

2020 - 2022 CATALOG



ESTABLISHED 1961

Northern Maine Community College
33 Edgemont Drive
Presque Isle, Maine 04769
(207) 768-2700
www.nmcc.edu

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Northern Maine Community College is accredited by the New England Commission of Institutions of Higher Education (NECHE). The business technology department is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) for the offering of its business programs that culminate in the associate in applied science degree. The associate degree nursing program is accredited by the Accreditation Commission for Education in Nursing (ACEN) and approved by the Maine State Board of Nursing. The emergency medical services program and the medical assistant program are accredited by the Commission on Accreditation of Allied Health Professions (CAAHEP). The automotive collision repair, automotive technology and diesel hydraulics technology programs have each achieved Master Level Certification by the National Institute for Automotive Excellence (ASE). The computer numerical controls program is accredited by the National Institute of Metalworking Skills (NIMS). The college is a member of the American Association of Community Colleges, the American Council on Education and the Maine Higher Education Council.

Northern Maine Community College expressly reserves the right to change in any manner, including terminating or eliminating, the courses and programs offered or otherwise presented in this catalog. The Maine Community College System expressly reserves the right to change in any manner, including increasing tuition or any other fees. While, where practicable, the college will attempt to give as much notice as each situation allows, the college reserves the right to make any such changes without notice.

Northern Maine Community College does not discriminate as prescribed by federal and/or state law on the basis of race, color, religion, national origin, sex, sexual orientation, age, disability, or marital, parental or veteran's status in specified programs and activities. Inquiries about the College's compliance with, and policies that prohibit discrimination on, these bases may be directed to:

Affirmative Action Officer Northern Maine Community College 33 Edgemont Drive Presque Isle, ME 04769 Telephone: 207-768-2791 Maine Relay Service: 800-457-1220 Fax: 207-768-2848 E-mail: AffirmativeAction@NMCC.edu Internet: http://www.nmcc.edu	<i>and/or</i>	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
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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	<i>and/or</i>	Equal Employment Opportunity Commission 475 Government Center Boston, MA 02203 Telephone: 617-565-3200 or 1-800-669-4000 TTY: 617-565-3204 or 1-800-669-6820 Fax: 617-565-3196 Internet: http://www.eeoc.gov/
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The college's practices are in full accord with the Family Educational Rights and Privacy Act.

In addition to policies and procedures of the College, NMCC adheres to the policies and procedures of the Maine Community College System.

MESSAGE FROM THE PRESIDENT

Choosing a college is an exciting and challenging undertaking, so embrace the moment and let us help you think through the process. We think you may determine that Northern Maine Community College is your best choice.

- If you are looking for a small community college where the faculty gets to know their students - **NMCC may be the place for you.**
- If you are looking for an affordable education to improve your quality of life - **NMCC may be the place for you.**
- If you are looking for a college whose faculty and staff are committed to making a positive difference in your life - **NMCC may be the place for you.**
- If you want to earn an associate degree in liberal studies with a goal of transferring to another institution to complete a bachelor's degree - **NMCC may be the place for you.**
- If you want to learn essential skills that will lead to an enjoyable and meaningful career - **NMCC may be the place for you.**

Encouragement, experience and excellence are at the heart of our institution. We embrace our vision statement - Transforming lives through education and use it as our guide in providing a welcoming learning environment. Please consider giving us the opportunity to work with you as you plan the next steps to your future.

Thank you for exploring our catalog and I invite you to visit our website at www.nmcc.edu to learn more. You can also visit us on Facebook and Instagram. I also encourage you to consider visiting our campus. You can contact the Admissions Office at 207-768-2785 or admissions@nmcc.edu.

Sincerely,



Timothy D. Crowley
President

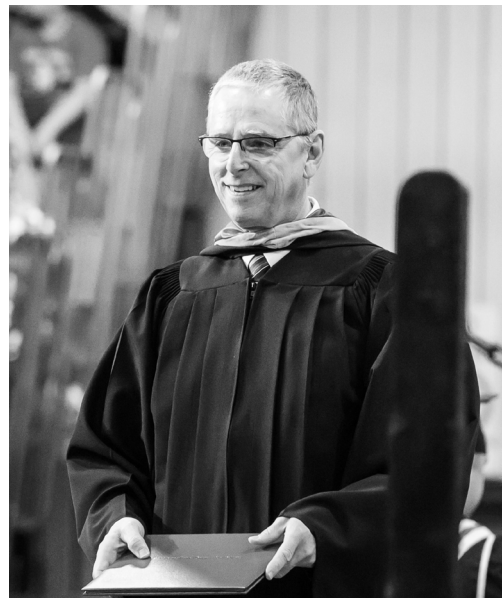


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General Information

THE COLLEGE

NORTHERN MAINE COMMUNITY COLLEGE

Northern Maine Community College was authorized in 1961 by the Maine Legislature and became operational in 1963. One of seven colleges in the Maine Community College System, the campus is located one mile from the center of Presque Isle. The college has undergone an impressive building program and has modern facilities to house its programs.

