required to be in uniform and to have culinary tool kit with them at every class.

Prerequisite(s): CULA-100, CULA-110, CULA-120
Corequisite(s): none

**CULA 230 Advanced Pastry and Baking 4 cr.**
This course teaches advanced baking techniques. Course activities include production of classical types of desserts: chocolate work, use of fine liqueurs, fruits, sugar work and breads with proper presentation and service in the Culinary Arts dining room. Students are required to be in uniform and to have culinary tool kit with them at every class.

Prerequisite(s): CULA-100, CULA-130
Corequisite(s): none

**CULA 240 Planning/Dining Room Service 4 cr.**
This course is designed to teach Culinary Arts students proper dining room service and procedures. Emphasis will be placed on teamwork, personal appearance, customer service skills, and the importance of the relationship between the dining room staff and the kitchen staff in a food service operation. Students are required to wear proper dining room attire in every class.

Prerequisite(s): CULA 100
Corequisite(s): none

**CULA 250 Food Service Management 3 cr.**
This course is designed to students to the business side of the food service industry. Through the hands-on planning of a food service facility, students will learn the importance and intricacies of menus, business plans, equipment layout, design, and state regulations.

Prerequisite(s): CULA-100 & CULA-140 *OR* HSMP-101 & MATH-050
Corequisite(s): none

## *Dietetic Technology Courses (DIET)*

**DIET 100 Introduction Dietetics Profession 1 cr.**
This course exposes students to the meaning of professionalism, code of ethics of a profession, certification requirements within the dietetic field, governance of the dietetics field and the relationship of dietetic technicians to the health care team. In addition, students are given opportunities to explore potential career choices.

Prerequisite(s): DIET program acceptance
Corequisite(s): none

**DIET 110 Food & Beverage Purchasing 3 cr.**
The course is designed to inform food service professionals of the importance of proper procedures in the areas of purchasing, receiving, and storing of food and beverage inventories. Emphasis will be placed on establishing specifications and determining food cost.

Prerequisite(s): DIET program acceptance
Corequisite(s): none

**DIET 150 Principles of Food Preparation 4 cr.**
This course provides an introduction to the science of food preparation with emphasis on the chemical and biological changes that occur in processing and storage of food products. Attention is given to cooking technique, material handling, heat transfer, sanitation in processing, kitchen safety, nutrient retention, product and ingredient quality characteristics, ingredient role in product structure, modification of foods to meet varied nutrient restrictions, and coordination of products to maximize palatability.

Prerequisite(s): DIET program acceptance
Corequisite(s): none

**DIET 155 Foodservice Systems Field Exp 3 cr.**
Freshman Field Experience is conducted in the production kitchen in a health care facility. This course is a hands-on practicum which emphasizes departmental structure, product procurement, interaction with purveyors, receiving and storage, standardized recipes, menu systems, food production, use of production equipment, meal delivery, cafeteria/catering operations, and sanitation/cleaning. A minimum of 135 contact hours is required for completion of this experience.

Prerequisite(s): DIET program acceptance
Corequisite(s): none

**DIET 160 Foodservice Sanitation 1 cr.**
This course is designed for degree and non-degree students interested in learning more about food safety. The course presents an overview of foodborne illness, food contamination, management of food safety, the HACCP (Hazard Analysis Critical Control Point) system and regulations that set standards of practice. Upon successful completion of an end-of-course exam, students will earn ServSafe food safety certification.

Prerequisite(s): none
Corequisite(s): none

**DIET 200 Health Care Delivery Systems 3 cr.**
This course is designed to acquaint students with all facets of health care delivery systems, including advanced level medical nutrition therapy, record communication and the systems available for delivering health care in the United States.

Prerequisite(s): NUTR-110, NUTR-210
Corequisite(s): none

**DIET 250 Nutrition Education and Counseling 3 cr.**
In this survey course, students will learn to apply current and traditional theories of human behavior as they relate to effective change .Theorists studied include Sigmund Freud, Carl Jung, B.F. Skinner, Carl Rogers and other major behaviorists. Communication and counseling techniques, introduction to behavior modification theories, group process skills, and development of educational tools will be studied.

Prerequisite(s): ENGL-100, BUSN-255
Corequisite(s): DIET-255

**DIET 255 Diet Seminar 1 cr.**
This is the final course offered to graduating seniors. Students will participate in discussions relating to quality dietetic performance. Timely and controversial issues affecting nutrition professionals will be discussed.

Prerequisite(s): DIET program acceptance
Corequisite(s): DIET-250

**DIET 275 Community Field Experience 4 cr.**
The Community Field Experience is conducted in a combination of outpatient based nutrition program settings and long-term care settings. This course is a hands-on practicum that emphasizes the implementation of nutritional care in community and long-term care settings. Students will participate in two different community based nutrition programs selected from the WIC program, the National School Nutrition program, the Area Agency on Aging Senior Nutrition program, the Cooperative Extension, and the Portland based Project on Supported Living. Additionally, students will complete a rotation at a long-term care setting, focusing on the delivery of nutrition care and the administrative functions of a food service department. A minimum of 180 contact hours is required for completion of this rotation.

Prerequisite(s): DIET-155, NUTR-210
Corequisite(s): DIET-200

**DIET 280 Clinical Field Experience 3 cr.**
The Clinical Field Experience is conducted in an acute care setting. This course is a hands-on practicum that emphasizes implementation of nutritional care in acute care settings, and will be exposed to the multi-faceted functions and purposes of hospitals. In addition, students will participate in one professional development activity, one continuing education activity, and one professional networking opportunity in the community. A minimum of 145 contact hours is required for completion of this rotation.

Prerequisite(s): DIET-275
Corequisite(s): none

**NUTR 110 Normal Nutrition & Lab 4 cr.**
This course is an introduction to the field of nutrition, which includes the study of carbohydrates, fats, proteins and other essential nutrients. Students will also gain a workable knowledge of digestion, absorption, and metabolism, life cycle nutrition, nutrition guidelines, and nutrition programs. The concepts covered in the lecture course are explored in greater detail during lab time using a variety of activities including food experiments, anthropometric measurement, nutrient analysis, and enhanced problem sets.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s):

**NUTR 210 Intro to Medical Nutrition Therapy 3 cr.**
This course is designed to investigate the use of nutrition in the treatment of disease. Emphasis will be placed upon diets which modify for specific nutrient groups, calories, and food testures. Special needs of allergy patients, athletes, alcohol use, and fad food claims will also be explored.

Prerequisite(s): NUTR-110
Corequisite(s): none

## *Early Childhood Education Courses (ECED)*

**ECED 100 Intro to Early Childhood Education 3 cr.**
An exploration of the major historical and theoretical influences in early childhood education, which have provided the basis for current day models such as Montessori and Head Start. Discussion topics will include the dynamic roles of teacher, child and family, as well as theories relating to the overall development of the young child.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**ECED 110 Child Development 3 cr.**
This course will explore the major theories of development of the young child (birth to age 8). Through observation and research, students will develop a context in which to understand the multiple variables that affect the growth and development of the young child.

Prerequisite(s): ENGL-050, ENGL0075
Corequisite(s): none

**ECED 150 Infant and Toddler Caregiving 3 cr.**
This course will address methods of caring for and guiding infants and toddlers (pre-natal through 36 months) in group settings. Developmental characteristics and needs of the very young child and the child's family will be examined. The emphasis is on developing competent caregiving skills and on providing a stimulating, developmentally appropriate environment.

Prerequisite(s): ECED-100, ECED-110
Corequisite(s): none

**ECED 160 Interactive Environments 3 cr.**
Students will exploration the nature of social development in young children and how to guide that development in the early childhood classroom. Students will also plan, design and evaluate an indoor

environment. Emphasis will be placed on how to incorporate developmentally appropriate guidance practices for children ages birth through age 8 into a wide variety of child care settings. This course will emphasize the relationship between guidance and the learning environment.

Prerequisite(s): ECED-100, ECED-110
Corequisite(s): none

**ECED 175 Practicum/Seminar I 3 cr.**
Students will work in an approved (licensed) setting for 70 hours under the supervision of a certified professional. Weekly seminars are planned to support and review students' experiences. Students must submit documentation relating theory to practice. Topical focus: health, safety, nutrition and the learning environment. Participants must be matriculated ECE students and obtain departmental approval.

Prerequisite(s): ECED-100, ECED-110, Department Permission
Corequisite(s): ECED-150, ECED-160

**ECED 200 Children's Lit & Language Arts 3 cr.**
This course explores the relationship between developmental characteristics of the child and the literary choices we make for them. Students will also examine the types of literature for young children (picture books, fiction, non-fiction, poetry, etc.), various story telling techniques, how environments can enhance emerging literacy and how literature relates to curriculum development.

Prerequisite(s): ECED-160
Corequisite(s): none

**ECED 210 Early Childhood Special Needs 3 cr.**
This course gives students a general understanding of the special education process and procedures at the early childhood level, birth through age 8. Course content enables students to enter practice with a clear set of guidelines for intervention strategies with children and support for families.

Prerequisite(s): ECED-150, ECED-160
Corequisite(s): none

**ECED 220 Observation and Record Keeping 3 cr.**
In this course, students will examine the importance of and various methods of observation as a crucial aspect of the teacher's role in the early childhood classroom. The role of observation in assessing students and planning appropriate curriculum will be addressed. Students will make numerous formal observations (covering all the developmental domains) of one typically developing child. Together these formal observations along with photos, audiotapes, drawings as well as activity plans will comprise a case study to be submitted at the end of the course.

Prerequisite(s): ECED-160
Corequisite(s): none

**ECED 225 Practicum/Seminar II 4 cr.**
Students will work in an approved (licensed) setting for 112 hours under the supervision of a certified professional. Weekly seminars are planned to support and review students' experiences. Topical focus: Motor skills, cognition, creative skills, self-concept and emotional growth and development. Students submit documentation relating theory to practice.

Prerequisite(s): ECED-175 and Department approval
Corequisite(s): none

**ECED 250 The Developing Curriculum 3 cr.**
This course is an exploration of a curriculum framework that sets forth a philosophy of early education. This framework includes learning goals and objectives for young children, as well as developing guidelines for teaching, which address all aspects of the child's development.

Prerequisite(s): ECED-200, ECED-210, ECED-220
Corequisite(s): none

**ECED 260 Early Childhood Program Admin 3 cr.**
This course is an overview of early childhood professions and the components necessary to start and operate a quality center-based program, with applicability to family child care homes. The specific topics will include budgets, needs assessments, staffing and program evaluations.

Prerequisite(s): ECED-160 and Department approval
Corequisite(s): none

**ECED 270 School, Home, & Community Relations 3 cr.**
This course is an exploration of relationships found among children, their families and the community. By examining the changing family structure and the various roles and interactions of family members, we will address issues relevant to young children as they socialize at home and in the community. Special consideration will be given to the factors affecting family life (such as urban/rural living, socio-cultural, racial and economic realities), and the changing role of families in society today.

Prerequisite(s): none
Corequisite(s): none

**ECED 275 Practicum/Seminar III 6 cr.**
Students will work in an approved (licensed) setting for 208 hours under the supervision of a certified professional. Weekly seminars are planned to support

and review students' experience. Students must submit documentation relating theory to practice in the following functional areas: promoting social skills, providing guidance, family involvement, program management and promoting professionalism.

Prerequisite(s): ECED-225
Corequisite(s): none

## *Economics Courses (ECON)*

**ECON 120 Microeconomics 3 cr.**
This course is an introduction to the analysis of firms and consumers in a market economy: the functioning of prices, economic decision-making by procedures and consumers, and market structure. Topics discussed include consumer producers and consumer behavior, production choices and production costs, industry structure and resource pricing.

Prerequisite(s): MATH-050
Corequisite(s): none

**ECON 125 Macroeconomics 3 cr.**
This course is an introduction to the modern economy both at the national and international levels. Topics include production of goods and services, consumption, employment, inflation, government fiscal and monetary policy, and causes of economic growth or decline. A special feature of this course is that students will manage their own hypothetical investment portfolio during the semester.

Prerequisite(s): MATH-050
Corequisite(s): none

## *Education Courses (EDUC)*

**EDUC 100 Introduction to Teaching 3 cr.**
Building on the research about how human beings learn, this course will expose students to the parallels between human cognition and teaching for learning with deep levels of understanding. Students will be exposed to the many facets of teaching, from a successful classroom environment, to the changing roles of teachers in the information age, to the impact and challenges of learner diversity, and the issues involved in school reform. The course format will emphasize group work and thinking as well as individual critical reflection on topics throughout.

Prerequisite(s): MATH-050
Corequisite(s): ENGL-100

**EDUC 105 Issues in American Education 3 cr.**
This course will introduce students to the major issues and challenges surrounding education and schooling in the United States Students will study the purposes of schooling, the trends in education, and strategies that have been used to address emerging problems/needs. The course will also cover role and impact of communities, educational bureaucracies, government (local, state, and federal), and other factors on education and education systems.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**EDUC 220 Found. Literacy Development 3 cr.**
Learning to Read and Reading to Learn. It is often assumed that learning how to read is a basic developmental milestone, just like learning how to walk and talk. Educators understand that learning how to read is a both a dynamic and complex intellectual process. This course explores the research on language acquisition and development in children as a way to better understand how students begin to acquire and progress through requisite skills to produce both confident and competent readers. Group work, group inquiry, and field work in classrooms are integral parts of this course.

Prerequisite(s): ENGL-100
Corequisite(s): none

## *Electrical Courses (ELEC)*

**ELEC 100 Basic Electrical Principles - HVAC 3 cr.**
This course is a fundamental approach to the study of basic electrical principles, such as: safety, static and current electricity, Ohm's Law, series and parallel circuits; Kirschhoff's Laws, magnetism and its applications, chemical and heating effects, electromagnetic induction, alternating current, and measuring instruments. Classroom demonstrations with student participation are included.

Prerequisite(s): HVAC program acceptance
Corequisite(s): none

**ELEC 103 Basic Electronics for HVAC 3 cr.**
This course is a study of system controls as applied to large gas and oil fired appliances. The course covers the systems controls utilized to maintain safe and reliable automatic operation of heat and steam generators.

Prerequisite(s): ELEC-100, HVAC-115
Corequisite(s): HVAC-215

**ELEC 105 Basic Electricity I 2 cr.**
This course is one of two foundational courses in the study of electricity. It examines direct current (DC) circuits, voltage, current, resistance and power. Students will learn to build, test and troubleshoot different types of circuits (series, parallel and series-parallel). A grade of C or better is required to move onto the next electrical course (ELEC-115).

Prerequisite(s): MATH-050
Corequisite(s): none

**ELEC 110 DC Circuits 3 cr.**
This is one of two foundational courses in the study of electricity. It examines the principles of electricity (voltage, current, resistance, power) and the electric circuit. Common circuits (series, parallel, series-parallel) are examined as well as circuit theorems including Superposition, Thevenin's Theorem and Maximum Power Transfer. Troubleshooting skills are emphasized.

Prerequisite(s): none
Corequisite(s): MATH-140 or MATH-145

**ELEC 115 Basic Electricity II 2 cr.**
Basic Electricity II is the 2nd of the two foundational courses in electricity. Students will examine the principles of alternating current (AC) electricity including peak and RMS voltages, frequency, power factor and the impact of inductors and capacitors placed in AC circuits. Series and parallel RL, RC and RLC circuits will be examined. A grade of C or better is required to move on to subsequent electrical courses.

Prerequisite(s): ELEC-105 w/grade of C or better
Corequisite(s): MATH-145

**ELEC 120 Digital Electronics 3 cr.**
Digital electronics is the study of the logic circuits and components that control devices from cell phones and DVD players to computers and industrial control devices. Numbering systems (binary, octal, hexidecimal) will be examined . The student will study and connect all basic gates, combination circuits, arithmetic circuits, counters, flip flops and registers.

Prerequisite(s): ELEC-110 w/grade of C or better
Corequisite(s): none

**ELEC 130 Programmable Logic Controllers 3 cr.**
This course covers the use of programmable logic controllers (PLC's) in the field of automation and process control. By using the PLC, a computer interface to connected Inputs/Outputs (I/O), and software tools, the technician can control and troubleshoot the most sophisticated systems. Students will work with two PLC platforms. Using simulation software will provide exposure to the Allen Bradley SLC500 platform. The GE Fanuc VersaMax platform will be examined with a lab fully equipped with hardware and software.

Prerequisite(s): ELEC-120
Corequisite(s): none

**ELEC 140 AC Circuits 3 cr.**
This course is a study of alternating circuits including magnetism, electromagnetic induction, AC current and voltage, AC circuits, basic inductance, capacitance, and RC and L/R time constants, complex numbers, phasor diagrams, AC RLC circuit analysis, power factor and power factor correction, resonance and filters.

Prerequisite(s): ELEC-110 w/C or better
Corequisite(s): MATH-145 or MATH-160

**ELEC 150 Transformers 2 cr.**
This course covers the theory associated with Polyphase Circuits and the comparison between single-phase and polyphase power generation; balanced and unbalanced 'wye' and 'delta' circuits; use of various wattmeters in various configurations; power factor and power factor correction techniques; single and three phase transformers; percent voltage regulation; transformer impedances.

Prerequisite(s): ELEC-115 w/grade of C or better
Corequisite(s): none

**ELEC 160 Controls I 3 cr.**
Controls I introduces students to residential wiring materials and techniques. Electrical wire, cable, devices and other materials are examined. In addition, wiring schematics utilizing device symbols will be reviewed. The National Electrical Code will be referenced to ensure safe electrical installations in the lab.

Prerequisite(s): ELEC-105 w/grade of C or better
Corequisite(s): none

**ELEC 170 Three-Phase Circuits 3 cr.**
This course covers the theory associated with Polyphase Circuits and the comparison between single-phase and polyphase power generation; balanced and unbalanced 'wye' and 'delta' circuits; use of various wattmeters in various configurations; power factor and power factor correction techniques; single- and three-phase transformers; autotransformers; 'vee' to 'vee'; scott tap percent voltage regulation; transformer impedances.

Prerequisite(s): ELEC-140 w/grade of C or better
Corequisite(s): none

**ELEC 175 Wiring Practices 3 cr.**
This course is designed to cover the principles and materials used in residential and some commercial electrical wiring applications. It will focus on devices, materials, and circuitry as they relate to residential and light commercial wiring techniques. Reference to the appropriate articles of the latest edition of the National Electrical Code will be an ongoing part of the course.

Prerequisite(s): ELEC Program Acceptance
Corequisite(s): none

**ELEC 205 Basic Electronics I 3 cr.**
This course examines the construction, operation and application of discrete electronic components including diodes, bipolar and field effect device characteristics, thyristors and operational amplifiers.

Prerequisite(s): ELEC-115 w/grade of C or better
Corequisite(s): none

**ELEC 210 Electrical Topics 3 cr.**
This course will be used to explore important and timely topics in the electrical field. Examples ofthe topics that might be examined would include: cabling and connectors for data and voice communications (networking installations), lighting options (the application and installation of incandescent, florescent, and HID lighting).

Prerequisite(s): ELEC-115 w/grade of C or better
Corequisite(s): none

**ELEC 215 Electrical Machinery 3 cr.**
This course will examine DC and AC generators and motors. Calculations and measurements of current, speed, and torque will be taken on motors. Percent voltage regulation and efficiencies will be taken on generators. Lab experiments will be used to better understand the theory behind electrical machines.

Prerequisite(s): ELEC-170
Corequisite(s): none

**ELEC 220 Electric Motors 2 cr.**
This course will cover DC and AC generators and motors. The student will examine DC shunt, series and compound machines, single and three phase induction motors and three phase alternators in the class and lab.

Prerequisite(s): ELEC-150
Corequisite(s): none

**ELEC 230 Industrial Electronics 3 cr.**
This course covers discrete and integrated circuit devices including capacitors, diodes, bipolar junction transistors, field effect transistors, SCR's, triacs, and operational amplifiers. Troubleshooting skills will be emphasized.

Prerequisite(s): ELEC-140 w/grade of C or better
Corequisite(s): none

**ELEC 240 Fluid Power Systems 3 cr.**
This course is an overview of basic components, applications, and circuitry involved in hydraulics and pneumatics. Lecture and lab experiments involve design, purpose, construction, and the basic maintenance of fluid power devices and systems.

Prerequisite(s): ELEC-130 *OR* HEMA program acceptance
Corequisite(s): none

**ELEC 250 National Electrical Code 3 cr.**
This course will examine the rules, regulations and requirements of the current version of the National Electrical Code for safe electrical installations. Examples, calculations and graphics will be used to explain requirements to better prepare students to take the State exam.

Prerequisite(s): ELEC-215 or ELEC-220 or permission
Corequisite(s): none

**ELEC 255 Electrical Blueprint Reading 3 cr.**
This course is designed to cover the fundamentals of blue print reading and specification reading skills. Focus will be on developing efficient and accurate print reading skills in the areas of electrical construction and maintenance. Specifications are presented and reinforced through actual print reading exercises offering practice in interpretation and analysis in various prints in the residential, commercial, and industrial fields.

Prerequisite(s): ELEC-115 w/grade of C or better
Corequisite(s): none

**ELEC 260 Motor Controls and Automation 3 cr.**
This course covers the theory, study, and application of electro-mechanical devices; ladder logic diagrams; control wiring techniques; electronic motor starters and circuits; proximity and photoelectric sensors; variable frequency drives.

Prerequisite(s): ELEC-215
Corequisite(s): none

**ELEC 265 Renewable Energy Resources 3 cr.**
This course is designed to cover the principles of electricity generation using wind, solar, hydro, and biomass alternative energy sources. Emphasis will be on characteristics, design, and implementation of direct and electromechanical energy conversion; types of storage devices; large-scale applications; and power system issues associated with integration of these technologies.

Prerequisite(s): ELEC-140 w/grade of C or better or permission
Corequisite(s): none

**ELEC 270 Electrical Communication Systems 1 cr.**
This course covers the principles and application of the latest security, protective, and data communications systems for residential and commercial buildings.

Focus will be on the concepts and practices of security and information transmission through various communication media, such as radio, television, telephone networks, data communications, satellites, and optical fiber.