NMCC currently offers more than 30 full-time associate degree, advanced certificate and certificate programs. A wide range of credit and non-credit courses are also offered in the evening, during the summer term and online. All programs are offered to women and men, and each are encouraged to enroll in programs considered nontraditional for their gender. Qualified people with disabilities are also encouraged to apply and are provided appropriate support services.

Most programs are designed to give male and female students the technical knowledge and skills as well as the essential general education with which to pursue a career after graduation. The liberal studies program offers students the opportunity to obtain their first two years of a baccalaureate credential before transferring to another college or university. Many graduates of technical programs choose to continue their education at an institution offering a baccalaureate degree. Several transfer agreements with other credited institutions assist students in continuing their education.

INSTITUTIONAL ACCREDITATION

Northern Maine Community College is accredited by the New England Commission of Higher Education (NECHE), one of seven regional higher education accrediting bodies in the United States. Through its evaluation activities the Commission provides public assurance about the educational quality of degree-granting institutions that seek or wish to maintain accreditation.

Each of the standards articulates a dimension of institutional quality. In applying the standards, the Commission assesses and makes a determination about effectiveness of the institution as a whole.

As such, it is not a guarantee of every course or program offered, or of the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

VISION STATEMENT

Transforming lives through education.

THE MISSION OF THE COLLEGE

Northern Maine Community College is committed to maintaining its tradition of providing high-quality career and transfer programs that lead to associate degrees, certificates, and specialized training necessary for an educated, skilled and adaptable workforce. Through its affordable programs of study, courses, and specialized-training seminars, the College is a catalyst for economic growth and the development of human potential.

CORE VALUES

The faculty, staff, alumni, and current students of NMCC are committed to the following core values:

- Student centered: We offer a learning environment focused on supporting students as they strive toward their individual success.
- Excellence in learning: We provide quality teaching and learning experiences as a means of promoting life-long learning to all.
- Diversity: We promote mutual respect and equality as a means of recognizing and embracing diversity.
- Service: We foster excellence in service to the college and the community, including business, industry and society.
- Integrity: We subscribe to and promote high standards of ethics and integrity; understanding that they are the foundation upon which our reputation is built.
- Sustainability: We practice continuous improvement as a means to being relevant to the economy, workforce, environment and future of the college.

DIVERSITY STATEMENT

The concept of diversity encompasses acceptance and respect. It includes but is not limited to ability, age, class, culture, education, ethnicity, family structure, gender, ideologies, political beliefs, race, religion, sexual orientation, style and values. Diversity is each of us and all of us.

AWARDS

The college awards the associate in applied science, the associate in science and the associate in arts degrees, as well as certificate and advanced certificate credentials.

NMCC PHILOSOPHY OF GENERAL EDUCATION

The general education core provides broad exposure to the main fields of human knowledge (humanities, social sciences, sciences, and mathematics) to provide the foundational knowledge, skills and values of an educated person, support students in mastering a technical field and becoming active and responsible citizens.

An educated person is fully literate, able to read, write, listen, speak, and think with clarity and precision; has the capability for lifelong learning, including the skills of information literacy and the ability to think critically; understands and is able to relate scientific and technological knowledge to the issues that affect the quality of human life on this planet; uses numerical data with ease and precision; and uses the aforementioned knowledge and his/her experience to find meaning and purpose in life.

An educated person engages in work that is fulfilling and does it to the best of his/her ability; understands his/her role as a citizen with a logical system of ethics and values; and is able to apply those values and morality everyday within society in a reasoned and rational manner. To that end, the faculty has identified what they deem to be the essential knowledge, skills, and values of an educated person.

RODNEY SMITH WELLNESS CENTER

The Smith Wellness Center features an open, naturally-lit design offering high-quality, user-friendly strength-training machines. The Smith Wellness Center is designed to support your personal wellness as well as prepare you for the physical demands of your chosen field of work.

This 4,000 square-foot facility is fully staffed and equipped with state-of-the-art equipment: including Life Fitness cardio units with individual LCD screens and interactive apps for use during cardio workouts. The certified trainers can help you individualize and personalize your routines.

All full-time students may use the facility at no cost. There may be a charge for some classes or activities. Please check with Center staff for information on Smith Wellness Center operational hours and offerings. The Wellness Center also offers a variety of group classes and activities.





Admission

ADMISSION

ADMISSION POLICY

Completion of a four-year high school program or a state high school equivalency certificate is required for admission to the associate degree and certificate programs offered at NMCC. Other admission criteria are specified in the matrix on page 13. A rolling admission policy affords candidates the opportunity to apply and be considered for acceptance throughout the year, but early application (9-10 months prior to the beginning of a given school year) is recommended because of competition and enrollment capacities established for each program. Some programs are subject to a competitive admission process.

All programs are offered to women and men. Students are encouraged to enroll in programs considered nontraditional for their gender. Qualified persons with disabilities are also encouraged to apply and are provided appropriate support services.