Prerequisite(s): ELEC-175 or permission
Corequisite(s): none

**ELEC 280 Controls II 2 cr.**
The theory and application of electro-mechanical devices using relays and switches, the study of ladder logic diagrams, the theory and application of motor starter circuits, sensor technology and reduced voltage starting systems.

Prerequisite(s): ELEC-150
Corequisite(s): none

## *Emergency Medical Services / Paramedicine Courses (EMSP)*

**EMSP 101 Introduction to Paramedicine 3 cr.**
This is an introduction to the Paramedic program. Included in this course are the roles and responsibilities of a paramedic, an overview of EMS systems, the medical-legal implications of providing emergency care, EMS communications including documentation, and medical terminology. Classes also cover personal well-being, fitness, effective communication, incident management, and current EMS research topics. Entrance into this course requires that students are Basic Emergency Medical Technicians.

Prerequisite(s): EMSP program acceptance
Corequisite(s): none

**EMSP 110 Paramedic Procedures I 3 cr.**
This course will develop the skills needed to perform a patient assessment including scene safety, history taking, techniques of physical exam, documentation, and the recognition and treatment of life threatening conditions. A review of the respiratory system and respiratory management are covered in this course.

Prerequisite(s): EMSP program acceptance
Corequisite(s): none

**EMSP 150 Cardiology I 3 cr.**
This course is designed to provide paramedic students with an understanding of the cardiovascular system including conduction system of the heart, electrocardiography, 12 lead ECG's, and beginning treatment of a patient with chest pain. Students will demonstrate use of ECG monitor/defibrillator including defibrillation, non-invasive pacing, and cardioversion. Topics include a review of the anatomy and physiology of the heart and circulatory system, electrophysiology, and assessment of the cardiac patient.

Prerequisite(s): EMSP-110
Corequisite(s): none

**EMSP 160 Paramedic Procedures II 3 cr.**
This course will continue the skills needed to perform a patient assessment and the recognition and treatment of life-threatening conditions. Intravenous therapy, advanced airway management, needle and surgical cricothyrotomy, chest decompression, interosseous infusions and medication administration are some of the procedures that will be presented.

Prerequisite(s): EMSP-110
Corequisite(s): EMSP-161

**EMSP 161 Paramedic Procedures II Lab 1 cr.**
This course taken concurrently with EMSP-160 will provide students with the opportunity to synthesize cognitive and psychomotor skills in the laboratory setting. Students will be expected to successfully complete a comprehensive adult and pediatric assessment, basic and advanced airway skills, intravenous therapy, and medication administration. The general format of the course will follow that of the lecture.

Prerequisite(s): none
Corequisite(s): EMSP-160

**EMSP 200 Clinical Practicum I 3 cr.**
Paramedic students will be scheduled for 200 hours of clinical experience in their first clinical practicum. Students will begin to integrate didactic knowledge with clinical education under the supervision of a preceptor. Students will complete clinical rotations in a variety of medical related facilities to include emergency divisions, clinics, critical care units, respiratory therapy, surgical units, and EMS services. Students will be required to document all clinical time and complete a minimum number of patient assessments, intubations, medication administration, and IV cannulations.

Prerequisite(s): BIOL-135, BIOL-136, EMSP-101, EMSP-150, EMSP-155, EMSP-160, EMSP-161
Corequisite(s): none

**EMSP 205 Trauma Management 4 cr.**
This class will consist of the pathophysiology and management of trauma patients to include, but not limited to: mechanism of injury, assessment of the trauma patient, management of head injuries, chest injuries, abdominal injuries, spinal injuries, orthopedic and pediatric injuries, management of the

multitrauma patient, management of special airway problems, and current trends in trauma management.

Prerequisite(s): BIOL-135, BIOL-136, EMSP-101, EMSP-150, EMSP-155, EMSP-160, EMSP-161
Corequisite(s): none

**EMSP 210 Medical Emergencies I 4 cr.**
This class will consist of lecture as well as hands-on practice in the classroom. After reaching competency in patient assessment skills, students will concentrate on airway and ventilation, respiratory disorders, nervous system disorders, endocrinology, anaphylaxis, gastroenterology, renal failure and hematology.

Prerequisite(s): BIOL-135, BIOL-136, EMSP-101, EMSP-150, EMSP-155, EMSP-160, EMSP-161
Corequisite(s): none

**EMSP 215 Pediatric Emergencies 3 cr.**
This course will allow students to integrate pathophysiological principles and assessment findings to formulate a field impression, and to implement a treatment plan of the pediatric and neonatal patient. Topics will include assessment and management for respiratory, cardiac, trauma, neurological, obstetrical and gynecological emergencies.

Prerequisite(s): BIOL-135, BIOL-136, EMSP-101, EMSP-150, EMSP-155, EMSP-160, EMSP-161
Corequisite(s): none

**EMSP 220 Advanced Cardiology 3 cr.**
This course provides an in-depth study into the pathophysiology and management of cardiovascular disease and related emergencies. Topics include a review of the cardiac patient, pathophysiology of atherosclerosis, specific conditions resulting from the atherosclerotic heart disease, peripheral vascular emergencies, pharmacologic intervention, dysrhythmia recognition, and management of cardiac emergencies.

Prerequisite(s): BIOL-135, BIOL-136, EMSP-101, EMSP-150, EMSP-155, EMSP-160, EMSP-161
Corequisite(s): none

**EMSP 225 Medical Emergencies II 4 cr.**
This class consists of lectures as well as hands-on skills in the classroom. After reaching competency in patient assessment skills, students will concentrate on environmental emergencies, behavioral and psychiatric disorders, toxicology, infectious diseases, geriatric emergencies, patients with special challenges, and acute interventions for chronic care patients.
Prerequisite(s): BIOL-135, BIOL-136, EMSP-101, EMSP-150, EMSP-155, EMSP-160, EMSP-161
Corequisite(s): none

**EMSP 250 Clinical Practicum II 3 cr.**
Paramedic students will be scheduled for 200 hours of clinical experience in their second clinical practicum. Students will continue to gain clinical experience integrating cognitive and psychomotor skills under the supervision of a preceptor. Students will complete clinical rotations in a variety of medical related facilities to include paramedic services, emergency divisions, critical care units, anesthesia, psychiatric, pediatrics, and labor and delivery. Students will be required to document all clinical time and complete a minimum number of patient assessments, intubations, medication administration, and IV cannulations.

Prerequisite(s): EMSP-200
Corequisite(s): none

**EMSP 260 Assessment Based Management 2 cr.**
This senior level course will integrate the principles of assessment-based management to perform an appropriate assessment and implement the management plan for patients with common complaints.

Prerequisite(s): EMSP-210, EMSP-215, EMSP-220, EMSP-225
Corequisite(s): none

**EMSP 265 Rescue Operations 3 cr.**
At the completion of this senior level class, students will be able to integrate the principles of rescue awareness and operations to safely rescue a patient from water, hazardous atmospheres, highways and hazardous terrain. Students will integrate the principles of rescue awareness and operations in formulating treatment for the patient(s).

Prerequisite(s): 30 credits toward major
Corequisite(s): none

**EMSP 270 Clinical Practicum III 3 cr.**
Paramedic students will be scheduled for a minimum of 200 hours of clinical experience in their third clinical practicum. During this clinical rotation students will encounter more technical and challenging experiences progressing into the role of teamleader under the supervision of a preceptor. Students will be required to document all clinical time and complete a minimum of patient assessments, intubations, IV cannulations, IV medication administrations, and medication administrations.

Prerequisite(s): EMSP-250
Corequisite(s): EMSP-275

**EMSP 275 Clinical Practicum IV 1 cr.**
This final clinical for paramedic students will consist of a minimum 90-hour internship in a high volume EMS service. Students will be expected to function as an

entry-level paramedic during their ALS field internship under the direct supervision of a paramedic preceptor.

Prerequisite(s): EMSP-250
Corequisite(s): EMSP-270

**EMSP 280 Paramedic Boards Review 1 cr.**
This 24-hour course taken in the final semester will review major topics and prepare senior paramedic students for the National Registry paramedic cognitive and psychomotor exam.

Prerequisite(s): EMSP-210, EMSP-215, EMSP-220, EMSP-225
Corequisite(s): none

## *Emergency Medical Technician Courses (EMST)*

**EMST 100 Emergency Medical Technician 5 cr.**
This course is designed to give students, through lecture, practical lab, and clinical experience, the entry-level knowledge and skills necessary to provide basic emergency medical care and transportation for patients who access the emergency medical system. Upon successful course completion, students are eligible to take the National Registry of EMT's certification examinations. Students will perform interventions necessary to provide patient care and transportation including basic level patient assessment, airway management and oxygen administration, CPR, spinal immobilization, shock management, bandaging and splinting, and medication administration. Knowledge and skills obtained at the EMT level provide the foundation for further advancement to Advanced EMT and Paramedic.

Prerequisite(s): none
Corequisite(s): none

**EMST 101 Emergency Medical Technician – Basic I 3 cr.**
This course is part one of a two-semester sequence designed to give students, through lecture, practical lab, and clinical experience, the entry-level knowledge and skills necessary to provide basic emergency medical care and transportation for patients who access the emergency medical system. Students will perform interventions necessary to provide patient care and transportation including basic level patient assessment, airway management and oxygen administration, CPR, spinal immobilization, shock management, bandaging and splinting, and medication administration. Knowledge and skills obtained at the EMT level provide the foundation for further advancement to Advanced EMT and Paramedic.

Students MUST complete the second class in this two-course sequence, EMST 102, in order to be eligible to take the National Registry of EMT's certification examinations.

Prerequisite(s): none
Corequisite(s): none

**EMST 102 Emergency Medical Technician – Basic II 2 cr.**
This course is part two of a two-semester sequence designed to give students, through lecture, practical lab, and clinical experience, the entry-level knowledge and skills necessary to provide basic emergency medical care and transportation for patients who access the emergency medical system. Upon successful course completion, students are eligible to take the National Registry of EMTs certification examinations. Students will perform interventions necessary to provide patient care and transportation including basic level patient assessment, airway management and oxygen administration, CPR, spinal immobilization, shock management, bandaging and splinting, and medication administration. Knowledge and skills obtained at the EMT level provide the foundation for further advancement to Advanced EMT and Paramedic.

Prerequisite(s): EMST-101
Corequisite(s): none

**EMST 105 Ambulance Operations/AVOC 1 cr.**
This course will identify the problems facing ambulance vehicle operators, review the legal responsibilities of emergency vehicle operations, discuss the appropriate use of signaling devices and emergency responses, and provide the opportunity to perform hands-on operation through the driving course.

Prerequisite(s): current, valid driver's license
Corequisite(s): none

## *English Courses (ENGL)*

**ENGL 050 College Reading 3 cr.**
This course is designed to teach the reading and study skills essential to succeed in college. It focuses on the understanding and retention of textbook comprehension skills and on advancing vocabulary and reading fluency skills. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): Appropriate placement
Corequisite(s): none

**ENGL 075 Basic Writing 3 cr.**
This course will include an emphasis on learning to write grammatically correct English sentences and

gaining a mastery of the basics of punctuation. It will also seek to remedy common errors of syntax and vocabulary use. Concurrent with such instruction will be lessons on writing formal essays. The essay process will include re-writing, revision and proofreading. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): Appropriate placement
Corequisite(s): none

**ENGL 100 English Composition 3 cr.**
English Composition is the introduction to college writing across the curriculum. It will introduce students to the standard rhetorical modes which will be assigned in this course but will also be assigned in other courses in other disciplines. An emphasis will be placed upon writing as a process of creating first drafts then revising, rewriting and proofreading them for accuracy, clarity and succinctness of written expression. The course will explore the distinctions between spoken and written, formal and informal uses of language. The course will also provide an introduction to research and the task of producing a formal research paper that follows MLA style and documentation practices.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**ENGL 110 Oral Communications 3 cr.**
This course in public speaking includes organization of speech materials, practice of oral reading, participation in panel discussions, and presentations of informal talks and formal speeches. Self-evaluation and growth are encouraged through the use of videotaping.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**ENGL 115 Introduction to Literature 3 cr.**
This course introduces the student to the literary genres: poetry, drama, fiction and non-fiction It emphasizes literature as a reflection of culture. This includes the discussion of literary terms, close textual reading, and historical backgrounds. This course has been designated as a writing-intensive course.

Prerequisite(s): ENGL-100
Corequisite(s): none

**ENGL 200 Creative Writing 3 cr.**
This course, which is a writing workshop, will welcome all four of the major literary genres: fiction, poetry, drama, and the personal essay. Most of class time will be spent discussing student manuscripts; the remaining time will consist of lectures on craft, critical discussion of assigned readings, and writing exercises. While a book will be assigned, student's original writing is the primary "text" which will be submitted to the class in regular rotation so that all have equal air time.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**ENGL 225 Writing Tutors 3 cr.**
This course prepares skilled writing students to work as peer tutors in the college's Learning Assistance Center. It provides advanced instruction in grammar and composition, with special emphasis on the writing process. Through the weekly seminar and tutoring sessions, students develop teaching strategies, problem-solving skills, and greater understanding of composition theory and practice.

Prerequisite(s): ENGL-100
Corequisite(s): none

## *Engineering Courses (ENGR)*

**ENGR 100 Introduction to Engineering 2 cr.**
This course is intended for students who are interested in exploring the field of engineering and its many specialties. Students will gain an understanding of the engineer's approach to problem solving using active learning techniques. The course will introduce students to the theoretical and applied aspects of engineering, focusing on basic engineering principles. Students will work in teams to analyze and solve design and production problems throughout the semester. Guest speakers and site visits will assist students in gaining an understanding of the profession and its role in our technological society

Prerequisite(s): ENGL-075
Corequisite(s): none

**ENGR 200 Engineering Statics 3 cr.**
Statics is the study of forces on objects in equilibrium. Students will examine two and three dimensional force systems, properties of area and friction, stress and strain, centers of gravity and torque. Demonstrations, simulations, and web-based course materials will be used to illustrate concepts.

Prerequisite(s): ENGR-100, PHYS-150, and MATH-260
Corequisite(s): none

**ENGR 250 Strength of Materials 3 cr.**
This course is an introduction to the mechanics of material science examining the principles of strength and the properties of materials. Topics include stress and strain analysis, tension, equilibrium, moments of inertia and Mohr Circle.

Prerequisite(s): ENGR-200 and MATH-270
Corequisite(s): none

## *Environmental Science Courses (ENVR)*

**ENVR 110 Fund. Environmental Science 4 cr.**
This survey course is designed to provide students with a sound foundation in basic principles and unifying concepts of Environmental Science Topic selection is based on major themes of modern environmental sciences: humans and sustainability; science and ecological principles; sustaining biodiversity and natural resources; and sustaining environmental quality and human societies. Students will gain an awareness of the importance of Earth's systems in sustaining our daily lives, plus the scientific foundation and tools needed to apply critical thought to contemporary environmental issues. The course is intended for both science and non-science majors.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s): none

**ENVR 115 Earth Science 4 cr.**
This survey course is designed to provide students with a sound foundation in basic principles and unifying concepts of modern geology Major topics include: 1) the study of geologic processes and materials including, plate tectonics, erosion, soils, rocks and minerals; 2) geologic hazards such as floods, landslides, volcanoes and earthquakes; 3) geologic resources such as water, fossil fuels, and metals; and 4) environmental challenges such as water supply, waste management, depleting energy and mineral resources, and global change. We will study these topics from a global perspective, paying particular attention to their importance in Maine and New England. Weekly laboratories will compliment lecture topics and will include field trips, mapping exercises, internet exercises, guest speakers, and laboratory analysis of earth materials.

Prerequisite(s): none
Corequisite(s): none

**ENVR 120 Environmental Geology 4 cr.**
Environmental Geology is a course developed to investigate how Geology determines the success and failure of living systems across our globe. Topics covering volcanism, earthquakes erosion, pollution and their effect on Biological systems will be explored. Additionally, basic geological principles that have formed and continue to change our world will be discussed.

Prerequisite(s): none
Corequisite(s): none

## *English for Speakers of Other Languages Courses (ESOL)*

**ESOL 065 Intermediate Speak/Listen 3 cr.**
This high-intermediate course focuses on the speaking and listening and note-taking skills that are necessary in an academic setting Students will discuss academic reading materials in small groups and begin to develop a method for delivering an oral presentation to a large group. Students will continue to develop a system for academic note-taking and learn how to use their notes to answer comprehension questions and summarize lectures. This course must be completed with a C or better to enroll in ESOL-085. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): ESOL placement test
Corequisite(s): none

**ESOL 070 Intermediate Reading 3 cr.**
This high-intermediate course focuses on reading skills and vocabulary development Students will be asked to demonstrate an understanding of reading materials with comprehension questions and writing assignments. Grammar is taught in the context of reading materials and in student generated writing. This course must be completed with a C or better to enroll in ESOL-090. The credits earned in this course will not count toward a degree with SMCC.
Prerequisite(s): ESOL placement test
Corequisite(s): none

**ESOL 075 Intermediate Writing 3 cr.**
This high-intermediate course focuses on reading skills and vocabulary development Students will be asked to demonstrate an understanding of reading materials with comprehension questions and writing assignments. Grammar is taught in the context of reading materials and in student generated writing. This course must be completed with a C grade or better in order to take ES0L-095. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): ESOL placement test
Corequisite(s): none

**ESOL 085 Advanced Speaking & Listening 3 cr.**
This advanced course focuses on the speaking skills and listening and note-taking skills that are necessary in an academic setting Students will discuss academic reading materials in small groups. Students will develop a method for delivering an oral presentation to a large group and increase self-confidence. Students will develop a system for academic note-taking and learn how to use their notes to answer comprehension questions and summarize lectures. Students will listen to academic lectures, take notes, and learn how to write essays assimilating the information presented in

the class lectures and readings, with their own opinions. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): ESOL placement test
Corequisite(s): none

**ESOL 090 Advanced Reading 3 cr.**
This advanced course focuses on critical and analytical reading skills and vocabulary development that are necessary for content courses Students will be asked to demonstrate an understanding of reading materials with a variety of comprehension exercises and writing assignments. Grammar is taught in the context of the readings and student generated writing. This course must be completed with a C grade or better in order to take college level courses. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): ESOL placement test
Corequisite(s): none

**ESOL 095 Advanced Writing 3 cr.**
This advanced course focuses on academic writing skills necessary for content courses Students will continue to develop their abilities with sentence structure, paragraph writing, and essays from personal experience and readings. Students will learn to cite sources and answer essay questions from readings. Grammar is taught in the context of the readings and student generated writing. This course must be completed with a C grade or better in order to take college level courses. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): ESOL placement test
Corequisite(s): none

## *Fire Science Technology Courses (FIRE)*

**FIRE 105 Introduction to Fire Protection 3 cr.**
This course is designed to be the initial course of the Fire Science Technology program. It is recommended for students new to the fire service. The course is a survey of the fire protection field, with emphasis on developing an awareness of history, organization, career options, and study skills.

Prerequisite(s): none
Corequisite(s): none

**FIRE 110 Fire Protection Systems 3 cr.**
This course is an introduction to fire protection and detection systems and their role in community fire protection. The focus of this course is on understanding fire behavior and the basic components that make up fire protection systems. Topics covered in this class include: Fire behavior, portable fire extinguishers, fire alarm and detection systems, standpipe systems, commercial/industrial automatic sprinkler systems, residential sprinkler systems, special extinguishing systems, and community fire protection.

Prerequisite(s): none
Corequisite(s): FIRE-105

**FIRE 115 Fire Service Building Construction 3 cr.**
This course is designed to be a comprehensive study of building materials, methods and design as they are related to fire protection and suppression. Topics covered in this class include: building materials and their impact on the fire service, types of construction, methods of construction, fire protection features, building codes, an examination of fire's effect on buildings and evaluation of fire damage. Many case studies are used during the delivery of this course to illustrate the importance of understanding building construction. This course concludes with presentations of semester long student projects.

Prerequisite(s): none
Corequisite(s): FIRE-105

**FIRE 125 FT Student Live-In Program 1 cr.**
This course, one in a continuous series of Service Learning courses, provides the Fire Science Technology student with experiential learning opportunities in the field of fire protection. Service Learning credits are available to the student for each semester with a maximum of four credits awarded. The student will live at an area fire station and become a fully participating member of that department. The student will learn and practice job responsibilities in the functional areas of fire suppression, fire prevention, equipment maintenance, and facility maintenance. The student will keep a log of his/her activities and reflect on experiences in regular group meetings. This course is available only to full time, matriculated Fire Science Technology students participating in the Southern Maine Community College Live-In Program and may be taken up to four times for credit.

Prerequisite(s): Program acceptance (FIRE or EMSP)
Corequisite(s): none

**FIRE 140 Fire in American Society 3 cr.**
This course traces the challenges faced by early settlers in the New World, how they protected themselves, their homes and their property from the ravages of fire. The evolution of building construction and it's impact on how fires react, laws relating to maintaining fire as a friend and how to control it as a foe, and the equipment used to combat fires and water supply to maintain the battle will be examined in detail. Major fires in American history will be

examined to determine how they changed the very fabric of the American lifestyle.

Prerequisite(s): none
Corequisite(s): none

**FIRE 150 Fire Inspector 3 cr.**
This course provides a demonstration of the basics of municipal fire inspection and code enforcement principles. Students will learn the basics of inspections, the identification of common hazards, the basics of special inspections, and the use of NFPA 101 Life Safety Codes and NFPA 1 Uniform Fire Code.

Prerequisite(s): none
Corequisite(s): none

**FIRE 155 Fire Service Hydraulics 3 cr.**
This is a foundation course in the principles of hydraulics as applied to fire service hose and appliances. This course applies theoretical and application principles to solve hydraulics based challenges. Topics include principles involving water at rest and in motion, solving hydraulic problems in fire hose layouts by exact mathematical calculation and fire ground estimation, establishing the ability to make rapid fire ground hydraulic determinations, and to evaluate the efficiency and effectiveness of various hydraulic systems including hydrant flows.

Prerequisite(s): none
Corequisite(s): MATH-140

**FIRE 160 Fire Investigation I 3 cr.**
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

Prerequisite(s): none
Corequisite(s): none

**FIRE 165 Introduction to Wildland Fire 3 cr.**
Wildfires are responsible for property damage throughout Maine and the United States every year. In addition, prescribed fire is used as land management tool to accomplish ecological objectives. This class will provide students with an introduction to wildland fire management. The class will cover topics in fire behavior, fire weather, fire ecology, and fuel management. This class will prepare an untrained wildland firefighter with the tools required to work on a wildland or prescribed fire. Students can earn National Wildland Coordinating Group (NWCG) certification for Wildland firefighter with this course and an additional eight hour field exercise.

Prerequisite(s): none
Corequisite(s): none

**FIRE 170 Wildland Fire Behavior 3 cr.**
Throughout history, wildland fires have shaped much of the natural landscape in New England as well as the rest of the United States. Relating fire behavior to modern landscapes will help managers make informed decisions about fuel management practices. This class will provide students with an understanding of expected fire behavior. Topics will include an in depth understanding of weather, topography, and fuels effect on wildland fire behavior. Although this class is not a firefighting class, a field component should be expected with the possibility to observe prescribed fire. It is recommended that students take Introduction to Wildland Fire management prior to this class.

Prerequisite(s): MATH-020
Corequisite(s): none

**FIRE 200 Hazardous Materials 3 cr.**
Because of the ever-increasing rate at which new industrial materials are being introduced into our world, and because it is the fire-fighter or fire-protection specialist who must deal with the hazards associated with these new chemicals, this is a particularly valuable course. This course is designed to meet the NFPA 472 standard at the ""Operations"" level. Some of the areas of study include flammable materials, pressurized vessels, cryogenics, oxidizing agents, corrosives, explosive and toxic materials. Students will become familiar with tools, equipment and response techniques as well as the federal and state laws that govern the handling of hazardous materials and the incidents they create. This course concludes with presentations of semester long student projects. In conjunction with this course, there is an opportunity to participate in a field training that may result in State Hazardous Materials certification at the "Operations" level.

Prerequisite(s): 30 credits or more
Corequisite(s): none

**FIRE 205 Fire & Life Safety Educator 3 cr.**
This course is designed to meet the requirements of the NFPA 1035, the professional qualification standards for Public Fire and Life Safety Educator I and II. The course combines student activities, instructor presentations and community-based projects to develop skills and knowledge in the field. The course will provide students with the knowledge to design a public fire and life safety program, to organize a budget to meet the needs of the program, and to present a fire safety or life safety education presentation. Students can earn state certification

from successful completion of this course and community based teaching assignments.

Prerequisite(s): none
Corequisite(s): none

**FIRE 210 Fire Instructor 3 cr.**
This course is designed to meet the requirements of NFPA 1041, the professional qualifications for Fire Instructor, and assist current and aspiring fire/rescue officers in teaching fire-service-oriented subjects and developing an understanding of the various methods of teaching fire/rescue occupational subjects. This course will aid students in preparing instructor lesson plans and help them to recognize and practice the effective use of other instructor resource materials. Students can earn state and national certification from successful completion of this course and a practical teaching demonstration.

Prerequisite(s): none
Corequisite(s): none

**FIRE 215 Fire Service Leadership 3 cr.**
This course is designed to develop a foundation of leadership, supervision and communication skills for the fire officer. The subject matter, instruction, activities, and assignments will follow the recommendations for Fire Officer I and II as presented in NFPA 1021, Standard for Fire Officer Professional Qualifications. Students will study basic issues related to all supervision, as well as issues specific to fire service supervision. Students can earn state and national Fire Officer I & II certification by successfully completing this course, additional writing assignments, and community-based training and certification requirements. This course has been designated as a writing-intensive course.

Prerequisite(s): ENGL-100
Corequisite(s): none

**FIRE 230 Water Supply Analysis 3 cr.**
Water is the most important and frequently used extinguishment medium used by the emergency fire services. The effective application of limited water resources is critical to successful control of unwanted fire. Students will gain a basic understanding of fire protection water supply systems in use in rural communities, urban communities and industrial settings. This course will require the application of hydraulic principles and pre-incident planning. Along with classroom lecture, the course will involve significant field application of classroom concepts.

Prerequisite(s): FIRE-155
Corequisite(s): none

**FIRE 250 Fire Ground Operations 3 cr.**
This course offers basic tactics and strategies to the firefighter. The course looks at three major response apparatus and explores the internal structure and skills needed to operate at the scene of a fire.

Prerequisite(s): 30 credits earned
Corequisite(s): none

**FIRE 260 Fire Administration 3 cr.**
This course is a broad overview of the management practices employed in today's fire/rescue services. The course focuses on the role of the fire administrator within the context of municipal government. The course will emphasize managerial ethics, accountability, the changing environment, planning, financial management, and preparing for the future. This course also requires development and defense of a Fire Science Thesis Portfolio documenting attainment of SMCC Fire Science learning outcomes. This course has been designated as a writing-intensive course.

Prerequisite(s): ENGL-100
Corequisite(s): none

## *French Courses (FREN)*

**FREN 100 Conversational French 4 cr.**
This course is designed for students of all levels of French The course focuses on the students'' ability to produce the language orally. Content begins with basics and becomes increasingly complex as the semester progresses. The course does not include explanations of grammar and all assessments are done orally. The course is intended for people who plan to use spoken French in some capacity in their lives.
Prerequisite(s): none
Corequisite(s): none

**FREN 101 Beginning French I 4 cr.**
This beginner's course in French equally emphasizes the four skills of language learning: listening comprehension, speaking, reading and writing Interactive materials and a laboratory component create a multifaceted and challenging learning environment. This course is appropriate for students with two or fewer years of high school French.

Prerequisite(s): none
Corequisite(s): none

**FREN 102 Beginning French II 4 cr.**
This course in French equally emphasizes the four skills of language learning: listening comprehension, speaking, reading and writing Interactive materials and a laboratory component create a multifaceted and challenging learning environment. This course is a

continuation of FREN-101 and follows the course sequence.

Prerequisite(s): FREN-101
Corequisite(s): none

## *Geographic Information Systems Courses (GISS)*

**GISS 150 Intro to Geographic Info Systems 3 cr.**
This computer intensive course provides an overview of cartography, spatial data structures, sources of data used in GIS, and analysis of spatial data. Students will gain an understanding of uses and applications of GIS, as well as a working knowledge of ESRI's ArcMap software. Classes will consist of lectures and computer exercises. Recommended: Knowledge of Windows based software.
Prerequisite(s): none
Corequisite(s): none

**GISS 250 Geographic Info. Systems II 3 cr.**
GISS-250 is an advanced class for students who have taken GISS-150 and wish to advance their skills in an applied fashion. The focus of the course is on development of individual projects. Students will define a real world problem and develop a GIS application which can be used to analyze the problem and make recommendations toward a solution. Students will prepare a report and do a public presentation of their work at the end of the course. Class sessions are used to work on software applications and to meet with individual students to discuss the progress of their projects.

Prerequisite(s): GISS-150
Corequisite(s): none

## *German Courses (GRMN)*

**GRMN 100 German I 4 cr.**
This is a beginner's course in German equally emphasizing the four skills of language learning: listening comprehension, speaking, reading and writing This course is appropriate for students with no prior German knowledge.

Prerequisite(s): none
Corequisite(s): none

**GRMN 200 German II 4 cr.**
This is a continuation of the beginner's course in German equally emphasizing the four skills of language learning: listening comprehension, speaking, reading and writing This course is appropriate for students with little prior German knowledge.

Prerequisite(s): GRMN-100
Corequisite(s): none

## *Health Science Courses (HLTH)*

**HLTH 155 Pharmacology 3 cr.**
This course is designed to provide students with a broad knowledge base of drug therapy. Emphasis is placed on preparing students to safely administer medications to patients (in other clinical courses). Basic pharmacological concepts provide students with essential information related to principles of pharmacology, clinical applications, and biopsychosocial aspects. Lifespan considerations are included within the essential information. Students also focus on major drug categories and a review of body systems. There is not a clinical component for this course.

Prerequisite(s): BIOL-105 or BIOL-130, BIOL-131
Corequisite(s): BIOL-135, BIOL-136 (if BIOL-130/131)

## *Heavy Equipment Maintenance Courses (HEMA)*

**HEMA 100 Intro. to Heavy Equipment Safety 3 cr.**
This introductory course introduces students to workplace safety in the Heavy Equipment Maintenance shop. Safety topics will include shop hazards such as fire, airborne gases, blood borne pathogens and chemical hazards. Students will introduced to the use of and care of hand tools, electric and air tools, as well as hydraulic presses and pullers. Equipment instruction will include the safe operation of lifting equipment, blocking and cribbing, lifting chains, come-alongs, slings, securing chains and binders. Students will receive an introduction to oxygen acetylene torches, cutting and welding equipment. Students will be introduced to the types of heavy machinery they will be working with as well as the proper and safe operation of it. Students will learn how to perform basic maintenance and inspect and test for worn or inoperative mechanical components Students will research service information and specifications utilizing electronic technical information to determine the correct procedures and fluids.

Prerequisite(s): Program acceptance
Corequisite(s): HEOP-100

**HEMA 150 Mobile Construction Equipment Braking Systems 3 cr.**
This course is designed to instruct students in fundamental theory, diagnosis, adjustments and repair of hydraulic, and pneumatic braking systems used primarily in construction mobile equipment. Students will study the functions, construction, operating principles of the braking systems. Students will demonstrate knowledge of and work with components of both wet internal and dry external braking systems. Students will also inspect and test hydraulic wheel

cylinders, both single and double piston and determine necessary repair action. Students will study master cylinder function, construction and operating principles.

Prerequisite(s): none
Corequisite(s): HEMA-100

## *Heavy Equipment Operations Courses (HEOP)*

**HEOP 100 Construction Safety for HEOP 1 cr.**
This course is designed to provide students with knowledge and skills as prescribed by the Occupational Safety and Health Administration This course will provide students with the ability to recognize and avoid hazardous situations as well as the ability to conduct themselves safely on the job site throughout their career. Students who successfully complete this section of the course will earn the industry-recognized credential, OSHA (10 or 30) Hour card.In addition, students enrolled in this course will study aspects of safety prescribed by the Mining Health and Safety Administration as pertinent to heavy equipment operators and laborers who will be working in and around trenches and other excavation work sites.

Prerequisite(s): Program acceptance
Corequisite(s): none

**HEOP 115 Maintenance and Service 3 cr.**
This course is designed to provide students with fundamental knowledge and skills of the Heavy Equipment Operations / construction industry As a result of this course, students will acquire the knowledge to safely work on a heavy equipment construction site. Students will study various types and functions of heavy equipment, as well as how to perform a pre-start safety inspection. Students will learn how to properly start up and shut down the equipment as well as the purpose and use of the operational controls. Students will complete this course with an introduction to construction site layout and grades.

Prerequisite(s): HEOP-100
Corequisite(s): none

**HEOP 130 Backhoe and Excavator (Sim Lab) 3 cr.**
This course will introduce students to the basic operation of a backhoe and/or excavator to perform fundamental procedures required for operation on the job site This simulation lab will provide students with opportunity to practice basic backhoe and excavator operations repetitively. This lab will develop proficiency in preparation for an internship.

Prerequisite(s): HEOP-100
Corequisite(s): none

**HEOP 145 Site Finishing & Grades 3 cr.**
This course is designed to give students the skills to perform print reading, plotting and site preparation of ground work This course describes the use of various types of heavy equipment to finish and trim grades and slopes of roads, pads, ditches and other structures. Information is presented regarding the responsibilities and leadership abilities in relation to organizing and directing workers and operations. Students will understand and interpret production requirements and specifications used for grade layout.

Prerequisite(s): HEOP-100
Corequisite(s): none

**HEOP 160 Bulldozer and Excavator (Sim Lab) 3 cr.**
This course will introduce students to the basic operations of a bulldozer and an excavator to perform fundamental procedures required for operation of each piece of equipment on the job site. This lab will provide students with the opportunity to practice basic skills on a job site associated with the equipment operations repetitively. This lab will develop proficiency in preparation for an internship.

Prerequisite(s): HEOP-115
Corequisite(s): none

**HEOP 175 Heavy Equipment Internship 4 cr.**
The Heavy Equipment Operations Internship comprises on-the-job training provided by employers on actual construction sites A training agreement specifies the tasks the student will be expected to perform. The instructor will determine the number of hours a student will participate in the internship.

Prerequisite(s): HEOP-130, HEOP-145, HEOP-160
Corequisite(s): none

## *History Courses (HIST)*

**HIST 120 World History to 1500 3 cr.**
This is an introductory survey covering the history of the global past from the origins of humanity through the 15th century, from the rise of early civilizations through the moment of European contact in the western hemisphere during the late-15th century. This course will introduce students to the process of thinking historically: students will seek to understand the problems, events, and people of the global past under their own terms and in the broadest contexts. Historians wage vigorous debates over such questions as: How did human society first evolve? What constitutes “civilization”? How has religion changed over time? What has been the significance of cultural exchange between peoples? Students will become attuned to how different the past was to our own

lifetimes, being ever mindful of how even ancient world history has and continues to shape our present.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 125 World History Since 1500 3 cr.**
This is an introductory survey covering the history of the global past from the 15th century through contemporary times, from the moment of European contact in the western hemisphere during the late-15th century through the modern global context. This course will introduce the process of thinking historically: students will seek to understand the problems, events, and people of the global past under their own terms and in the broadest contexts. Students will examine important historical issues such as: How did the modern world evolve? How have institutions such as slavery, religion and capitalism shaped the global experience? What caused nations to emerge and how does nationalism affect individuals? Students will develop an appreciation of how our contemporary world emerged from and is shaped by these critical issues.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 130 United States History to 1877 3 cr.**
This is an introductory survey covering the history of the United States through Reconstruction. This course is designed to acquaint students with most major topics in the American experience ranging from the origins of British settlement in North America through the civil war and the end of reconstruction in 1877. This course will explore the cultures that discovered and created American society and the interactions of European, Native American and African peoples. It also will introduce students to the process of thinking historically, with a focus on original historical sources.
Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 135 United States History Since 1877 3 cr.**
This is an introductory survey covering the history of the United States since the end of Reconstruction. This course is designed to acquaint students with most major topics in the American experience ranging from the aftermath of the Civil War through the contemporary period. Some of the key topics to be covered include: industrialization, progressivism, World Wars I and II, the Great Depression and the Civil Rights Movement. This course also will introduce students to the process of thinking historically, with a focus on original historical sources.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 136 Modern America 3 cr.**
This course examines the history of the United States since World War II, with special focus on the social, cultural, political and foreign policy history that has defined the modern American experience. To examine this history, this course will explore a broad range of topics, from Cold War diplomacy through the nation's current conflicts in Iraq and Afghanistan, from the evolution of major New Left Social movements to the impact of technology, immigration, and party politics in contemporary America. Devoting particular attention to primary source documents and historical artifacts, including popular music and television programs, this course endeavors to understand the roots of the modern United States. This course is offered Spring semester.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 140 Maine & NE Maritime Heritage 3 cr.**
Maine and New England's Maritime Heritage is designed to give students an introduction to Maine's maritime history in the context of the larger history of the region and country. Students will be introduced to maritime history at the time of the Native Americans, buy the primary focus will be 1500 to the present day, from sailing vessels to supertankers. Course topics will include: early fishing communities in the area, Native Americans, minorities and women in the seafaring community, sail power to steam power, and the current state of the region's maritime realm.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 145 Maine History 3 cr.**
Maine has a rich and varied history, at once unique and simultaneously deeply enmeshed in the broader history of the United States. The course will develop both the singularity of the Maine experience and the contributions of the state to the growth of the nation in various periods. Primary attention will be given to the economic and social development of Maine, that is "history from the bottom up." Consistent stress will also be placed on the relationships of Maine's past to contemporary issues facing the state. The course will stress documentary sources to understand the processes involved in that growth. The arts, musical, visual, and literary, will provide other avenues to understanding how people related to their setting and experiences.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 155 Historical Archaeology 3 cr.**
Historical archaeology is the study of the archaeological remains of literate cultures throughout the world. Historical archaeologists turn to a variety of disciplines including history, anthropology, geography, ecology, and biology as they explore the historic peoples of the world over the last 3,000 years. Students will delve into the origins of historical archaeology in North American, it's methods, and contributions the field has made to our understanding of the settlement of the continent since the 11th century. This course will include hands-on activities using artifacts and documents, a visit to an archaeological laboratory, and films detailing the excavations at sites such as Jamestown, Red Bay, and the plantation south. This course is offered Spring semester.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 165 Social History Civil War 3 cr.**
In November 1863, Abraham Lincoln addressed the meaning of the Civil War at Gettysburg, Pennsylvania, asserting that the fallen "shall not have died in vain; that this nation, under God, shall have a new birth of freedom." How, and indeed whether, the Civil War came to foster a renascent commitment to liberty in the United States is at the heart of this course on the social history of the Civil War and Reconstruction. To investigate this "new birth of freedom" this course will explore the varied causes of the Civil War and examine the many contested legacies of the conflict through the Reconstruction period and beyond. Considering more than military strategy, this course will draw widely from original sources that illuminate the social and political impact of the Civil War and its aftermath. This course will naturally attend to the remarkable political leaders of the era, but it will also recover the experiences of ordinary Americans from both the Union and the Confederacy. Finally, to fully address whether the era resulted in a "new birth of freedom," this course will consider how Americans' commitment to liberty evolved over time, making a "Second Reconstruction" necessary a full century after Lincoln commemorated the war dead at Gettysburg. This course is offered Fall semester.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 170 History of World Religions 3 cr.**
Religion is a complex network of ideas and actions, both ethical and ritual, that expresses a groups' sense of ultimate meaning of life. Students will examine how the beliefs and values of contemporary and historical cultures shape and are shaped by societal factors, longstanding traditions, and distinctive forms of literary expression. The aim of this course is to introduce students to some of the major religious traditions and to think critically and analytically about the various human phenomena we name "religious." The traditions to be surveyed include Judaism, Christianity, Islam, Hinduism, Buddhism, Native American and newer expressions of religion.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 175 History of Islam/Middle East 3 cr.**
This course presents a survey of Islamic civilizations from the origins of the Muslim faith until the present day. Topics of study include Islamic origins, the early Islamic conquests, the medieval caliphates, the Crusades and Mongol invasions, the rise of Islamic Asian empires, and the era of Western imperialism in Africa, Asia and the Middle East. Special attention will be paid to understanding the Qur'an in its historical context, the status of women in Islamic history, the complex interaction between Islamic societies and the West in the modern age, and the histories of contemporary issues in the Islamic world, such as the Israeli/Palestinian conflict, the tensions between India and Pakistan, and theocracy in Iran.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 201 History of Science 3 cr.**
The History of Science is designed to help the student better understand the impact of science and technology on our way of life, through discussions of the history of science, resulting technological changes, and our relationship to the social and physical environment. Textbook readings will be supplemented with original writings by some of the builders of our scientific society, from Plato and Aristotle to Newton and Einstein. While names, dates, and places are an important part of the course, the emphasis will be to provide an understanding of changes in ideas, knowledge, and culture over time. This course is offered occasionally.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 202 History of Technology 3 cr.**
The History of Technology will help the student better understand the impact of science and technology on our way of life, through discussions of technological change and the inter-relationship with the social, political and economic forces of society. The course will focus on the impact of major 20th Century American technologies such as the automobile, nuclear energy and computers. This course is offered occasionally.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 203 History of Health Care 3 cr.**
This course is designed to enrich the student's knowledge of the history of science, medicine, and technology that have impacted the development of modern health care. This course will explore the practice of health care providers and study the role of institutions and of the economic and social changes in the development of health care. This course is offered occasionally.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 205 Historical Archaeology 3 cr.**
The Field School in Historical Archaeology is a hands-on 3-credit history course that provides the students with on-site archaeological field and laboratory experience. The course will expose students to the field of historical archaeology at the site of the Robert Given Farmstead (c.1761-c.1835) at Pemaquid Falls on the south-central coast of Maine, under the supervision of the project director and several experienced volunteers. This experience is a great hands-on opportunity for college students seeking course credit and experience in historical archaeology, teachers in need of recertification credits, or history buffs interested in exploring an area with a rich colonial history. HIST-155 is recommended prior to enrolling in this course. This course is offered in the Summer semester.

Prerequisite(s): none
Corequisite(s): none

**HIST 208 American Biography 3 cr.**
This course serves as an introduction to reading and writing biography as an historical genre. By examining biographical techniques, this course evaluates biography as a method of narrating and interpreting the past. To do so, this course focuses on the history of political protest and social activism in the United States, investigating such topics as the radicalism of the American Revolution, utopianism, abolitionism, Progressivism, the labor movement, the struggle for African American freedom, feminism, the movements of the New Left, and environmentalism. Exploring the lives and times of the figures who created and sustained the nation's tradition of radical reform while assessing a range of original historical sources will provide students the chance to understand the challenges – and rewards – of crafting historical biography. This course is offered occasionally.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**HIST 225 African American Freedom Struggle 3 cr.**
This course investigates the origins and consequences of the civil rights movement, an ongoing struggle for African-American freedom with roots deep in the American past that profoundly impacted life in the United States between the 1860s and 1970s. This course will focus especially on the efforts of African-American men and women, both ordinary folk and renowned leaders, who fundamentally shaped the movement for civil equality. To examine this history, this course will : draw from primary sources that recover the voices and experiences of activists, intellectuals, artists, and everyday people who supported the civil rights movement: evaluate the work of civil rights historians who interpret the history of the ongoing freedom struggle: and investigate the regional histories of the civil rights struggle from Montgomery, Alabama to Portland, Maine. This course is typically offered in the Spring semester. This course has been designated as a writing-intensive course. This course is offered occasionally.

Prerequisite(s): ENGL-100
Corequisite(s): none

## *Horticulture Courses (HORT)*

**HORT 100 Intro to Horticulture & Lab 3 cr.**
The student will be presented with an overview of the field of horticulture. Career opportunities, educational options and industry associations will be discussed. The principles of propagating, growing, arranging, maintaining, utilizing, and marketing of plants will be presented. Practical experience in greenhouse setting, such as transplanting occurs the first month of class. Field trips are required.

Prerequisite(s): none
Corequisite(s): none

**HORT 110 Woody Plant Materials 2 cr.**
This course focuses on the identification, selection, uses and culture of trees, shrubs, groundcovers and vines in the northern New England landscape. Native and introduced or exotic plants are discussed, with an emphasis on the identification and selection of plants appropriate to various sites encountered in the urban and rural landscape. Field trips are required.

Prerequisite(s): none
Corequisite(s): none

**HORT 120 Pruning 1 cr.**
This course is an introduction to the principles and practices of pruning. The course will cover selected topics on the science and art of pruning. Topics will include types and maintenance of pruning tools, reasons for pruning, plant responses to pruning and

the various techniques used to effectively prune trees, shrubs, vines, edible fruits and herbaceous plants. Field trips are required.

Prerequisite(s): HORT-110
Corequisite(s): none

**HORT 130 Soils and Soil Fertility 3 cr.**
This is an introductory soil science course investigating the physical, biological and chemical properties of soils and the relationships between plants and soil. Areas of study include: soil sampling and testing, organic matter management and composting, water relationships, soil surveys, soil horizon interpretation, soil fertility, and plant nutrition based on the selection and use of natural and synthetic fertilizers and soil amendments.

Prerequisite(s): none
Corequisite(s): none

**HORT 140 Integrated Pest Management 3 cr.**
This course introduces students to applied entomology and plant pathology, and pest management strategies using the principles of integrated pest management (IPM) Common insect and plant disease organisms are identified and discussed. Emphasis is placed on plant health and pest management tactics resulting from systematic, logical, effective, and environmentally safe management decisions. Field trips are required. Maine Board of Pesticides Control Private Applicators License exam is given.

Prerequisite(s): none
Corequisite(s): none

**HORT 150 Arboriculture & Lab 3 cr.**
This is an introductory course in arboriculture: the planting and care of trees and shrubs. Students study the identifying features, growth habits and cultural requirements of urban trees and shrubs. The principles of tree care, pruning, repair and maintenance are covered. The techniques of tree climbing and appropriate knot tying and usage are presented. Preparation to become a licensed Maine arborist is given. Field trips are required.

Prerequisite(s): HORT-110
Corequisite(s): none

**HORT 155 Tree Fruit Production I 1 cr.**
This is the first part of a year-long, three part, introductory study of the general principles and practices involved in handling home and commercial plantings of tree fruit crops commonly grown in this area Part 1 has 16 one-hour weekly class sessions. The student will study the cultural requirements necessary to manage an organic orchard. The principles of IPM, scouting, degree days, orchard establishment, lay-out, tools, and tree maintenance are covered. The techniques of grafting, budding, pruning, and top-working are presented and practiced. Class meetings and labs will be scheduled around yearly orchard operations that occur during the dormant and early growing season. Attendance of MOFGA's Scion-wood & Seed Exchange will be expected.

Prerequisite(s): HORT-130
Corequisite(s): HORT-140

**HORT 156 Tree Fruit Production II 1 cr.**
This is the second part of a year-long, three part, introductory study of the general principles and practices involved in handling home and commercial plantings of tree fruit crops commonly grown in this area Part 2 has 12 1.25-hour weekly class sessions. The student will study the cultural requirements necessary to manage an organic orchard. The principles of IPM, scouting, degree days, orchard establishment, lay-out, tools, and tree maintenance are covered. The techniques of budding and pruning are presented and practiced. Class meetings and labs will be scheduled around yearly orchard operations that occur during the mid-Summer growing season.

Prerequisite(s): HORT-130
Corequisite(s): HORT-140

**HORT 157 Tree Fruit Production III 1 cr.**
This is the third part of a year-long, three part, introductory study of the general principles and practices involved in handling home and commercial plantings of tree fruit crops commonly grown in this area Part 3 has 15 one-hour weekly class sessions. The student will study the cultural requirements necessary to manage an organic orchard. The principles of IPM, scouting, degree days, orchard establishment, lay-out, tools, and tree maintenance and Winter preparation are covered. The techniques of soil testing, apple ripeness, and spraying are presented and practiced. Class meetings and labs will be scheduled around yearly orchard operations that occur during the Fall and early-Winter season. Attendance of a related session during MOFGA's Common Ground Fair and visiting an orchard on Maine Apple Day will be expected and will replace the weekly scheduled class for that week.

Prerequisite(s): HORT-130
Corequisite(s): HORT-140

**HORT 175 Placement Training 4 cr.**
This summer internship is on-the-job training, providing students with a work experience in an area of horticulture or related field of specific interest to the student. Students are primarily responsible to the employer for the various work responsibilities

established. Students are also responsible to the course instructor to complete academic requirements.

Prerequisite(s): Program acceptance
Corequisite(s): none

**HORT 180 Freshman Seminar 1 cr.**
Students present a seminar of a topic of interest. Students are required to attend the "Distinguished Speaker Series." Speakers may include leading horticultural researchers, industry representatives, green industry professionals or experts in other fields.

Prerequisite(s): none
Corequisite(s): none

**HORT 185 Introduction to Floral Design 3 cr.**
This course is an introduction to the profession of Floral Designer The course covers elements, principles and techniques of floral design. Classes will consist of lecture followed by hands on design. Classes will also cover the daily practices of a traditional floral shop. This course will prepare students for a career in the floral industry, including sales, design and merchandising. Students may purchase their arrangements on a weekly basis.

Prerequisite(s): none
Corequisite(s): none

**HORT 200 Herbaceous Plant Materials 2 cr.**
This course focuses on the identification, selection, uses, and culture of herbaceous landscape plants in the northern New England landscape. Emphasis is placed on the identification, environmental adaptation, and ornamental value of selected plants, with applications in the perennial and annual gardens.

Prerequisite(s): none
Corequisite(s): none

**HORT 210 Surveying & Mapping 2 cr.**
This course gives students a working knowledge of landscape mapping as it might relate to landscape construction and design. Students learn various measuring techniques, develop technical skills using a level and transit, and produce base maps showing land contours, surface draining patterns, vegetative characteristics, and other landscape information.

Prerequisite(s): College-level mathematics
Corequisite(s): none

**HORT 220 Landscape Management 3 cr.**
This course presents the principles and techniques of landscape management. Components of landscape contracting and landscape gardening are discussed, with an emphasis on the efficient and environmentally sound management of the landscaped area. Topics include weed management, hardscape construction elements, landscape maintenance, job estimating and bidding, and business and resource management. Preparation to become a Maine Certified Landscape Professional is given.

Prerequisite(s): HORT-110, HORT-130
Corequisite(s): none

**HORT 230 Nursery & Garden Center Ops 3 cr.**
This course introduces students to the scope and nature of the nursery and garden center industries in Maine and New England. Current nursery crop production and management methods are discussed as well as applications of nursery equipment and irrigation techniques. Preparation is given to become a Maine Certified Nursery Professional. Field trips are required.

Prerequisite(s): HORT-110
Corequisite(s): none

**HORT 240 Turfgrass Management 2 cr.**
This course presents the principles and practices of managing turfgrass in the landscape. Course content includes the growth, development and maintenance of cool season turfgrasses. Seeding, sodding, mowing, fertilization, turf weeds and pests and related management practices are discussed. Field trips are required.

Prerequisite(s): none
Corequisite(s): none

**HORT 250 Greenhouse Management 3 cr.**
This is an introductory commercial greenhouse operations and management course. Students become familiar with greenhouse structures and equipment, the greenhouse environment, insect, disease and weed management, and crop production and marketing. Students apply methods and techniques to manage the greenhouse facility and environment and to gain experience and knowledge about common greenhouse crops. Field trips are required.

Prerequisite(s): HORT-130, HORT-200
Corequisite(s): none

**HORT 271 Herbaceous Plant Design 2 cr.**
This course focuses on the use of herbaceous plants in the landscape and provides an opportunity to explore the function and design aspects of herbaceous plants for the outdoor garden in New England Emphasis is placed on creating designs in response to given criteria. A strong background in herbaceous plant material identification and culture is required.

Prerequisite(s): HORT-200
Corequisite(s): none

**HORT 280 Senior Seminar 1 cr.**
Students present a seminar of their work experiences in HORT-175, Summer Placement. Students are required to attend the "Distinguished Speaker Series." Speakers may include leading horticultural researchers, industry representatives, green industry professionals or experts in other related fields.

Prerequisite(s): HORT-175, HORT-180
Corequisite(s): none

**HORT 290 Landscape Design 3 cr.**
This course introduces students to the fundamentals of landscape design as it applies to residential and small scale commercial landscapes. Included are the study of site evaluation, plan graphics, plant and landscaping materials selection, business aspects of landscape design and the principles of formal and informal design. Students prepare sketches and finished designs.

Prerequisite(s): HORT-110, HORT-200, HORT-210
Corequisite(s): none

## *Hospitality Management Courses (HOSP)*

**HSPM 101 Intro to Hospitality & Tourism 3 cr.**
This course will provide students with a thorough overview of the tourism and hospitality industry along with the critical management principles that underlie the smooth operation of these operations. Tourism and Hospitality represent broad subject areas. This course will help the student understand the different market segments and the varied opportunities that exist in Maine's largest industry.

Prerequisite(s): ENGL 050
Corequisite(s): None

**HSPM 125 Housekeeping Operations 3 cr.**
The housekeeping department is the largest single department in most hotels This course gives students a well-rounded knowledge in the exceptionally important area of housekeeping and how it is related to hotel, motel, and restaurant operations. Safety and security, managing inventories, guest room and public area cleaning, linens, and controlling expenses will all be covered in depth.

Prerequisite(s): none
Corequisite(s): HSPM-126

**HSPM 126 Housekeeping Operations Lab 1 cr.**
In this lab the student intern will become familiar with efficient and effective techniques for cleaning hotel rooms and public areas of a hotel or restaurant The safe use of cleaning supplies and chemicals is stressed along with customer comfort, safety and key control security. Laundry cleaning procedures and linen control will also be covered. Students are required to be in uniform as lab dictates. Tools will be provided by SMCC.

Prerequisite(s): none
Corequisite(s): HSPM-125

**HSPM 135 Front Office Operations 3 cr.**
This course deals with the center of operations from the guest's perspective - the front office Operations, reservations, registration, accounting, and the night audit will be stressed. The special areas of guest service and up-selling will be discussed.

Prerequisite(s): none
Corequisite(s): HSPM-136

**HSPM 136 Front Office Operations Lab 1 cr.**
This lab will provide the skills necessary to ensure customer satisfaction, safety and security Guest registration, check-out procedures, key control and phone manners will be a focus. This lab will require evening, over-night and weekend hours. Students are required to be in uniform as lab dictates. Tools will be provided by SMCC.

Prerequisite(s): none
Corequisite(s): HSPM-135

**HSPM 175 LRM Internship 3 cr.**
This course is designed to give Lodging and Restaurant Management students a working knowledge of hotel operations. Each student will rotate through the various departments of a hotel, under the supervision of a shift manager or designated hotel employee. Students will familiarize themselves with the daily internal operations of a hotel and document the experience using a journal. The internship will be completed over the course program, under faculty guidance. A student may choose from a list of properties or select another establishment with advisor approval. The four areas of study will include, Front Desk, Concierge/Guest Services, Night Audit, and Events Management/Catering. Once started in any of the areas, the area must be completed. No broken service will be counted for credit.

Prerequisite(s): Program Acceptance
Corequisite(s): none

**HSPM 230 Hotel & Lodging Management 3 cr.**
This course will provide students with a comprehensive introduction to the management of hotels and lodging properties that combines detailed presentations of each department along with a close examination of organizational structure and the interdependent relationship among departments.

Prerequisite(s): HSPM 101, BUSN 255
Corequisite(s): None

**HSPM 240 Hospitality Marketing 3 cr.**
This course looks at how to identify and sell to the most appropriate market segments in local, national and international settings The ability to develop and implement effective marketing plans is stressed. Applying key marketing methodologies to research, sales, advertising, public relations, promotions and pricing are discussed at great length.

Prerequisite(s): none
Corequisite(s): none

**HSPM 245 Events Management 4 cr.**
This course will provide the knowledge, skills and experience necessary to produce effective events, in accordance with traditional business services, which include but are not limited to the following: advertising; booking and coordinating events; providing audio, visual, wireless internet equipment and print media; catering and banquet services; handicap support services; and entertainment, spousal and child care services, as well as shuttle service.

Prerequisite(s): none
Corequisite(s): HSPM-240

## *Heating, Air Conditioning, and Refrigeration Courses (HVAC)*

**HVAC 115 Residential Heating Systems 7 cr.**
This course covers the study of heating systems beginning with basic energy units, work, power, measurements, fuel, combustion theory, burner, heat exchange controls, system types and application.

Prerequisite(s): Program acceptance
Corequisite(s): none

**HVAC 120 Basic Refrigeration 7 cr.**
Basic Refrigeration prepares students for entry-level positions in the industry through theory, demonstration and hands-on practice in a simulated workplace environment The areas of instruction include safety, tools, commercial refrigeration equipment, refrigeration cycles, compressors, evaporators, all associated controls (both electrical and mechanical), and basic electrical theory.

Prerequisite(s): Program acceptance
Corequisite(s): none

**HVAC 180 Heating Theory 3 cr.**
This course is a study of heat-loss calculation for domestic burner installation Student study and analyze proper insulation practice, fuel consumption and fuel demand (Degree Day System).

Prerequisite(s): Program acceptance
Corequisite(s): none

**HVAC 215 System Design & Industrial Heating 7 cr.**
This course covers System Design, forced hot water and forced warm air piping, and duct layout System zone control is emphasized in all common residential systems. Other topics include light industrial heating equipment and controls.

Prerequisite(s): ELEC-100, HVAC-115
Corequisite(s): ELEC-103

**HVAC 220 Basic Air Conditioning 7 cr.**
Basic Air Conditioning continues to prepare students for entry level positions in the HVAC industry through comfort cooling theory, demonstration, and "hands-on" practice in a simulated workplace environment The areas of instruction include review of trade safety practices, proprietary tools, instruments, workplace readiness for installation, service and repair of air conditioning systems and heat pumps.

Prerequisite(s): ELEC-100, HVAC-120
Corequisite(s): none

## *Plumbing Courses (HVPL)*

**HVPL 100 Blueprint Reading and Sketching 2 cr.**
This course is a study of isometric plans and elevation drawings for plumbers It includes exercises in bathroom layouts and producing isometric pipe drawings. Restricted to Plumbing and HAC students.

Prerequisite(s): Program acceptance
Corequisite(s): none

**HVPL 105 Plumbing Application & Methods 7 cr.**
This course offers an introduction to the plumbing trade as practiced in the State of Maine Students will develop a working knowledge of the codes governing the installation of plumbing and when where to use the proper materials in the different plumbing systems. Students will also learn the safe and proper way to use the different tools and equipment used in the trade. Students will be required to work on individual projects over the course of the semester.

Prerequisite(s): Program acceptance
Corequisite(s): none

**HVPL 205 Plumbing Application & Code 7 cr.**
This course is a further concentration of Maine Plumbing Code Mock-ups will be used for actual piping and fixture layout allowing students the opportunity to design, build and test plumbing installations. This course continues preparation to qualify the students to sit for the Maine State Journeyman Plumbers Exam.

Prerequisite(s): HVPL-105
Corequisite(s): none

## *International Cultural Exchange Courses (ICEX)*

**ICEX 130 Cultural Experience - Austria 3 cr.**
This course is intended to include SMCC's culinary arts two-week study tour in Austria, which takes place at the end of each spring semester. The study tour is based at Bad Gleichenberg Tourismusschule. The hands-on application in Bad Gleichenberg is 8 full days of cooking Austrian cuisine including: moist methods of cooking beef, poultry, veal and pork; dry methods such as Vienna Schnitzel, cutlets, and smoking of fresh native fish; Austrian dumplings; spaetzle; vegetable salads; dressings and vegetable compliments for the main course. Desserts and pastries include items such as Lindzer torte, Sacher Torte, a variety of dumplings, souffles, Palatchinken, Kaisiershmarm and the beverages to accompany the meals. During our stay, we will have two evenings of wine education in any one of the school?s six wine cellars, and attend a graduation ceremony, performed by the students under the supervision of their chefs and Maitre d'hotel. Additionally, after cooking and serving of the meals, we will visit several castles and learn the history of the Hapsburg Dynasty. Students will also visit wineries, chocolate manufacturing, local agricultural sites and several upscale resort spas and spend the last weekend touring museums and city activities.

Prerequisite(s): none
Corequisite(s): none

**ICEX 160 Cultural Experience-Mexico 3 cr.**
For this trip to Mexico, students will be required to complete a significant amount of reading from the work of at least two major Mexican writers. The motifs of geographical proximity and cultural contrast will be the primary focus of study. A journal of the Mexican sojourn and a five-page essay reflecting travel experiences and the required reading will be expected of students. The course will also include one three-hour meeting/discussion and the viewing of at least one Mexican-made film or film made about Mexico.

Prerequisite(s): none
Corequisite(s): ENGL-115

**ICEX 170 Cultural Experience-Ireland 3 cr.**
Foreign Cultural Experience (Ireland) is designed as an independent study centered on the college sponsored trip to Ireland during the school vacation in March. The course is designed to promote an understanding and appreciation of Irish culture. Through research, students will develop an awareness of the similarities and differences between Irish and American cultures at the same time developing skills to work independently outside a classroom setting with guidance from faculty. Students will meet with the instructor periodically and develop a topic of research, an appropriate list of resources, a topic outline, and a final paper. An outline of the desired project must be submitted and approved by February 1st. Students will be required to participate in four pre-trip seminars relating to the objectives and coverage to take place during the trip.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

## *Interdisciplinary Studies Courses (IDST)*

**IDST 120 Symmetry, Shape, and Space 3 cr.**
What is the Golden Ratio and how do artists and scientists use it? This interdisciplinary course is a survey of geometrical topics in mathematics and our world, focusing on problem solving and the connections between mathematics and culture. For example, is our social order influenced by mathematics or spatial awareness? A selection of introductory topics will be covered from among these: Euclidian geometry; mathematics and social satire; ruler-and-compass constructions; tessellations; symmetries in two dimensions; and perhaps more as time permits. The course format emphasizes guided exploration and critical thinking; students will be required to demonstrate an understanding of the material through journal writing and reports. A mathematics text and a novel are used to introduce concepts and related themes. This course has been designated as a writing-intensive course. Listed as MATH-120 and IDST-120.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s): none

**IDST 140 Working Women 3 cr.**
This course is designed to introduce students to new scholarship on women and work It covers the evolution of the household economy as well as the role of women in the paid labor force. Recognizing that work considerations have had a powerful influence on family life and economic status, this course will allow students to place their lives in a larger historical context, enabling them to comprehend the experiences and problems of women and men as gender and work took on new shape and meaning in modern times. The course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): none

**IDST 150 Nature and Culture 3 cr.**
This interdisciplinary course uses the combined perspectives of sciences such as biology, ecology and economics together with history, philosophy and literature to study how cultures and individuals interact with nature Through close reading of essays, poems and scientific papers, as well as through students' own field observations and writings on their local environment, this course explores the underlying values and ethical judgments involved in making choices on environmental issues that range from the local to global. Topics include basic concepts such as evolution and cell theory and current issues such as animal rights, biotechnology, global warming and biodiversity conservation. No college science background is required.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s): none

**IDST 160 The Nature of Music/Music of Nature 3 cr.**
This 100-level interdisciplinary course combines the scientific perspectives of biology and the artistic perspective of music to examine the relationship of music and nature. This course will integrate composition, performance and instrument-making together with ethnomusicology, evolutionary theory and bioacoustics. Students examine the vocalizations of animals such as birds, frogs and insects, the gamelan music of Indonesia and other cultures, and composers and compositions inspired by nature. The course culminates in a performance of an original composition using handmade instruments constructed during the semester.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s): none

**IDST 170 Seminar on HIV/Aids in America 3 cr.**
HIV/AIDS presents challenges for all people. This multidisciplinary course focuses on the biological, sociocultural, political and humanistic components of this worldwide epidemic. It also emphasizes the prevention of the spread of HIV infection. Students will have an opportunity to learn about the science of HIV/AIDS, treatment, issues related to the societal and political impact of HIV/AIDS, and the education/prevention of HIV/AIDS. Students will participate in service learning projects related to educating the SMCC community on HIV/AIDS.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

## *Literature Courses (LITR)*

**LITR 220 Introduction to Theater 3 cr.**
This course will be an introduction to the collaborative enterprise of theater The central object of study will be dramatic literature and the ways by which it is brought to life in performance. Students will read six to eight full-length plays. This reading will involve detailed scene analysis from the point of view of playwrights, actors, directors and set designers. Students will be introduced to basic rehearsal techniques and will explore the means by which a play may be visually realized upon stage. The course will consist of a survey of the history of Western theater, by means of reading representative plays. This course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 225 The Short Story 3 cr.**
This course is a study of the modern short story from its origins in the early 19th century to its current form. Areas of focus will include: the history/development of the short story as a prose fiction form, the short story as a reflection of social and cultural movements/issues, and the use of the form as a mode of personal expression and identity. Readings will include a variety of authors, notably key figures in the development of the form as well as contemporary voices poised to influence the future of the genre. This is a writing intensive course.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 230 New England Myth and Folklore 3 cr.**
This course is designed as an expansion of the fundamental Introduction to Literature course It explores regional oral and written tradition and its influence on New England writers. Utilizing past and present prose and poetry, fiction and nonfiction as catalysts, students will reflect upon and write responses to those experiences and explore their own perceptions of familial and cultural folklore through independent study. This course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 235 African-American Literature 3 cr.**
This course surveys the rich literary tradition of African-American literature. It seeks to acquaint students with the major writers, literary movements, and historical events that shaped writers such as Phyllis Wheatley, purchased as a slave by a wealthy Boston family in 1761, through poetry and prose writers of the 21st century. Topics will include the antebellum period, the Gilded Age, the Harlem Renaissance, the Black Power Movement, and the present. Texts will include poetry, prose, short stories, and/or a novel. This course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 240 Varieties of Non-Fiction 3 cr.**
This class will examine contemporary creative nonfiction literature in the sub-genres of memoir, nature writing, the personal essay, and literary journalism Although the readings will be ""contemporary,"" an overview of the history, variety and evolution of the genre will be provided as well. Students will explore nonfiction as both scholars and writers. The class will be a combination of reading and composing with a focus on critical and creative writing. Students will keep a journal of critical and reflective responses to assigned readings (annotations); comments on the drafts of other students' work, and notes towards one's own work-in-progress. Class time will be devoted to critical examination of work read, sharing of journals, and free-writing exercises suggested by the techniques demonstrated in the texts. This course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 250 The Twentieth Century Novel 3 cr.**
This course surveys the 20th century novel. While the focus will be on the American novel, students will read at least two non-American novels as well. The novel both as an artistic form and a cultural and political artifact will be examined. The course will explore the literary canon, the works that many believe should be read and studied for all time: How is the canon formed? Who deserves to be included? When appropriate, the course will cover literary movements and periods. This is not to say an author has to be part of a specific group to merit biographical attention; the private and public lives of all the novelists on the reading list will be touched upon, in part to further understand how a great work gets written, but also in part because many of these novelists are simply fascinating people. This course is writing intensive.
Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 255 World Literature I 3 cr.**
This course introduces students to literary works of enduring significance from the Ancient Period through the Middle Ages. Students will examine the first flowering of written literature in Mesopotamia and the Mediterranean basin, be introduced to sacred writings from east and west, and track the development of literary genres with a focus on innovative and influential writings from around the world.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 260 Literature and Film 3 cr.**
Throughout time humans have had a need to tell a story These stories have had some common goals: to reflect current culture, to inform the future, to examine the past, and to make sense of existence. Film and Literature are two modern forms of media that try to achieve these same goals. This course covers the techniques, vocabulary, and art of film and literature. It also explores the connections between both media. In this course students will learn how to "read" a film, examine the options and choices filmmakers have to tell their stories, identify those choices and link them to the thematic ideas the story holds. This course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 270 Poetry 3 cr.**
This course will be a close examination of poetry as a universal form of human verbal expression It will explore the varieties of the genre, the fundamentals of prosody, and the different poetics that have been articulated and embraced through-out history. Different forms and styles of poetry will be examined as well as the different incarnations of poetry among world cultures. In addition to reading a significant quantity of poetry, students will also read critical essays about important poets and essays by poets containing their statements of aesthetics. The course will emphasize poetry deemed ?accessible? - capable of being read and analyzed by a non-specialized audience - but not to the extent of eschewing poetry that has over time been considered profound and enduring. Representative poets will be assigned, and their work will be analyzed in terms of various aesthetic, historical, cultural, political, and ethical contexts. This course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

**LITR 280 Women in Literature 3 cr.**
The rich tradition of women's literature has received new attention and benefited from exhaustive scholarship in recent decades This course examines that tradition, concentrating on both public and private writing as integral to the study of women in literature. In addition to the works themselves, the course considers political, economic, and cultural forces which shaped the evolution of women's writing. This course is writing intensive.

Prerequisite(s): ENGL-100
Corequisite(s): ENGL-115

## *Machining Courses (MACH)*

**MACH 100 Intro to Precision Machining 3 cr.**
The Introduction to Precision Machining course will provide an overview of precision metal cutting using good safe work habits. Emphasis is on standard machine design, construction and maintenance. Students are introduced to workplace safety, precision measuring, lathes, milling, grinding and drilling machines.

Prerequisite(s): none
Corequisite(s): none

**MACH 105 Basic Machine Theory 4 cr.**
This course emphasizes basic precision machining theory. Students will study workplace and machine safety. This course will focus on the development of best work practices and related theory including; precision measuring, layout, hand tool, lathes, drill press, grinding and milling.

Prerequisite(s): MATH-020
Corequisite(s): AEDD-105, MACH-106

**MACH 106 Basic Machine Lab 3 cr.**
This lab complements the theory taught in MACH-105 Basic Machine Theory. Students will apply the skills reviewed in MACH-105 including: precision measuring, layout, hand tools, lathes, drill press, grinding and lathe operations. Development of best work practices will be emphasized including safe work habits to build student confidence in manual machining. Students will complete a series of assignments and Lab Projects as required to validate entry level metalworking competencies.

Prerequisite(s): MATH-020
Corequisite(s): AEDD-105, MACH-105

**MACH 155 Advanced Machine Theory 4 cr.**
The second semester course teaches safe work habits and modular set-ups, and develops student confidence and imagination Emphasis is on advanced machine operations and closer tolerances with projects are introduced. This course is designed to make the student more aware of the importance of efficient use of time in the machining process. Hand tools, drilling, electric discharge machining on a vertical ram machine, grinding and tool & die construction will be explored.

Prerequisite(s): MACH-105, MACH-106
Corequisite(s): MACH-156

**MACH 156 Advanced Machine Lab 3 cr.**
This course is a continuation of lab work in MACH-106. This lab complements the theory taught in MACH-155. Students will apply advanced skills for higher tolerance precision measuring, turning, drill press, grinding and milling operations. Development of best work practices, safe work habits and time management will be emphasized. Students will complete a series of Lab Projects as required to meet NIMS national credentials.

Prerequisite(s): MACH-105, MACH-106
Corequisite(s): MACH-155

**MACH 205 Intro CNC Machining Theory 4 cr.**
This course is divided into three units of study, including NIMS national credentialing, CNC (Proto TRAK milling and turning), and CNC (fanuc), PC and various other machine controllers). Information gained from each of the units will be applied to a series of assignments that develop the skills required to produce production planning and CNC codes, tooling and operations for CNC machining.

Prerequisite(s): MACH-155, MACH-156, AEDD-170
Corequisite(s): MACH-206

**MACH 206 Introductory CNC Machining Lab 3 cr.**
This lab complements the theory taught in MACH-205 Introductory CNC Machining Theory. Students will work on projects utilizing Computer Numerical Controlled machine tools, (CNC) Proto TRAK milling and turning with Fanuc, PC and various other controllers. Particular emphasis is placed on NIMS national credentialing and safe CNC machine operations.

Prerequisite(s): MACH-155, MACH-156, AEDD-170
Corequisite(s): MACH-205

**MACH 255 CNC Programming 4 cr.**
This course is divided into five units, consisting of Advanced Computer Numerical Control (CNC) operations and programming, and four other areas of study. They are metallurgy and materials, Statistical Process Control (SPC) and Quality Control (QC), an integration of various CAD (Computer Aided Design) programs, and CAM (Computer Assisted Manufacturing) programs (Solidworks and Camworks). Students will complete a capstone project to validate all skills attained in the program.

Prerequisite(s): MACH-205, MACH-206
Corequisite(s): MACH-256

**MACH 256 CNC Machining Lab 3 cr.**
This lab complements the theory taught in MACH-255 CNC Programming. Students will work on projects

utilizing Numerical Control (CNC) operation and programming, and Statistical Process Control (SPC) and Quality Control (QC). Projects will integrate CAD(Computer Aided Design) programs and CAM (Computer Assisted Manufacturing) programs (Pro CAM, Solid Works, CAM Works). Students will complete a capstone project to validate all skills attained in the program.

Prerequisite(s): MACH-205, MACH-206
Corequisite(s): MACH-255

**MACH 275 Senior Internship 3 cr.**
This course is designed to give the student practical experience to enter the job market. Students will be required to complete 90 documented hours of trade related job shadowing and work. This course may be spread out during the senior year as work schedule permits.

Prerequisite(s): MACH-105, MACH-106
Corequisite(s): none

## *Mathematics Courses (MATH)*

**MATH 020 Numerical Math 3 cr.**
This developmental course covers the basic arithmetic of whole numbers, exponents and roots, the order of operations, fractions, decimals, percents, ratio and proportion, measurement and units, integers, geometry, simple statistics and includes applications that use those topics. Students will learn to work without the use of a calculator. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): Appropriate placement
Corequisite(s): none

**MATH 050 Introduction to Algebra 3 cr.**
This developmental course covers the standard topics of basic algebra: real numbers and algebraic expressions, using formulas, solving linear equations and inequalities, Cartesian coordinates, graphs of linear equations, direct and inverse variation, exponents and scientific notation, operations with polynomials, factoring of polynomials, solving quadratic equations by factoring, and simplifying rational and radical expressions, and applied problem solving. The credits earned in this course will not count toward a degree with SMCC.

Prerequisite(s): Appropriate placement
Corequisite(s): none

**MATH 110 Contemporary Mathematics 3 cr.**
This course is designed to survey and develop an appreciation for mathematical topics that are useful in our contemporary world such as critical thinking, logic, sets, number theory, algebra and formulas, financial management, measurement units and conversions, geometry, statistics and applied problem solving. It is intended for students not expecting to enroll in additional math classes and is designed to satisfy the general education requirement for mathematics.

Prerequisite(s): MATH-050
Corequisite(s): none

**MATH 115 Fundamentals of Elementary School Mathematics I 3 cr.**
This is the first of a two-course sequence for future elementary teachers designed to deepen their conceptual understanding of mathematics. Topics will include problem solving, patterns, reasoning and proof, making mathematical connections, sets, understanding algebraic thinking, numeration systems, understanding the four fundamental operations of arithmetic, basic number theory, and the Real numbers system.

Prerequisite(s): MATH-050
Corequisite(s): none

**MATH 116 Fundamentals of Elementary School Mathematics II 3 cr.**
This is the second of a two-course sequence for future elementary teachers designed to deepen their conceptual understanding of mathematics. Topics will include problem solving that involves ratio and proportion, applying algebra to percents and formula usage, mathematics of data collection and chance, geometry as shapes and transformations of shapes, and geometry of measurement.

Prerequisite(s): MATH-115
Corequisite(s): none

**MATH 120 Symmetry, Shape, and Space 3 cr.**
What is the Golden Ratio and how do artists and scientists use it? This interdisciplinary course is a survey of geometrical topics in mathematics and our world, focusing on problem solving and the connections between mathematics and culture. For example, is our social order influenced by mathematics or spatial awareness? A selection of introductory topics will be covered from among these: Euclidian geometry; mathematics and social satire; ruler-and-compass constructions; tessellations; symmetries in two dimensions; and perhaps more as time permits. The course format emphasizes guided exploration and critical thinking; students will be required to demonstrate an understanding of the material through journal writing and reports. A mathematics text and a novel are used to introduce concepts and related themes. This course has been designated as a writing-intensive course. This course is listed as both MATH-120 and IDST-120.

Prerequisite(s): ENGL-050, ENGL-075, MATH-050
Corequisite(s): none

**MATH 125 Discrete Mathematics 3 cr.**
An introduction to the ideas of discrete mathematics, this course presents the topics needed to prepare the student for success in courses in computer science and electronics. Topics include number systems, logic, computer arithmetic, coding, sets, Boolean algebra, networks, circuits, flowcharts, computer functions, algorithms, graphs, arrays, and summation.

Prerequisite(s): MATH-050
Corequisite(s): none

**MATH 140 College Algebra 3 cr.**
This course covers variables and symbols; scientific notation; formulas and literal equations; slope intercepts, and equations of lines; graphs of linear and quadratic functions; graphs of linear inequalities; solving systems of linear equations; polynomials, products and factors; roots, rational exponents and complex numbers; rational expressions; solving linear, quadratic and higher order equations; solving linear inequalities; an introduction to exponential and logarithmic functions, and applied problem solving.

Prerequisite(s): MATH-050
Corequisite(s): none

**MATH 145 College Algebra & Trigonometry 4 cr.**
This course covers variables and symbols; scientific notation; formulas and literal equations; slope, intercepts, and equations of lines; graphs of linear and quadratic functions; graphs of linear inequalities; solving systems of linear equations; polynomials, products and factors; roots, rational exponents, and complex numbers; rational expressions; solving, linear, quadratic, and higher order equations; solving linear inequalities; an introduction to exponential and logarithmic functions; degree and radian angle measure; right triangle trigonometry and its applications; trigonometric functions and their inverses; graphing trigonometric functions; solutions of oblique triangles; vectors; and applied problem solving.

Prerequisite(s): MATH-050
Corequisite(s): none

**MATH 150 Math for Elementary Teachers 3 cr.**
This course is designed to provide future teachers of mathematics with content and knowledge of numerical mathematics that is beyond and deeper than the mathematics they will be teaching. Topics will include attitudes toward mathematics, problem solving, patterns, representation, reasoning and proof, making mathematical connections, and understanding the Real number system. Manipulatives and computer technology will be used to enhance the mathematical concepts. Students will be expected to participate in supervised field experiences.

Prerequisite(s): MATH-050
Corequisite(s): none

**MATH 160 College Trigonometry 3 cr.**
Topics include degree and radian angle measure, right triangle trigonometry and its applications, trigonometric functions and their inverses, graphing trigonometric functions, applications of trigonometric functions, analytic trigonometry, solutions of oblique triangles, vectors, polar coordinates and the trigonometric form complex numbers including DeMoivre's Theorem.

Prerequisite(s): MATH-140
Corequisite(s): none

**MATH 190 Pre-Calculus 3 cr.**
This course is designed to add depth and breadth to a student's mathematical background before embarking on a study of the methods of calculus The course covers a review of algebra, linear, and quadratic functions; polynomial, rational, exponential, radical, and logarithmic functions; compositions and inverses of functions; theory of polynomials with the Fundamental Theorem of Algebra; trigonometric functions and identities; additional topics and applications.

Prerequisite(s): MATH-145 or MATH-140 & MATH-160
Corequisite(s): none

**MATH 200 Algebra for Elementary Teachers 3 cr.**
This course is designed to provide future teachers of mathematics with content and knowledge of numerical mathematics and algebraic thinking that is beyond and deeper than the mathematics they will be teaching. Topics will include: algebraic thinking (patterns and relationships that lead to communicating algebraically); properties and operations of the Real Number System; and the use of algebra in problem solving. Manipulatives and computer technology will be used to enhance the mathematical concepts.
Prerequisite(s): MATH-150
Corequisite(s): none

**MATH 220 Finite Mathematics 4 cr.**
This course emphasized mathematical modeling and decision making in the fields of business, economics, social science, and non-physical sciences Topics include the mathematics of finance, matrices, linear programming, and probability. Data description and probability distributions are optional topics.

Prerequisite(s): MATH-140
Corequisite(s): none

**MATH 230 Statistics 3 cr.**
This course is designed for students with little or no experience in statistical analysis. Topics of study include sampling theory, descriptive statistics, probability theory, normal distribution, confidence intervals, hypothesis testing, inference, regression, and correlation. Students will develop skills in collecting, examining, and interpreting data using statistical techniques.

Prerequisite(s): MATH-140
Corequisite(s): none

**MATH 260 Calculus I 4 cr.**
This course introduces the concepts of limit, continuity, differentiation and integration of algebraic, trigonometric, exponential, logarithmic, and inverse trigonometric functions of a single variable Emphasis is placed on applications of the derivative and the integral using the rules of differentiation and integration.

Prerequisite(s): MATH-190
Corequisite(s): none

**MATH 270 Calculus II 4 cr.**
This course is a continuation for Calculus I Topics include an introduction to differential equations, techniques and applications of integration, L'Hopital's Rule, improper integrals, infinite series, conics, and parametric and polar equations.

Prerequisite(s): MATH-260
Corequisite(s): none

**MATH 280 Calculus III Multivariable Calculus 4 cr.**
This course is the extension of calculus in one variable to calculus in more than one variable introducing the concepts of limits and continuity in multiple dimensions, partial differentiation, multiple integration, gradients, divergence, Stokes Theorem, and Greens Theorem. This course is for students interested in the fields of mathematics, engineering, economics, and the sciences.

Prerequisite(s): MATH-270
Corequisite(s): none

## *Medical Assisting Courses (MDAS)*

**MDAS-100 Medical Terminology 3 cr.**
This course is designed as an introduction to medical terminology using a body systems approach. Students will develop a basic understanding of medical language by analyzing prefixes, suffixes, root words, and combining forms as they relate to the different body systems and the basic cellular structure.

Prerequisite(s): MDAS Program Acceptance
Corequisite(s): none

**MDAS-105 Medical Office Procedures 3 cr.**
Students will learn and apply through reading, discussions and projects all aspects of the health care operation including the profession of medical assisting, patient communication, telephone triage techniques, scheduling, and medical records.

Prerequisite(s): MDAS-110
Corequisite(s): none

**MDAS-110 Introduction to Medical Assisting and Allied Health 1 cr.**
This course is designed as an introduction to the profession of Medical Assisting. Students will be exposed to various topics related to Medical Assisting which will include background, concepts, ethics/standards of practice, professional responsibilities, current issues in healthcare, and the relationship of Medical Assisting with other healthcare professions.

Prerequisite(s): Program acceptance
Corequisite(s): MDAS-100

**MDAS-150 Disease Pathology/Diagnostic Labs 3 cr.**
This course is designed to apply knowledge previously learned in Medical Terminology and Anatomy & Physiology to the disease process. Common diseases will be covered in a body systems approach. Laboratory and diagnostic tests will also be applied to each body system. The relationship between diagnostic testing and diagnosis of disease will be explored.

Prerequisite(s): BIOL-132, MDAS-100, Program acceptance
Corequisite(s): none

**MDAS-160 Intro Clinical Office Procedures 3 cr.**
This beginning Clinical Procedures course will cover a limited number of procedures necessary for the medical office. This course will include disease transmission and infection control cycle, beginning surgical asepsis, vital sign procedures, obtaining patient history data, and assisting the physician in a general physical examination, and Cardiopulmonary Resuscitation (CPR).

Prerequisite(s): BIOL-132
Corequisite(s): BIOL-138, MDAS-105

**MDAS-205 Billing Procedures & Admin 3 cr.**
This course will focus on insurance, billing, and coding procedures to include the operations a medical billing office performs to collect revenue from physician rendered services and supplies, covered or non-covered, by commercial, State, Federal, and third-party liability insurance companies by ethical, compliant, and legal methods. Also covered will be CPT/HCPCS procedural coding and ICD-9-CM diagnostic and inpatient coding procedures.

Prerequisite(s): MDAS-105, MDAS-150, HLTH-155
Corequisite(s): none

**MDAS-210 Clinical Office Procedures 3 cr.**
This course is designed to provide students with the didactic knowledge necessary to effectively assess and treat patients in a variety of clinical medical settings. Lessons will include instruments and equipment used in the medical practice settings, medical and surgical asepsis, general physical examination skills, venipuncture, common lab tests, emergency preparedness, and administration of medications.

Prerequisite(s): MDAS-150, MDAS-160, HLTH-155, BIOL-138
Corequisite(s): none

**MDAS-225 Electronic Medical Records (EMR) 3 cr.**
This course will cover the application of computers to manage the information flow in the medical office setting. Students in this course will work within an operating practice management and electronic medical record system where receiving patients, entering and changing demographics and billing information, performing clinical visits, doing referrals, and several other real-life medical office tasks will be covered.

Prerequisite(s): Program acceptance, CMPT-101
Corequisite(s): none

**MDAS-250 Medical Ethics and Law 3 cr.**
This course will provide students with an overview of laws, ethics, liabilities, and their relationships as they relate to the Medical Assisting profession. Covered topics will include ethical and legal responsibilities, licensure requirements, physician and patient rights, negligence, medical records confidentiality, and revocation of licensure

Prerequisite(s): Program Acceptance
Corequisite(s): none

**MDAS-260 Medical Office Administration 3 cr.**
This advanced course is designed to integrate administrative office skills including: human resources & business organization management, professionalism, quality assurance, healthcare compliance, office safety compliance, patient interaction and other office communications, maintenance of supplies and equipment and appropriate documentation.

Prerequisite(s): MDAS-105
Corequisite(s): none

**MDAS-275 Medical Assisting Practicum 4 cr.**
This practicum is designed to reinforce the accumulation of knowledge acquired in the Medical Assistant Program. The practicum experience affords students the opportunity to spend 160 hours of directed practice in a medical office setting applying theory to medical practice.

Prerequisite(s): Department approval
Corequisite(s): none

## *Management Courses (MGMT)*

**MGMT 110 Princ. Management & Leadership 3 cr.**
This course is an introduction to the tasks necessary to motivate and guide people within an organization so that its goals are reached Students will learn about the basics of planning, delegation, and producing results through others. Most important is the emphasis placed on the skills of leadership, where an individual may have responsibilities not explicitly defined by the formal organization. Instead, that person has to persuade and encourage a group to take action cooperatively in the face of risk or hardship. Extensive self-assessments are used.

Prerequisite(s): none
Corequisite(s): none

## *Health Information Technology Courses (MHIT)*

**MHIT 100 Introduction to Health Care in a Public Setting 3 cr.**
This course is a survey of how health care and public health are organized and services are delivered in the United States (U.S.), covering public policy, relevant organizations and their interrelationships, professional roles, legal and regulatory issues and payment systems. This class will also address health reform initiatives in the U.S.

Prerequisite(s): Program Acceptance
Corequisite(s): none

**MHIT 200 Configuring Electronic Health Record Systems 3 cr.**
This course offers practical experience with a laboratory component, addressing approaches to assessing, selecting and configuring Electronic Medical Records (EHRs) to meet the specific needs of customers and end-users.

Prerequisite(s): MDAS-225
Corequisite(s): none

**MHIT 210 Health Management Information Systems 3 cr.**
This theory course is specific to health care and public health applications. It provides an introduction to Health Technology's IT standards, health-related data structures, software applications and enterprise architecture in health care and public health organizations.

Prerequisite(s): MDAS-225
Corequisite(s): none

**MHIT-275 HIT Practicum 4 cr.**
This practicum is designed to reinforce the accumulation of knowledge acquired in the Health Information Technology Program. The practicum experience affords students the opportunity to spend 160 hours of directed practice in a medical office/hospital setting applying theory to electronic medical records systems.

Prerequisite(s): Department approval
Corequisite(s): none

## *Marketing Courses (MKTG)*

**MKTG 200 Marketing 3 cr.**
This course merges activities used to market a product or service into a logical framework Students learn about building relationships with customers according to the customer's needs. Skills developed and used are segmenting the market, defining buyer behavior, positioning a product to satisfy customer needs, and developing a strategy for the product, price, and marketing communication. Areas of focus include modern distribution systems such as direct marketing, telemarketing, and the Internet. There is also extensive focus on E-commerce.

Prerequisite(s): BUSN-100
Corequisite(s): none

**MKTG 250 Advertising 3 cr.**
The purpose of this course is to introduce students to the methods available for the development of an integrated marketing communications program It will provide a conceptual framework for understanding the various forms of marketing communications and the interrelationships among them.

Prerequisite(s): BUSN-100
Corequisite(s): none

## *Music Courses (MUSI)*

**MUSI 100 Music Appreciation and History 3 cr.**
Music Appreciation 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.

Prerequisite(s): none
Corequisite(s): none

**MUSI 105 SMCC Chorale 1 cr.**
This performance based course is for students, experienced or inexperienced, interested in vocal music expression The chorale performs several times a year, presenting a variety of musical styles. Basic vocal techniques are taught. Ability to read music is not required. The chorale rehearses once a week throughout the semester. May be repeated a maximum of three times for credit.

Prerequisite(s): none
Corequisite(s): none

**MUSI 110 Fundamentals of Music 3 cr.**
This course is a one semester introduction to basic music theory, including clefs, rhythmic notation, key signatures, scales, intervals, chords, melodic writing, and harmonization. It is designed for the student with no background in music, but will also be useful to students who have had some musical experience.

Prerequisite(s): none
Corequisite(s): none

**MUSI 125 World Music 3 cr.**
World Music is an introduction to the music and musical life of many cultures of the world, emphasizing the unique character of each musical expression, as well as those elements that are universal to all music. The great diversity of global musical styles will be explored and celebrated, with an emphasis on a relativistic view: the belief that each society has a musical system that suits its culture, and should be understood and appreciated within that cultural context.

Prerequisite(s): none
Corequisite(s): none

**MUSI 135 Jazz Appreciation & History 3 cr.**
Jazz Appreciation and History is an introductory survey of American jazz history including key styles and

seminal musicians from the birth of jazz until the present day.

Prerequisite(s): none
Corequisite(s): none

## *Nursing Courses (NURS)*

**NURS 100 Dosage Calculation 1 cr.**
This course is required for pre-nursing students to acquire the mathematical skills and knowledge used by nurses in the clinical setting. Students must have strong basic math skills (knowledge of decimals, fractions, metric system, conversions between systems of measurement, ratio-proportion, and ability to do basic algebraic equations) required for medication administration. Emphasis is placed on the safety and accuracy required for medication administration. This course will include clinically-based problems that provide students with practice and mastery of clinical calculations. Students taking the on-line version of this course must be able to work independently.

Prerequisite(s): MATH-050
Corequisite(s): none

**NURS 110 Transition to the ADN Role 3 cr.**
This course assists LPN upgrade students to begin the transition from licensed practical nurse (LPN) to associate degree nursing students. The core concepts for competent nursing practice are reviewed: nursing process, caring, and professional behaviors. Opportunities are provided to review basic nursing skills related to patient assessment, use of the nursing process, documentation, therapeutic interventions, caring behaviors, and professional behaviors. Emphasis is placed on methods to be successful in classroom requirements and clinical practice as an associate degree nursing student. Upon completion of this course, students will have the skills and knowledge needed to make a successful transition to Nursing 2, the first nursing course required for LPN upgrade students.

Prerequisite(s): Department approval
Corequisite(s): none

**NURS 125 Nursing I 9 cr.**
In this beginning nursing course, the core concepts for competent nursing practice are introduced: nursing process, caring, and professional behaviors. Emphasis is placed on learning basic nursing skills; patient assessment skills; therapeutic interventions to meet patients' individual needs; caring behaviors to promote therapeutic nurse-patient relationships; and professional behaviors expected in classroom and clinical areas. Students begin to use theoretical knowledge in clinical practice. Upon completion of this course, students are able to provide accurate and safe nursing care in selected skilled care clinical settings as beginning nursing students, using concepts presented in this course. Successful completion of Nursing 1 is required for continuation in the nursing program.

Prerequisite(s): NURS program acceptance
Corequisite(s): none

**NURS 175 Nursing II 9 cr.**
In this second nursing course, the core concepts for competent nursing practice are expanded: nursing process, caring, and professional behaviors. Emphasis is placed on clinical nursing skills; patient assessments for changes in health status, responses to health problems, and effects of therapeutic interventions; use of standardized teaching plans; written and verbal communication skills; caring behaviors; and professional accountability for patient care, including legal and ethical ramifications for nursing practice. Professional behaviors are expected in classroom and clinical areas. Students incorporate theoretical knowledge in clinical practice. Upon completion of this course, students are able to provide accurate and safe nursing care in selected medical, surgical, and maternity clinical settings, using concepts presented in this course. Successful completion of Nursing II is required for continuation in the nursing program.

Prerequisite(s): NURS-125
Corequisite(s): none

**NURS 225 Nursing III 9 cr.**
In this third nursing course, students' skills and knowledge are advanced in the core concepts for competent nursing practice: nursing process, caring, and professional behaviors. Emphasis is placed on students' use of the nursing process as a critical thinking tool for clinical decisions, implementation of safe care, and patient education; management of basic care components; effective verbal and written communication; therapeutic caring relationships; and professional accountability for implementation and evaluation of patient care. Professional behaviors are expected in the classroom and clinical areas. Students continue to incorporate theoretical knowledge in clinical practice. Upon completion of this course, students are able to provide accurate and safe care in selected medical, surgical, and pediatric clinical settings, using concepts presented in this course. Successful completion of Nursing III is required for continuation in the nursing program.

Prerequisite(s): NURS-175
Corequisite(s): none

**NURS 275 Nursing IV 9 cr.**
In this final nursing course, students use prior theoretical and clinical learning experiences to incorporate the core concepts for competent nursing

practice: nursing process, caring, and professional behaviors. Emphasis is placed on student's systematic use of the nursing process and critical thinking skills to manage patient care; making clinical decisions for accurate and safe patient care; patient education, particularly for patients to make informed decisions and provide self-care; utilization of management skills for effective communication; and accountability for all aspects of patient care. Students demonstrate professional behaviors in all settings. Students integrate theoretical knowledge with clinical practice. Upon completion of this course, students are able to provide and manage comprehensive care in selected medical, surgical, and psychiatric clinical settings. Successful completion of Nursing IV is required for students eligibility to take the NCLEX-RN examination.

Prerequisite(s): NURS-225
Corequisite(s): none

## *Nutrition Courses (NUTR)*

**NUTR 110 Normal Nutrition & Lab 4 cr.**
This course is an introduction to the field of nutrition, which includes the study of carbohydrates, fats, proteins and other essential nutrients. Students will also gain a workable knowledge of digestion, absorption, and metabolism, life cycle nutrition, nutrition guidelines, and nutrition programs. The concepts covered in the lecture course are explored in greater detail during lab time using a variety of activities including food experiments, anthropometric measurement, nutrient analysis, and enhanced problem sets.

Prerequisite(s): ENGL-050, ENGL-075, MATH-020
Corequisite(s): none

**NUTR 210 Intro Medical Nutrition Therapy 3 cr.**
This course is designed to investigate the use of nutrition in the treatment of disease. Emphasis will be placed upon diets which modify for specific nutrient groups, calories, and food textures. Special needs of allergy patients, athletes, alcohol use, and fad food claims will also be explored.

Prerequisite(s): NUTR-110
Corequisite(s): none

## *Oceanography and Marine Science Courses (OCEA)*

**OCEA 100 Elements of Nautical Science 2 cr.**
This course will provide students with a brief introduction to navigation, nautical publications, electronic navigation, fire-fighting, rules of the road, and practical experience in small boat handling.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): MATH-050

**OCEA 105 Elements of Oceanography 4 cr.**
This introductory science course is designed to give students an overview of marine processes and phenomena as a foundation for further learning about the oceans. Many measurable oceanographic parameters are defined and described. Major topics are supported by appropriate laboratory activities.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): MATH-050

**OCEA 125 Sea Time I 2 cr.**
This is the first of four semesters of Seatime It is designed to introduce AMBO students to the basic activities of field and aquatic research, often while on a research vessel. Students will be taught introductory field sampling methods, including water-quality techniques, basic navigation, biological sampling, and data acquisition and analysis.

Prerequisite(s): Program acceptance
Corequisite(s): OCEA-100, OCEA-105

**OCEA 215 Oceanographic Instrumentation/Lab4 cr.**
This course will cover the theory and practice of using instrumentation to collect and analyze oceanographic data. Techniques covered will include multibeam echo sounder, side-scan SONAR, data sonde Conductivity-Temperature-Density (CTD), current drifters, remote sensing devices, remotely operated vehicles (ROV), underwater video, and geographic information systems (GIS). The laboratory will stress calibration, use, and maintenance of oceanographic gear, release of current drifters and analysis of data.

Prerequisite(s): OCEA-100, OCEA-105, OCEA-125
Corequisite(s): None

**OCEA 225 Advanced Sea Time 2 cr.**
This course is the third of a four course sequence. The course is designed to reinforce concepts learned in Nautical Science, Oceanography, Marine Botany and Marine Invertebrate Zoology. Students will spend time on a boat in Casco Bay taking physical and biological measurements during September and October.

Prerequisite(s): OCEA-175
Corequisite(s): none

**OCEA 299 Capstone Research 3 cr.**
This course prepares students to carry out a scientific investigation. Topics include writing a proposal, researching the scientific literature, proposing hypotheses, designing and conducting an experiment and reporting the results. Projects are conducted at

SMCC's Aquaculture lab and often investigate reproductive cycles of aquatic organisms.

Prerequisite(s): OCEA-225
Corequisite(s): none

## *Philosophy Courses (PHIL)*

**PHIL 100 Introduction to Philosophy 3 cr.**
This course is an introduction to the "basics" of philosophy. It will introduce the basic questions, frame the basic arguments these questions have engendered, and introduce students to the major figures in the history of philosophy who have both raised the questions and attempted to answer them. This course seeks to define what philosophy is and what its parameters are. It will also attempt to answer the question "why philosophize"?

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**PHIL 105 Ethical Dilemmas 3 cr.**
This course will examine the roots of the cultural values in American life and how these values affect decision-making on social, political, and personal moral issues The course will survey the major philosophical thought of Western civilization focusing on ethics and how they are derived from metaphysical as well as social and political philosophy. Students will be assigned readings that deal both with ethical theory and ethics in practice. Two works of literature, one ancient and one modern, will also be assigned and analyzed in terms of the ethical issues they raise.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

## *Physics Courses (PHYS)*

**PHYS 110 Technical Physics & Lab 4 cr.**
This course represents a non-calculus, but rigorously algebraic, approach to the analysis of the concepts and relationships of all the principal areas of Physics Topics of study include Mechanics, such as Kinematics in one and two dimensions, Dynamics and Newton?s Laws of Motion, Friction, Rotations and Torque, Uniform Circular Motion, Universal Gravitation, Momentum and Angular Momentum, Kinetic and Potential Energy, Properties of Solids and Fluids, Strength of Materials, Harmonic Motion, Waves, Sound, Light and Electromagnetic Waves, Heat and Thermodynamics, and Electricity and Magnetism, as well as Relativity, and Quantum and Nuclear Physics, if time permits. Emphasis will be placed in understanding natural phenomena and solving numerical problems in both the Metric (SI) and English (US) Systems of units. Weekly laboratory experiments help the student develop a feel for realistic measurements and meaningful calculations. Successful completion of this course fulfills the Associates of Arts degree science requirement.

Prerequisite(s): MATH-020
Corequisite(s): MATH-050

**PHYS 150 College Physics I & Lab 4 cr.**
The first semester of a two semester series, this course represents a non-calculus, but rigorously algebraic, approach to the analysis of the concepts and relationships of Mechanics: Kinematics in one and two dimensions, Dynamics and Newton?s Laws of Motion, Friction Forces, Rotations and Uniform Circular Motion, Universal Gravitation, Torque and Static Equilibrium; Momentum and Angular Momentum, Kinetic and Potential Energy. Emphasis will be placed on understanding natural phenomena and solving numerical problems in both the Metric (SI) and English (US) Systems of units. Weekly laboratory experiments help the student develop a feel for realistic measurements and meaningful calculations in Mechanics.

Prerequisite(s): MATH-140
Corequisite(s): none

**PHYS 155 College Physics II & Lab 4 cr.**
The second part of a two semester series, this course represents a non-calculus, but rigorously algebraic, approach to the analysis of the concepts and relationships in Solids and Fluids, Heat and Thermal Physics, Thermodynamics, Waves and Sound, Light, Electromagnetism, and Modern Quantum, Atomic and Nuclear Physics. Emphasis will be placed in understanding natural phenomena and solving numerical problems. Weekly laboratory experiments help the student develop a feel for realistic measurements and meaningful calculations in the topics studied.

Prerequisite(s): PHYS-150
Corequisite(s): none

## *Political Science Courses (POLS)*

**POLS 100 Contemporary World Problems 3 cr.**
Contemporary World Problems is an introductory course that will expose the student to current events worldwide. The course will introduce students to the structure and functions of the U.S. government and policy issues facing the nation and the world. These issues include the federal budget, the U.S. and global economy, international terrorism, weapons of mass destruction, human rights and the global environment. The course examines the interconnection between the student's life at a community college in Maine and the

rapidly changing, globally interdependent world in which they live.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**POLS 105 Intro to American Government 3 cr.**
This course introduces students to the institutions and political practices of American Government. Students will gain an understanding of the origins, structure and operation of the American government system. The course focuses primarily on the structures and processes at the national level, but will also touch on state and local governments. This course will examine the relationship between the President, Congress, and Courts. It will review the political dynamics of campaigns and elections and also examine the fundamentals values of freedom and equality under the Constitution.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**POLS 110 Intro to International Relations 3 cr.**
Introduction to International Relations examines the political and power relationships among the nations of the world. The course introduces and analyzes current world issues including the impact of the Cold War on global relations, the war on terror, international environmental issues, globalization, international health concerns, militarism, and the foreign policies of countries toward these complex issues. The important role that cultural perceptions play in global relations is emphasized. Through assigned readings and class discussions, students gain an understanding of the many different actors in international relations and how they affect today's global society.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**POLS 115 State and Local Government 3 cr.**
Most citizen and business contact with government takes place at the state and local levels. This course examines the politics, policies and processes of Maine government particularly, but within the context of state and local governments nationally. It will review the legislative, judicial and administrative functions of government with attention to the Constitutional structure of federalism, intergovernmental relations, and contemporary issues. Topics covered may include law enforcement, land use planning, education, social services, taxation and budgeting. This course is offered occasionally.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

**POLS 120 Introduction to Public Policy 3 cr.**
Introduction to Public Policy will introduce students to key concepts in public policy formation, implementation and evaluation in the American political system. An array of public policy issues will be presented from which class selections will be made for in-depth study and analysis. This course begins with a thorough analysis of the federal government's financial condition as a backdrop for government policy decisions. The use of the federal budget with its limitations and opportunities in providing resources and benefits as the fundamental tool in government policymaking will be explored. Policy discussions will be drawn from domestic and foreign policies treating economic, social welfare, medical care, environmental, and national security issues. The course will be centered on class and group discussions, presentations, debates, independent student research and written analysis.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): POLS-100 or POLS-105

**POLS 175 Political Science Internship 3 cr.**
Political Science Internship is a three-credit course in which students will combine readings, reports and seminar discussions with professional experience in the local offices of Maine's US. Congressmen and Senators, the State Legislature or other area political organizations. Students will spend approximately 12 hours per week in the assigned office, carrying out a variety of tasks from standard office work to constituent work and small research projects. During the semester, the student also will meet regularly with their SMCC instructor and other interns to discuss readings and experiences.

Prerequisite(s): none
Corequisite(s): POLS-100 or POLS-105 or POLS-110

**POLS 180 Gender and Politics 3 cr.**
This course is an analysis of the role that gender plays in shaping politics and other aspects of American society based on the history of women's quest for power. It will examine the impact of politics on women's lives and women's impact on politics within the United States and will survey global issues pertaining to women and politics. Using classic and contemporary feminist texts, students will examine theories of gender difference, gender voice, gender and political office, and gender and public policy. This course is offered occasionally.

Prerequisite(s): none
Corequisite(s): POLS-100 or POLS-105 or POLS-110

**POLS 205 Comparative Politics 3 cr.**
Comparative Introduction to Political Science will expand the student's understanding of the practices

and procedures involved in political institutions at the national and international levels of government. This course provides an introduction to the study of government and politics from a comparative perspective, focusing especially on political structures and behavior in a wide range of nations and international organizations. Students will gain an understanding of the institutional and operations of American government through a comparative analysis of other political systems. Students will examine democratic, authoritarian and totalitarian forms of government and the ideological foundations on which they are based.

Prerequisite(s): POLS-100 or POLS-105
Corequisite(s): none

**POLS 212 Peace, War, and Security 3 cr.**
This course will examine the military, economic, political and cultural factors that lead to peace. It will look at the changing nature of war, whether between countries, within a country, or, as with the war on terror, virtually independent of nation states. Last, it will set out a framework for looking at security on a national, as well as local, concrete level. The war in Iraq will be a central case study, but students also will be able to study other conflicts, such as Kosovo, the Sudan, and the war on terror.

Prerequisite(s): POLS-100 or POLS-105 or POLS-110
Corequisite(s): none

**POLS 250 Introduction to Political Theory 3 cr.**
Using selected contemporary and classical readings in political philosophy, this course will study important political systems, such as democracy and socialism, and key political concepts such as political authority, law, personal liberty and justice. Lecture and classroom discussion will emphasize applications to contemporary events and problems.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): POLS-100 or POLS-105

## *Psychology Courses (PSYC)*

**PSYC 100 Introduction to Psychology 3 cr.**
This course is designed to provide a broad overview of the field of Psychology. Special attention will be given to helping the student become a better thinker, by learning to take charge of ideas one has about psychology. The goal of this course is to think consciously, deliberately and skillfully about human behavior. Topics such as physiological psychology, perception, learning, cognition, emotions, health psychology, psychological disorders, as well as others are included.

Prerequisite(s): none
Corequisite(s): ENGL-050, ENGL-075

**PSYC 200 Abnormal Psychology 3 cr.**
This course is an introduction to the psychological theory and research regarding abnormal and maladaptive human behavior. It provides a comprehensive overview of the major categories of abnormal behavioral disorders with an emphasis on theory and research (e.g., schizophrenia, affective disorders, substance abuse, eating disorders, etc.) Special attention will be given to the study of major concepts, theoretical perspectives, empirical findings and historical trends as they pertain to psychological problems: as well as exposure to issues in diagnostics and treatment techniques. This course is writing intensive and will use a variety of types of writing (e.g., class writing, reaction papers), in addition to or in place of more conventional formal papers. This course has been designated as a writing-intensive course.

Prerequisite(s): ENGL-100, PSYC-100
Corequisite(s): none

**PSYC 201 Social Issues: A Qualitative Study 3 cr.**
In this course, students will have the opportunity to learn how research connects to social issues. The focus in this course will be on qualitative research not traditional quantitative research. Qualitative research is research that explores the quality, texture, and meaning of experience (versus research focused on collecting data which is statistically analyzed to prove a hypothesis). You will learn six distinct qualitative designs, and then use one of these designs to conduct a qualitative study of a social issue of your choice.

Prerequisite(s): ENGL-100, 100 level Social Science Course
Corequisite(s): None

**PSYC 215 Social Psychology 3 cr.**
This course introduces the major classic and contemporary theories and research in social psychology. One definition of social psychology is that it represents "" an attempt to understand and explain how the thought, feeling, and behavior of individuals are influenced by the actual, imagined, or implied presence of others"" (Allport, 1985). Defined more broadly, social psychologists study social behavior. This course investigates the mental processes, situational factors, individual differences, and group phenomena that influence the way people interact with other people.

Prerequisite(s): ENGL-100, PSYC-100
Corequisite(s): none

**PSYC 220 Developmental Psychology 3 cr.**
This course utilizes a life-span approach to human development, focusing on factors associated with physical, cognitive, social, and personality development from birth through adulthood. Using major developmental theories as a framework, both psychological and environmental factors and their interplay will be discussed. Topics will also include philosophical and historical bases of theories, as well as cultural factors which influence development. Students will be encouraged to think critically and apply their knowledge of development to their own lives.

Prerequisite(s): ENGL-050, ENGL-075, PSYC-100
Corequisite(s): none

**PSYC 225 Educational Psychology 3 cr.**
Educational Psychology is the overview of the psychology of learning, motivation, growth and development, personality dynamics and social adjustment. Emphasis is placed on the learning process and related ideas such as child development, individual differences, cognition, learning environments, motivation, and effective teaching-learning relationships in schools.

Prerequisite(s): ENGL-050, ENGL-075, PSYC-100
Corequisite(s): none

**PSYC 230 Sport Psychology 3 cr.**
This course provides an overview of the major areas of research and application in the area of sport psychology. It involves the study and application of psychological principles, which influence behavior, enhance skill acquisition, and maximize sport performance of athletes, coaches, and others involved in sports. Topics may include philosophies of sport, motivation, personality of coaches and athletes, recreational sports for children, training and learning principles, mind/body relationships, and the effects of anxiety, arousal, and relaxation on performance and current research in the field.

Prerequisite(s): ENGL-050, ENGL-075, PSYC-100
Corequisite(s): none

**PSYC 235 Psychology of Gender 3 cr.**
This course focuses on the way gender influences behavior and personality. The class will center on how women and men are influenced by social, psychological, and biosocial constructions of gender. The student will use critical thinking skills to develop and evaluate gender, in terms of psychological concepts, empirical studies, and personal knowledge.

Prerequisite(s): ENGL-050, ENGL-075, PSYC-100
Corequisite(s): none

**PSYC 240 Theories of Personality 3 cr.**
In this course major personality theorists and their theories will be reviewed, including psychodynamic, humanistic, behavioral, cognitive, biological, trait, and cultural perspectives. In addition, students will explore how culture and social context shape understanding of personality and the development of theories.

Prerequisite(s): ENGL-050, ENGL-075, PSYC-100
Corequisite(s): none

## *Public Safety Courses (PUBS)*

**PUBS 104 Public Safety Telecommunicator 3 cr.**
This course is designed to prepare students for emergency telecommunicator duties, to meet the requirements of the NFPA 1061 Professional Qualification Standard for Public Safety Telecommunicator I, as well as meeting the State of Maine statutory requirement for those employed at public safety dispatch centers in Maine (25 MRSA §2926 2(b)) . The course combines instructor presentations, student activities and simulation exercises to develop skills and knowledge in the field. The course will provide the student with the knowledge of roles and responsibilities, current technologies, interpersonal communications skills, telephone communication and call processing skills, radio broadcast procedures, legal aspects of public safety communications and stress management skills. In addition the course will introduce students to the skills necessary to manage requests for police, fire and medical services. This course is cross-listed as CJUS-104, EMST-104, and FIRE-104

Prerequisite(s): none
Corequisite(s): none

**PUBS 106 Introduction to Homeland Security 3 cr.**
An introduction to the public and private sector dimensions of the theory and practice of homeland security at the national, regional, state, and local level. An overview of the administrative, legislative, and operational elements of homeland security programs and processes including a review of homeland security history, policies, and programs is provided. Topics include the threat of terrorism and countermeasures, including intelligence, investigation, and policy that support U.S. homeland security objectives.

Prerequisite(s): none
Corequisite(s): none

## *Radiography Courses (RADG)*

**RADG 100 Introduction to Health Sciences 3 cr.**
This course is designed to introduce the student to the fundamental concepts of patient care, including radiation protection and considerations of patient physical and psychosocial conditions. Routine and emergency patient care procedures will be described as well as aspects of patient assessment and assistance, medical-surgical asepsis, infection control, patient communication and death and dying. Radiation protection will include types of interaction of radiation and matter, as well as radiation safety and protective measures for the patient as well as personnel. (Note: The role of the radiographer in patient education, communication skills, ethical and legal issues will be covered in Introduction to Clinical Practicum I.)

Prerequisite(s): Program acceptance
Corequisite(s): none

**RADG 105 Radiographic Procedures I 4 cr.**
This lecture/demonstration course is designed to introduce the student to medical and radiological terminology, the basic routine positions of the chest, abdomen, upper and lower extremities, mobile radiography and fluoroscopic/contrast procedures through lecture notes, hands-on experience and competency examinations in the SMCC Radiographic Simulation Laboratory.

Prerequisite(s): Program acceptance
Corequisite(s): none

**RADG 115 Radiographic Exposure 3 cr.**
This course deals with the prime factors of exposure and the technical factors affecting image quality. The relationship between the prime factors of exposure and the accessories that affect radiographic density/brightness will be emphasized. Film composition, computed radiography and direct digital imaging, automatic processor construction and chemistry are also discussed.

Prerequisite(s): Program acceptance
Corequisite(s): RADG-130

**RADG 130 Clinical Practicum I 5 cr.**
This course correlates the academic concepts into the clinical environment, dealing directly with patients. Under supervision, students will observe and perform radiographic examinations of the chest, abdomen, upper and lower extremities. Clinical Area Specific inventories and competency evaluations are utilized to document clinical performance.

Prerequisite(s): Program acceptance
Corequisite(s): none

**RADG 155 Radiographic Procedures II 4 cr.**
This lecture/demonstration course is a continuation of Radiographic Procedures I. The student will continue with an in depth study of the routine positions of the pelvic girdle, vertebral column, ribs, sternum, skull, facial bones and sinuses. Radiographic procedures of the urinary system, surgical radiography, and pediatrics. Demonstrations and competency testing procedures are conducted in the SMCC Radiographic Simulation Laboratory.

Prerequisite(s): RADG-105, RADG-130
Corequisite(s): none

**RADG 160 Clinical Practicum II 5 cr.**
Students continue in the clinical setting to perform radiographic examinations of patients under supervision. In addition to those examinations previously performed, students will learn to perform radiographs of the spine, contrast studies and mobile radiography.

Prerequisite(s): RADG-130
Corequisite(s): none

**RADG 175 Radiographic Analysis I 1 cr.**
This course provides students with comprehensive and detailed instruction in the evaluation of diagnostic quality radiographs and computer-generated images. Students will assess radiographs based on the fundamentals of exposure, image processing and positioning.

Prerequisite(s): RADG-160
Corequisite(s): RADG-190

**RADG 190 Clinical Practicum III 4 cr.**
During this semester, students are able to continue to perform radiographic examinations on increasingly difficult patients. Continuity of procedural area is achieved with this five-day-per-week clinical practice and allows third semester students to achieve competencies appropriate to this semester.

Prerequisite(s): RADG-160
Corequisite(s): none

**RADG 205 Radiographic Procedures III 3 cr.**
This course included the study of Trauma Radiography, Sterile Technique, and Venipuncture as well as the basic concepts, related physics and clinical applications in the specialty areas of computerized tomography scanning, cross sectional anatomy, interventional radiography, and magnetic resonance imaging.

Prerequisite(s): RADG-155
Corequisite(s): none

**RADG 215 Radiographic Exposures II 3 cr.**
This course of study provides a review of all factors affecting radiographic density. Utilizing a format of lecture-demonstrations, all factors affecting radiographic contrast, recorded detail, distortion will be covered. A review of film sensitometry will also be included along with a comparison of film-screen combinations and digital imaging relative to speed, resolution, and reduction of patient exposure. Students are encouraged to present, in class, challenges related to exposure encountered in clinical practicum. A review of PACS systems will also be covered.

Prerequisite(s): RADG-115
Corequisite(s): RADG-160

**RADG 230 Clinical Practicum IV 6 cr.**
This course is designed to study those procedures considered less general to the Radiology Department. Students are introduced to the most common of these procedures, the anatomy demonstrated, the radiographic projections, and use of the equipment. Students are also taught the value of properly analyzing image quality.

Prerequisite(s): RADG-175, RADG-190
Corequisite(s): none

**RADG 235 Applied Physics for Radiography 3 cr.**
This course begins with a review of x-ray production. It continues with a study of electrodynamics, x-ray circuitry, components of the x-ray circuitry, methods of rectification, construction of and types of x-ray tubes, x-ray production and the x-ray beam. Image intensification, image display, and video units, are also covered.

Prerequisite(s): RADG-190
Corequisite(s): none

**RADG 245 Radiographic Pathology 3 cr.**
This course is designed to introduce theories of disease causation and the pathophysiologic disorders that compromise healthy systems. Etiology, pathophysiologic responses will be presented, with a strong focus on the clinical manifestations and appearances of diseases of various imaging modalities.

Prerequisite(s): BIOL-135, BIOL-136
Corequisite(s): Program acceptance

**RADG 255 Principles of Quality Assurance 2 cr.**
This course is designed to familiarize students with the basic concepts of quality assurance as applied to diagnostic radiographic equipment and image processes. As x-ray equipment has become more complex, the need for radiographers to understand detailed workings and limitations of equipment has become more important. This course will provide students with the necessary theoretical background and experimental skills through clinical sites laboratory sessions to permit him/her to function effectively as part of a team to measure performance parameters and to evaluate quality assurance programs.

Prerequisite(s): RADG-235
Corequisite(s): none

**RADG 260 Clinical Practicum V 8 cr.**
This course concentrates on the continuation of perfecting previously acquired skills. In addition, students will have the opportunity to rotate through and observe specialty areas such as angiography, CT scanning and MRI.

Prerequisite(s): RADG-230
Corequisite(s): none

**RADG 275 Radiographic Analysis II 1 cr.**
In this continuation of RADG-175, students learn to critique images performed by classmates and, in addition, learn how to present case studies relative to procedures. Correlation is made between patient history, radiographic views obtained, and technical factors utilized.

Prerequisite(s): RADG-175, RADG-230
Corequisite(s): none

## *Radiation Therapy Courses (RDTH)*

**RDTH 100 Medical Terminology 1 cr.**
RDT-100 is an intense study of medical terminology using a system in word building with an emphasis on Radiation Oncology. Thousands of medical words can be built from Greek and Latin prefixes, suffixes, word roots and combining forms.

Prerequisite(s): RDTH program acceptance
Corequisite(s): none

**RDTH 105 Introduction to Radiation Therapy 3 cr.**
This course introduces the student to the fundamentals of medical imaging, including radiographic imaging techniques, digital imaging, transfer and storage of medical images. An introduction to the principles of radiation therapy is discussed, including patient assessment, patient education, and pharmacology. This course provides students with the knowledge and skills to solve problems associated with radiation therapy, and to think critically when working with patients and colleagues.

Prerequisite(s): RDTH program acceptance
Corequisite(s): none

**RDTH 120 Clinical Practicum I 4 cr.**
This course introduces the student to clinical education with an intense clinical orientation including hospital orientation, field trips, boot camps, job-shadowing experiences and the role of a student in the department of radiation therapy. It serves as an introduction and provides a foundation for the student's specific role in the clinical setting. Topics such as teamwork, ethics, blood-borne pathogens, radiation protection and clinical assignments are all covered in this course.

Prerequisite(s): RDTH program acceptance
Corequisite(s): none

**RDTH135 Radiographic Anatomy I 1 cr.**
This course is a presentation of radiographic anatomy as it pertains to the radiation therapist in general. Specific skeletal anatomy will be reviewed; emphasis will be on bony landmarks, terminology, organ reference, surface and cross-sectional anatomy.

Prerequisite(s): RDTH program acceptance
Corequisite(s): none

**RDTH 140 Princ. & Pract. of Rad Therapy I 3 cr.**
This course provides an introduction to radiation oncology concepts and techniques. The student examines cancer through an exploration of factors, including epidemiology, etiology, and detection. Theoretical knowledge delivered in class supports the clinical aspects of providing treatment to patients with cancer. Treatment components include simulation and treatment utilizing an anatomical site-by-site approach.

Prerequisite(s): RDTH program acceptance
Corequisite(s): none

**RDTH 160 Clinical Practicum II 4 cr.**
This practicum course is the continuation of Clinical Practicum I. In addition to applying knowledge gained during the first clinical practicum, students will observe and participate in the technical and clinical aspects of radiation therapy. Again, clinical-performance objectives are used to direct students to specific tasks and related information necessary in the clinical setting. Students must demonstrate competence in specific clinical activities.

Prerequisite(s): RDTH-120
Corequisite(s): none

**RDTH 165 Radiographic Anatomy II 1 cr.**
This course is a continuation of RDTH-135, Radiographic Anatomy I. It presents radiographic anatomy as it pertains to the radiation therapist in general. Specific organ systems are reviewed with emphasis placed on specific tumors and sites.

Prerequisite(s): RDTH-135
Corequisite(s): none

**RDTH 170 Radiation Physics 3 cr.**
This is a lecture study series dealing specifically with the physics of radiation oncology, including radiation and its properties, x-ray production, radiation quality, principles of detectors, high energy equipment, photon and electron beams and brachytherapy applications.

Prerequisite(s): RDTH-120
Corequisite(s): none

**RDTH 180 Clinical Practicum III 7 cr.**
This practicum course is the continuation of Clinical Practicum I & II. In addition to applying knowledge gained during the first and second clinical rotations, students will observe and participate in the technical and clinical aspects of radiation therapy. Clinical performance objectives and case studies will be used to direct students to important clinical tasks and related information. This 10-week summer internship allows the student an opportunity to work with the patient on a daily basis, challenge their clinical skills and grow in self-confidence. Students must demonstrate competence in specific clinical activities.

Prerequisite(s): RDTH-160
Corequisite(s): none

**RDTH 210 Princ. & Pract. of Rad Therapy II 3 cr.**
This senior-level course is designed to provide the learner with a foundation in cancer management. Topics such as epidemiology, etiology, pathology and the principles of radiation therapy will be discussed. Students will be introduced to concepts such as radiosensitivity, therapeutic ratio, cell cycle, time/dose relationship and specific radiation therapy equipment.

Prerequisite(s): RDTH-105
Corequisite(s): none

**RDTH 215 Physician's Lecture Series 3 cr.**
This is a lecture series presented by visiting radiation oncologists. Each of the physicians will provide students with the fundamentals of clinical radiation oncology. Malignant conditions, their etiology and methods of treatment are discussed. Attention is given to patient prognosis, treatment results and the effects of combined therapies. Case study presentations will emphasize treatment principles included in each particular tumor site, utilizing radiographic images, scans, pathology slides, etc.

Prerequisite(s): RDTH-140
Corequisite(s): none

**RDTH 220 Clinical Practicum IV 7 cr.**
The purpose of this course is twofold: 1) as a continuation of Clinical Practicums I, II, & III for entry-level students; and 2) as an orientation and first clinical rotation for those in advanced standing. Clinical performance objectives for both levels of students will be used, with a more concentrated clinical approach organized for those students in advanced standing. Entry-level students will demonstrate proficiency in common technical and clinical skills, as well as learning and refining the more technically difficult aspects of radiation therapy. Students in advanced standing will demonstrate proficiency in common technical and clinical skills.

Prerequisite(s): RDTH-180
Corequisite(s): none

**RDTH 225 Treatment Planning & Dosimetry 4 cr.**
Students are introduced to concepts in treatment planning and dosimetry as they apply to a radiation oncology department. Topics such as dose calculations, brachytherapy, and computer dosimetry will be discussed.

Prerequisite(s): RDTH-140
Corequisite(s): none

**RDTH 230 Basic Clinical Dosimetry 1 cr.**
Clinical dosimetry has been an integral part of radiation therapy since its inception. This dosimetry course is organized and centered on the practice of clinical radiation dosimetry with the objectives of developing students' skill in quality assurance measurements, machine warm-up procedures, and brachytherapy.

Prerequisite(s): RDTH-180
Corequisite(s): none

**RDTH 235 Radiation Cell Biology 3 cr.**
This course will provide students with the principles of cell responses to radiation. Factors that influence the effects of radiation, tissue sensitivity, cell biology, interaction of radiation with matter, total body and late effects of radiation, and environmental factors are discussed. In addition, radiation protection principles are reviewed, including time, distance, and shielding.

Prerequisite(s): RDTH-140
Corequisite(s): none

**RDTH 240 Clinical Practicum V 7 cr.**
The purpose of this course is twofold: 1) as a continuation of Clinical Practicums I, II, III and IV for the entry level student; and 2) as a continuation of Clinical Practicum IV for students in advanced standing.

Prerequisite(s): RDTH-220
Corequisite(s): none

**RDTH 245 Radiation Quality Assurance Lab 1 cr.**
The lab experience highlights and reinforces many of the physics and dosimetric applications of the clinic. Special emphasis is on quality assurance procedures and dose measurement as it relates to radiation therapy.
Prerequisite(s): RDTH-220
Corequisite(s): none

**RDTH 260 Clinical Practicum VI 7 cr.**
The purpose of this course is twofold: 1) as a continuation of Clinical Practicum I-V for the 24-month students; and 2) as a continuation of Clinical Practicums IV and V for students in Advanced Standing. Students will benefit from the summer internship by participating in patient care, providing treatment planning and delivering a planned course of radiation therapy under direct and indirect supervision. The team approach should provide an atmosphere where students can grow in self-confidence, precision and accuracy in delivering a planned course of radiation therapy. In addition, students shall demonstrate the following skills: 1) technical skills (quality and quantity of work); 2) dosimetric and treatment planning skills (clinical applications); and 3) nursing skills (psychological and routine nursing skills).

Prerequisite(s): RDTH-240
Corequisite(s): none

**RDTH 280 Clinical Practicum VII 6 cr.**
This practicum course is a continuation of Clinical Practicum VI and is designed for the advanced standing student only. The student will focus on clinical competence, decision-making, and critical thinking related to delivering a prescribed course of radiation therapy.

Prerequisite(s): RDTH-260
Corequisite(s): none

**RDTH 295 Radiation Therapy Registry Review 1 cr.**
This course is designed to prepare the radiation therapy student to take the American Registry of Radiologic Technology (ARRT) Certification Examination in Radiation Therapy. There will be a complete review of ARRT Registry content, with special emphasis on the first year material. Several "mock registries" will be provided.

Prerequisite(s): RDTH-260
Corequisite(s): none

## *Respiratory Therapy Courses (RESP)*

**RESP 100 Respiratory Therapy Patient Care 2 cr.**
This course is designed to give entry-level Respiratory Therapy students an overview of the development of respiratory therapy, its role in health care, its relationship to other health care services, and its organizational structure in the hospital environment. Also discussed will be such topics as ethics, medical-legal responsibilities of patient care (including HIPPA training), death and dying, blood borne pathogens and universal precautions, charting and generation of orders and medical terminology. Basic pulmonary anatomy and medical terminology will also be presented. Focus throughout the course will be on the patient as an individual and central figure in the complex multi-directional environment.

Prerequisite(s): Program acceptance
Corequisite(s): RESP-101

**RESP 101 Gas, Humidity, & Aerosol Therapy 4 cr.**
This course will allow students to achieve the technique, skills and understanding necessary to properly and effectively administer the three treatment modalities. The physiologic rationale, indications and contraindications will be stressed in addition to practices required for patient safety. An understanding of the physical principles defining equipment function will be required.

Prerequisite(s): Program acceptance
Corequisite(s): RESP-100

**RESP 105 Pulmonary Assessment Tech 3 cr.**
This course is designed to provide students with entry-level skills in basic chest-assessment and auscultation of breath-sound; basic interpretation of chest radiographs, pulmonary-function tests, arterial-blood gas sampling, and analysis, interpretation, and application of concepts covered in AHS-114, Cardiopulmonary-Renal Anatomy and Physiology.

Prerequisite(s): Program acceptance
Corequisite(s): RESP-100, RESP-101

**RESP 110 Airway Management 3 cr.**
The course is designed to provide students with the knowledge and skills needed to effectively assess and treat patients with disorders of the upper and lower airway. Knowledge and skills will be confined to the scope of practice of the respiratory-care practitioner.

Prerequisite(s): BIOL-130, BIOL-131, RESP-100, RESP-101
Corequisite(s): none

**RESP 115 Applied Physics-Health Sciences 2 cr.**
This course is designed as a general introduction to basic concepts in physics, relevant to respiratory care and cardiovascular technology. Concepts discussed will include gas laws, fluid dynamics, temperature, pressure, Newton's Laws of Motion, units of measurement and conversions, radiation safety, and biomedical monitoring.

Prerequisite(s): Program acceptance (RESP or CARD)
Corequisite(s): none

**RESP 120 Cardiopulmonary-Renal A&P 3 cr.**
This course is designed to be an in-depth study of the structure and function of the cardiovascular, pulmonary and renal systems. Emphasis will be placed upon the clinical aspects of systemic function and clinical measurement of that function.

Prerequisite(s): BIOL-130, BIOL-131, RESP-100, RESP-101
Corequisite(s): none

**RESP 125 Clinical Practicum I 3 cr.**
This course is an introduction to clinical practice and hospitals affiliated with SMCC's Respiratory Therapy Program. The clinical experience will be observational, with some directly supervised task performance under guidance of the clinical instructor. Students will rotate through selected environments for four or eight hours each on a day shift one day per week.

Prerequisite(s): BIOL-130, BIOL-131, RESP-100, RESP-101
Corequisite(s): RESP-110, RESP-115, RESP-120

**RESP 150 Microbiology for Patient Care 2 cr.**
This course takes a survey approach to the classification, morphology, identification, and physiology of microorganisms. The major emphasis is on the clinical problems associated with infection nosocomially contracted. Some emphasis is also placed on the practical problems and techniques of the cleaning, sterilization, and utilization of contaminated equipment and clothing.

Prerequisite(s): BIOL-135, BIOL-136, CHEM-120, RESP-105, RESP-115
Corequisite(s): none

**RESP 160 Pharmacology 2 cr.**
The general principles of drug action, methods of administration, metabolism, excretion and clinical application will be presented. Bronchoactive drug groups seen in the practice of respiratory therapy will be emphasized. Also discussed will be several drug categories (cardiovascular medications, antibiotics,

neuromuscular blockers, anticoagulants and diuretics) not used directly by the respiratory care practitioner.

Prerequisite(s): RESP-105, RESP-115, BIOL-135, BIOL-136
Corequisite(s): none

**RESP 170 Intro to Mechanical Ventilation 2 cr.**
This course is designed to provide students with an understanding of the fundamentals of mechanical ventilation. The focus will be placed on the way mechanical ventilators function, basic terminology, classification, technological and mathematical concepts, graphical displays and the interrelationship between pressure, volume, flow and time as related to mechanical ventilator function.

Prerequisite(s): RESP-105, RESP-110, RESP-125
Corequisite(s): RESP-150, RESP-160, RESP-170

**RESP 175 Clinical Practicum II 4 cr.**
This course is designed to give students their first direct "hands-on" performance of selected basic respiratory therapy clinical skills in the non-critical care hospital environment. Use of basic, non-critical care respiratory therapy equipment as well as basic patient assessment skills will be emphasized. Students will be assigned to 12 twelve-hour shifts with a clinical mentor.

Prerequisite(s): RESP-125, RESP-150, RESP-160, RESP-170
Corequisite(s): none

**RESP 180 Polysomnography I 3 cr.**
The basic principles of polysomnography will be presented. Patient setup and electrode application for overnight recording, the sleep history, and the technologist's assessment of the patient are discussed in detail. Determination of recording parameters, instrument settings, polysomnograph and patient calibrations are emphasized. An overview of sleep disorders is provided with emphasis on those routinely seen in sleep disorders centers. These disorders include obstructive sleep apnea, narcolepsy, periodic limb movements in sleep, and others. Methods of treatment including CPAP and surgical treatments are also discussed. The techniques of sleep staging according to the national standards of AASM Scoring Criteria are introduced in this course. Respiratory event scoring, movement and arousal scoring criteria are also outlined.

Prerequisite(s): BIOL-130, BIOL-131, program acceptance or completion
Corequisite(s): none

**RESP 200 Neonatology and Pediatrics 3 cr.**
This course is designed to give Respiratory Therapy students insight into special considerations involved in the respiratory care of the neonatal and pediatric patient. Emphasis will be given to lung embryology and morphology, abnormal cardiopulmonary and congenital anomalies of the newborn and overall respiratory care of the distressed neonate. Also discussed will be respiratory disease of infancy and childhood. Particular attention will be given to the specialized equipment used to maintain, monitor, and treat the neonatal-pediatric patient.

Prerequisite(s): RESP-170, RESP-175
Corequisite(s): none

**RESP 210 Cardiovascular Assessment 3 cr.**
This course is designed for upper level Respiratory Therapy students and other Allied Health Science or Nursing students in order to present an overview of current cardiovascular diagnostic techniques. Emphasis will be placed primarily upon non-invasive techniques including electrocardiography and echocardiography, but the course will also include modules relating to therapeutic aspects of cardiac care and cardiac rehabilitation and disease prevention. Some cardiovascular pharmacology will also be presented.

Prerequisite(s): RESP-120, RESP-170
Corequisite(s): BIOL-135, BIOL-136

**RESP 220 Clinical Mechanical Ventilation 3 cr.**
This course is designed as a follow-up to RESP-170, Introduction to Mechanical Ventilation. It is designed for senior Respiratory Therapy students as a more advanced and detailed presentation of topics initially raised in the introductory course with an emphasis on clinical applications and also the addition of an introduction to neonatal mechanical ventilation. Ventilator graphics, high-frequency ventilation, non-invasive mechanical ventilation, acute respiratory distress syndrome, lung protective strategies, newer ventilator modes and formats, airway pressure therapy and weaning from mechanical ventilation will all be studied. Laboratory sessions will focus on operating characteristics of selected mechanical ventilators as well as clinical simulations.

Prerequisite(s): RESP-170, RESP-175
Corequisite(s): none

**RESP 225 Clinical Practicum III 4 cr.**
This course is a continuation of RESP-175. The development of clinical skills in the physiological assessment of the patient and care of the adult patient will be reinforced. Students will have an opportunity for observation of surgery in the Operating Room and

also receive an introduction to selected critical care procedures. Students will be assigned 2 eight-hour clinical days each week. In addition, students will be introduced to some non-hospital based aspects of Respiratory Therapy such as diagnostic testing laboratories, physician medical practices, home care, and Sleep Diagnostic Laboratories.

Prerequisite(s): RESP-175
Corequisite(s): none

**RESP 250 Critical Respiratory Care 3 cr.**
This class is designed to give second-year Respiratory Therapy students insight into the organization and structure of the Intensive Care Unit; included will be discussion of the roles, relationships and stresses upon the ICU health-care team. Also discussed will be infection control in, and psychological implications of, the ICU environment. Major course emphasis will center on Hemodynamic Monitoring as well as assessment and treatment of the patient with specific pathologic conditions commonly seen in the ICU. The interrelations between organ systems and disease entities in the critically ill patient will also be discussed.

Prerequisite(s): RESP-170, RESP-175, RESP-220
Corequisite(s):

**RESP 275 Clinical Practicum IV 6 cr.**
This clinical course is designed to provide an in depth introduction into the role of the respiratory therapist in the Acute Critical Care setting for adult, pediatric and neo-natal patients. In addition the clinical practicum is designed to polish the skills learned in previous clinical rotations and serve overall as the final preparation for employment at the entry-level in Respiratory Therapy. Students will be assigned 3 eight-hour days per week.

Prerequisite(s): RESP-200, RESP-210, RESP-220, RESP-225
Corequisite(s): none

## *Sociology Courses (SOCI)*

**SOCI 100 Introduction to Sociology 3 cr.**
Introduction to Sociology presents fundamental concepts and theories covering many areas of contemporary sociology. This course analyzes the influence of social and cultural factors upon human behavior in the areas of culture, socialization, groups, deviance, sexuality, stratification, race, gender, economics, family, religion, and the environment. Social dynamics and social institutions will be explored, coupled with the ever-present issues of social change and the impact of these changes on society and the individual.

Prerequisite(s): none
Corequisite(s): ENGL-050, ENGL-075

**SOCI 160 North American Social Geography 3 cr.**
Social Geography focuses on the interrelationship between sociology and geography. Students will examine how the geography of a region affects population, settlement patterns, urbanization, and cultural development. Students will participate in an interactive classroom project to explore how geography shaped North American social development. This course is offered occasionally.

Prerequisite(s): ENGL-100
Corequisite(s): SOCI-100

**SOCI 190 Sociology: Service Learning 3 cr.**
Service Learning is an instructional method that integrates community service with academic instruction. This service-training model of instruction used in sociology will focus on critical, reflective thinking, and civic responsibility, and commitment to the community. Students should develop a broader and deeper understanding of social issues through their service to the community.

Prerequisite(s): SOCI-100
Corequisite(s): none

**SOCI 201 Marriage and Family 3 cr.**
Marriage and Family covers the concepts, structure and diversity of marriage and family from a multigenerational perspective. The focus will be on the modern American family and how it interacts with contemporary society. Each student will be introduced to marriage and family through lectures and practicum. This practicum will be a problem-based learning exercise. The students will participate in a classroom marriage simulation so they can gain real-life knowledge of the personal and social interaction of a family unit in contemporary society. The history of social dynamics and institutions will be explored, coupled with social change and the impact of these changes on the individual, family and society. This course is offered Fall semester.

Prerequisite(s): ENGL-100
Corequisite(s): SOCI-100

**SOCI 205 Genocide, Societies' Shame 3 cr.**
Genocide is the systematic destruction of a racial or ethnic group or culture. This course studies acts of genocide perpetrated in the 20th and 21st centuries, for example the Holocaust, Darfur and Bosnia. The course will focus on what happens to a culture experiencing genocide. Students will participate in activities that illustrate the realities of genocide and its impact on the individual and society. Topics covered

include prejudice, social movement theory, collective behaviorism and group dynamics. This course is offered Spring semester.

Prerequisite(s): ENGL-100, PSYC-100 or SOCI-100
Corequisite(s): none

**SOCI 210 Critical Thinking - Social Issues 3 cr.**
This course will introduce students to the concepts and skills associated with critical thinking about social issues. Topics for the semester will include educational reform, energy, and sexual behavior. The course content will include reading and thinking critically; writing concisely and with conceptual clarity; developing convincing, rational arguments to support one's views; and understanding others arguments and perspectives. It is developed with the explicit aim of preparing the student for advanced courses while becoming an active thinker and learner outside of the discipline and college. This course has been designated as a writing-intensive course.

Prerequisite(s): ENGL-100, SOCI-100
Corequisite(s): none

**SOCI 215 The Society of the Disabled 3 cr.**
The focus of this course is on modern Americans with disabilities, both mental and physical, and how they interact with society. Each student will be introduced to a wide range of disabilities through lectures and a practicum. This practicum will consist of problem-based learning exercises. Students will participate in a classroom disabilities activity that presents real-life situations for students to explore so they can gain knowledge of the personal and social interactions of a person with disabilities in society. The history of social dynamics and institutions will be explored, coupled with the study of social change and the impact of these change on the individual and society. This course is offered occasionally.

Prerequisite(s): ENGL-100
Corequisite(s): SOCI-100

**SOCI 250 Social Theory 3 cr.**
This course will provide an introduction to theories in Sociology. We will begin with three theorists who represent the traditional field of Sociology: Karl Marx, Max Weber, and Emile Durkheim. Additionally, the class will read and discuss the work of theorists who made significant contributions to understanding social life from metaphorical margins of society – the life of women, people of color, people living in poverty, and other disenfranchised populations. This course is offered Fall semester.

Prerequisite(s): ENGL-100, SOCI-100
Corequisite(s): none

## *Spanish Courses (SPAN)*

**SPAN 100 Conversational Spanish 3 cr.**
This course is designed for students of all levels of Spanish The course focuses on the students'' ability to produce the language orally. Content begins with basics and becomes increasingly complex as the semester progresses. The course does not include explanations of grammar and all assessments are done orally. The course is intended for people who plan to use spoken Spanish in some capacity in their lives.

Prerequisite(s): none
Corequisite(s): none

**SPAN 101 Beginning Spanish I 4 cr.**
This beginner's course in Spanish equally emphasizes the four skills of language learning: listening comprehension, speaking, reading and writing Interactive materials and a laboratory component create a multifaceted and challenging learning environment. This course is appropriate for students with fewer than 2 years of high school Spanish.

Prerequisite(s): none
Corequisite(s): none

**SPAN 102 Beginning Spanish II 4 cr.**
This course in Spanish equally emphasizes the four skills of language learning: listening comprehension, speaking, reading and writing Interactive materials and a laboratory component create a multifaceted and challenging learning environment. This course follows SPAN-101 in the course sequence and is a continuation of material covered in SPAN-101.

Prerequisite(s): SPAN-101
Corequisite(s): none

## *Sport Management Courses (SPTM)*

**SPTM 105 Foundation of Sport 3 cr.**
This course provides an extensive overview of professions within the field of sport Students will explore different value philosophies of sport and the formulation of personal & professional goals. Current and future issues and trends are examined. Students will examine the field of sport from a career orientation and build upon the observations throughout their course of study.

Prerequisite(s): ENGL-050
Corequisite(s): none

**SPTM 155 Introduction to Sport Management 3 cr.**
This course will introduce students to the fundamental aspects of sport management, with a concentration on the history of sport, sport organizations and education, and the impact of sport on economics. This

course will also explore the influence of sport management and the impact on society.

Prerequisite(s): SPTM-105
Corequisite(s): none

**SPTM 200 Sport Management Internship I 3 cr.**
This course will introduce students to hands on practical experience in the field of sport management Students will be placed at an on-site location to develop skills learned in the classroom and developed within the professional work setting. All students will have a direct on-site supervisor to assist in the development of the professional experience.
Prerequisite(s): SPTM-155
Corequisite(s): none

**SPTM 205 Sport and Facilities Management 3 cr.**
The course focuses on recreation and sport program management, with emphasis on coordination, development, implementation and evaluation of activities and programming in recreation, fitness and sports in school, community and professional levels The course also focuses on sport and recreation facility uses, trends, equipment, and physical layout. The areas of program promotion, project planning, market analysis, motivation, and adherence to standards are explored.

Prerequisite(s): SPTM-155
Corequisite(s): none

## *Sustainability Courses (SUST)*

**SUST 140 Weatherization for the Building Professional 4 cr.**
This course is an introduction to residential weatherization and insulation remediation. Students will learn about building science, energy movement within buildings, ventilation and indoor air quality, surface and air transported heat loss, R and U values, types of building framing, types of insulation used, and proper installation techniques as well as remediation options. The course includes a variety of activities involving the use of the blower door, manometer, infared imaging camera and other instruments.

Prerequisite(s): none
Corequisite(s): none

**SUST 141 Energy Auditing 3 cr.**
Maine has embarked on an ambitious plan to audit and weatherize every residential structure by the year 2030. This introductory course to building science and energy auditing will prepare students to pass the BPI Building Analyst certification, the energy auditing professional designation recognized by Efficiency Maine and Maine State Housing. After completing this course, students will be able to conduct accurate building analyses and document findings, as well as make recommendations for improvements, including financial benefits and investment payback.

Prerequisites: None
Corequisites: None

## *Social Work Courses (SWRK)*

**SWRK 100 Introduction to Social Work 3 cr.**
This course will familiarize students with the various roles, functions, and tasks which social workers perform in a variety of settings and acquaint them with the primary skills and practices of generalist social work Students will be introduced to social work practice as a multi-level and multi-method approach to influencing change in problem situations. Students will also be introduced to the core values and Code of Ethics of social work and be exposed to issues of diversity, oppression, and social justice. The practice of generalist social work will be considered from the perspective of a collaborative, strengths-based model working within complex social service systems.

Prerequisite(s): ENGL-050, ENGL-075
Corequisite(s): none

## *Theater Courses (THEA)*

**THEA 105 Introduction to Acting 3 cr.**
This course will introduce students to the basics of acting and scene study. Students will develop an understanding of the art of acting through improvisational exercises, group discussion and performance of scenes. Students will attend local theatrical productions and write performance reviews.

Prerequisite(s): none
Corequisite(s): none

**THEA 115 Acting: Body and Voice 3 cr.**
Acting: Body and Voice is a hands-on experience in which the student is actively engaged in the creative process. This class introduces the student to the physical and vocal techniques used in acting, allowing them to understand the importance of physical and vocal presence onstage. Students will also develop a holistic understanding of their instrument (body, voice and mind) as an expressive tool. In-class projects and scenes will allow students to apply these techniques to character work and scene analysis. Students will also attend local theatre performances allowing them to see the skills they are studying in class as realized in full productions.

Prerequisite(s): None
Corequisite(s): None

**THEA 155 Modern Dance 3 cr.**
This course is designed to introduce the beginner to Modern Dance. In this class, students will explore technical and physical concepts as well as improvisation and composition. Students will also be introduced to the historical development of modern dance. Students will gain confidence in performance and execution of the material in the studio. In addition, students will work on building trust and rapport with each other.

Prerequisite(s): None
Corequisite(s): None

**WELD 100 Introduction to Welding 3 cr.**
This course is designed to provide the fundamentals of welding for the beginner. Students will learn to operate basic equipment pertaining to shielded metal arc welding, oxy-fuel welding and cutting. Students will also be instructed in the choice of proper electrodes. This course will be beneficial to students going into a welding career or any occupation that requires welding skills. It will also be valuable to welders as refresher or to the home hobbyist or a supervision advancement.

Prerequisite(s): none
Corequisite(s): none

**WELD 102 Introduction to Welding I 1 cr.**
This course is designed to provide the fundamentals of welding for the beginner. Students will learn to operate basic equipment pertaining to shielded metal arc welding, oxy-fuel welding and cutting. Students will also be instructed in the choice of proper electrodes. This course will be beneficial to students going into a welding career or any occupation that requires welding skills. It will also be valuable to welders as refresher or to the home hobbyist or a supervision advancement.

Prerequisite(s): none
Corequisite(s): none

**WELD 103 Introduction to Welding II 1 cr.**
This course is designed to provide the fundamentals of welding for the beginner. Students will learn to operate basic equipment pertaining to shielded metal arc welding, oxy-fuel welding and cutting. Students will also be instructed in the choice of proper electrodes. This course will be beneficial to students going into a welding career or any occupation that requires welding skills. It will also be valuable to welders as refresher or to the home hobbyist or for supervision advancement.

Prerequisite(s): none
Corequisite(s): none

**WELD 104 Introduction to Welding III 1 cr.**
This course is designed to provide the fundamentals of welding for the beginner. Students will learn to operate basic equipment pertaining to shielded metal arc welding, oxy-fuel welding and cutting. Students will also be instructed in the choice of proper electrodes. This course will be beneficial to students going into a welding career or any occupation that requires welding skills. It will also be valuable to welders as refresher or to the home hobbyist or for supervision advancement.

Prerequisite(s): none
Corequisite(s): none

**WELD 105 Structural Welding Theory 4 cr.**
This course is designed to provide the theory of shielded metal arc welding, oxy-fuel welding and cutting. Subjects the students will cover include shop safety, welding equipment, terminology, striking the arc, metallurgy, critical temperatures, quality control, welding distortion and defects, joint design, and weld symbols. The student will be introduced to codes and standards, API, ASME, Maine State and AWS standards I.A.W. AWS D1.1, This course is designed to provide the student with the state regulations and the various certification requirements in preparation for SMAW welder certification testing.

Prerequisite(s): MATH-020
Corequisite(s): WELD-106

**WELD 106 Structural Welding Lab 3 cr.**
This laboratory component is intended to provide students with experiential learning in support of concepts and principles introduced in WELD-105 Structural Welding Theory. Students will be trained in basic shielded metal arc welding, including F-3 filler stringer beads, pad weld, filet weld, all position and F-4 filler stringer bead, pad weld, filet weld, all position. Basic fuel gas operations including torch safety, oxy cutting, brazing, soldering will be covered. This course is designed to provide the student with the hands on skill in preparation for structural steel plate welder certification testing.

Prerequisite(s): MATH-020
Corequisite(s): WELD-105

**WELD 155 Advanced Welding Theory 4 cr.**
Students will learn about and explore the principles of carbon arc and plasma arc cutting, welding of carbon steels, alloys of aluminum and stainless using shielded metal arc welding, flux core arc welding, gas metal arc welding, and gas tungsten arc welding to prepare for the ever changing welding environment.

Prerequisite(s): WELD-105, WELD-106
Corequisite(s): WELD-156

**WELD 156 Advanced Welding Lab 3 cr.**
This laboratory component is intended to provide students with experiential learning in support of concepts and principles introduced in the WELD-155 Advanced Welding Theory. Topics include certificate preparation in groove welding to AWS D1.1 in shielded metal arc welding, flux core arc welding, and metal cored arc welding. Students will also perform basic alloy welding (stringer beads, pad welds, filet weld), advanced carbon arc cutting, plasma arc cutting, gas tungsten arc welding / tig (stringer beads, filet welds, walking the cup). Advanced students will have the opportunity to explore piping, sockets, and open root welding.

Prerequisite(s): WELD-105, WELD-106
Corequisite(s): WELD-155

**WELD 200 Metal Fabrication I 3 cr.**
This course is designed to introduce students to the various tools used in welding and fabrication careers. Students complete hands on training using electric, air powered tools, hand tools, cutting and welding equipment will be studied. Skills developed include making metal projects to scale, forming jigs and constructing shapes. The course is given in part lecture, part lab format taught through project assignments.

Prerequisite(s): WELD-100 or -105 or -106
Corequisite(s): none

# GOVERNANCE, ADMINISTRATION, FACULTY & STAFF

## Executive Staff

**Ronald G. Cantor**
President
*B.S., University of New Hampshire;*
*M.Ed., University of Nebraska - Lincoln;*
*Ph.D., Syracuse University*

**Janet M. Sortor**
Vice President & Dean of Academic Affairs
*B.S., Eastern Michigan University;*
*M.Ed., Boston University;*
*Ed.D., University of Massachusetts*

**Scott G. Beatty**
Dean of Administration
*B.S., Purdue University*

**Robert D. Coombs**
Dean of Finance
*B.A.,Tufts University;*
*M.A., University of Southern Maine*

**Mitch Davidson**
Dean of Information Technology, CIO
*B.S., Union Institute*
*M.S., Regis University*

**Diane M. Vickrey**
Dean of Students & Planning
Affirmative Action Officer
*B.A., Brooklyn College*
*M.Mus., Boston University*
*M.B.A., New York University*

**L. Kaylene Waindle**
Dean of Advancement
*B.F.A., University of Southern Maine*
*M.P.A., Harvard University*

**James B. Whitten**
Dean of Midcoast Campus and Satellite Centers
*B.S., St. Joseph's College*
*M.S., University of Southern Maine*

# Faculty

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*A.S., Hesser College*

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*B.A., University of Maine*

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*M.S., University of Oregon*

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*B.S., M.B.A., University of Maine Orono*

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**Shaun M. Gray**
Director of Budget & Financial Reporting
*B.B.A., University of Notre Dame*

**Susan J. Hannaford**
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McKernan Center
*B.A., Trinity College*

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**Joseph P. Manhardt**
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*A.A.S., Southern Maine Community College*

**Kenneth L. Reno, Jr.**
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*A.A.S., Southern Maine Technical College*

**James F. Reny**
Facilities and Project Manager

**Timothy J. Slane**
Facilities Maintenance Supervisor (Custodial)

**John T. Theroux, Sr.**
Facilities Daily Operations Supervisor
*Licensed Master Oil and Solid Fuel Technician*
*Licensed Maine Gas Technician*
*CTEP National Gas Association Certified*

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Department of Cardiac Surgery
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**Greg Gadberry**
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The Maine Film Office

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USM Police Department

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Oakhurst Dairy

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Personal Touch Catering

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Maine Restaurant Association

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Portland Marriott at Sable Oaks

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New England Coffee

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**Sean Riley**
Maine Course Hospitality Group

**Sean Ryan**
Native Maine Produce

**Brian Sawyer**
Senator Inn

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**Vaughn Stinson**
Maine Tourism Association

**Tom Taliento**
Northcenter Food Services

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David's 388 Restaurant

**Beau Burns**
Chef De Cuisine
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**Kelly Price**
Sous Chef, David’s 388

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Schwanns Foods

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Swiss Army and Victorinox Cutlery

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SMCC Adjunct Faculty

**Karen Mueller, DTR**
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Clinical Nutrition Manager

**Sue Cobb, DTR**
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**Irving Williams (1996-present)**
Instructor
Early Childhood Educations Occupations
Portland Arts & Technology High School (PATHS)

**Margaret Hawkins (2005-present)**
Principal
Brown Elementary School

**Janine Blatt (2003)**
Early Childhood Consultant
Department of Education

**Eva Eldridge (2009-present)**
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Catherine Morrill day Nursery

**Two parent positions to be determined from Spring Point Children's Center**

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Interim State Administrator

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**Chris Green**
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**Chris Jordan**
Johnson and Jordan

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**Curt Muller**
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**Phil Snyder**
Snyder Plumbing & Heating

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**Peter Mathiews**
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**David McCulloch**
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**Eric Nelson**
Consolidated Industries

**Laurie Ritter**
LAI International

**Andy Paul**
Pratt & Whittney Aircraft

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**Chuck Tarling**
D&G Machine Products Inc.

**Tom Zack**
Lanco Assembly Systems

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**Maria Dalton**
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Practice of Dr. John Kazilionis

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MA Externship Coordinator
Southern Maine Community College

**Abbie Graiver**
Human Resources
Maine Medical Partners

**Jodie Griffith**
PHR Recruiter
InterMed

**Nina Huntington**
Chair, Medical Assisting
Southern Maine Community College

**John Kazilionis**
D.O., FACFP
Family Practitioner

**Joanne LeBlanc**
RN, BSN
Center for Orthopedics

**Deb LeMons**
Office Manager
Falmouth Internal Medicine
Mercy Primary Care

**Jackie Mador**
Risk Manager
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**Barbara Plamondon**
LPN
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Practice Manager
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Southern Maine Community College

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Women's Health Programs

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Home Health and Visiting Nurses of So. Maine

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**Nora Holliday**
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Maine Medical Center

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Central Maine Medical Center

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**Geri Labonte, RT(R)(T)**
Radiation Oncology Department
Central Maine Medical Center

**Diane Mulkhey, RT(T)**
Radiation Oncology Department
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Radiation Therapy Department
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**Leslie Weeks, RT(R)(T)**
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**Karen Boyer, R.R.T.**
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**Bernie Fecteau, R.R.T.**
Home Care Supply

**Chris Hirsch, R.R.T.**
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Maine Medical Center

**Mary Fink, R.R.T.**
Resp. Care Dept.
Mercy Hospital

**Peter Leavitt, R.R.T.**
Respiratory Therapy Dept.
St. Mary's Hospital

**Patricia Lerwick, M.D.**
Maine Medical Center

**Garry Michaud, R.R.T.**
Respiratory Care Dept.
Central Me. Med Center

**Darren Rainey, R.R.T.**
Southern Maine Medical Center

**Lee Gilman Scott, MS, CHES**
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Maine Medical Center

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