APPLICATION PROCEDURE

The following procedures constitute the admission process:

1. An NMCC application form must be submitted with a non-refundable \$20 application fee (\$15 if completing the online application).
2. A complete high school transcript, for all years attended, must be submitted to the admission office. Current high school seniors must include grades for the ranking periods completed at the time of their application to NMCC.
3. GED/HiSET test scores must be submitted to the admission office by those who have not received a high school diploma.
4. College transcripts must be submitted to the admission office by applicants who have attended other colleges or postsecondary schools.
5. a. Placement testing scores (SAT, Accuplacers, etc.) and individual interviews are required, in most cases, prior to admission notification.
b. Prospective students with a native language other than English, will be required to demonstrate a proficiency in the English language. The Test of English as a Foreign Language (TOEFL), administered by the National Testing Service, will be made a part of the applicant's file. Minimum scores required; BT=85 or pBT=61.
6. Campus tours are strongly recommended.

7. Admission decisions are made as quickly as possible once an individual candidate's file is complete.
8. Accepted applicants are required to make a \$100 non-refundable (after May 1st) classroom deposit within thirty days of their acceptance notification. Students wishing on-campus housing are required to submit an additional \$100 deposit to reserve space in the residential complex.

CONDITIONAL ADMISSION

Some students are admitted with conditions, including, but not limited to, an on-campus developmental studies program in reading, writing and/or mathematics. The conditions in a given applicant's acceptance letter typically must be completed during the first semester of attendance and are removed upon successful completion of the specified requirement.

TRANSFER CREDIT

- I. Applicants requesting transfer credit must submit their request to the admission office, preferably prior to enrollment. Requests for transfer credit after admission follow the Prior Learning Assessment process. Courses accepted for transfer credit are not included as part of any student's grade-point average at NMCC. Official college transcript is required.
The college's policy is to accept no more than six credit hours from another institution while the student is currently enrolled in a prescribed two year program at NMCC. Determination will be made on an individual basis.
 1. A student wishing to attend another institution while enrolled at NMCC must make a written request.
 2. Request must be approved by the registrar.
 3. The written approval and final grades are to be submitted to be recorded on the permanent transcript as transfer credit.
 4. For transfer courses to be accepted, a minimum grade of C is required. Courses accepted as transfer credit are not included as part of a student's grade point average at NMCC.
- II. Credit for Occupational/Major courses may be issued to individuals enrolled in or having completed a Registered Apprenticeship program may be awarded up to 24 credit hours. Assessment may be fulfilled by one or more of the following methods:

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1. Successful completion of a recognized apprenticeship training program approved by the Maine State Apprenticeship Council.
 2. Applicants who have successfully completed a Journeyman's Examination may submit written application for lab credit.
 3. Applicants presently enrolled or having completed in-house training in which formal apprenticeship training or examinations are not used.

III. Nursing and Allied Health Program Guidelines: Individuals entering nursing and allied health programs with advanced standing (upgrading credential) or re-entering the program after a break in attendance, may be required to take or repeat all major courses within the program. Related science courses must be repeated if they were taken more than 10 years previously.

CREDIT FOR PRIOR LEARNING

Prior learning is a term used to describe learning that a person acquires outside a traditional academic environment. This learning may have been acquired through work experience, employer training programs, military, non-credit courses or seminars, and volunteer work.

Prior learning assessment (PLA) is a term used to describe the process by which an individual's experiential learning is assessed and evaluated for purposes of awarding college credit. NMCC has several approaches to PLA to help students save time and money on their way to achieving a college degree.

1. National standardized exams in specified disciplines such as Advanced Placement (AP) exams, College Level Examination Program (CLEP) tests, Dantes Subject Standardized Texts (DSST), The college awards credit for examinations based on current American Council on Education (ACE) recommendations.
2. Foreign Language Achievement Testing Service (FLATS) exams
3. Proficiency Credit - Certificates, Examinations and Licenses from evaluated non-college programs
4. NMCC Challenge Exams
5. Portfolio Review
6. Military Review
7. Articulation Agreements

Student Eligibility for Prior Learning Credits

1. Students must be matriculated in one of the College's degree programs.

2. Students will have a requirement(s) in their academic program to which prior learning credit could apply.

Award of PLA Credit

- Credit for prior learning will be awarded based on assessment of documented learning, which demonstrates achievement (at a grade level of C or higher) of learning outcomes for a specific requirement/discipline area elective.
- The College has all course descriptions, objectives and learning outcomes written for each catalog course, and available for use by students seeking prior learning assessment.
- Students may earn prior learning credit for any graduation requirement at any point in their program for which they demonstrate equivalent learning, unless there is unique program accreditation requirement restricting this.
- The award of prior learning credit is subject to New England Commission of Higher Education (NECHE) accrediting agency standards (revised for July 2016). These standards cap PLA credits in certificate programs of 30 or fewer credits to 25%. Credits earned by PLA are not recognized in the residency requirement of 25% of associate degree credits.
- All types of prior learning acquired more than ten years from the date of NMCC matriculation are subject to review though not exclusion.
- Prior to a formal review, faculty and other academic advisors will provide guidance, but not assurances, of the number of credits that may be awarded.
- A student may not receive credit twice for a course that has been awarded through PLA.
- NMCC is committed to transparency in the award/denial of academic PLA credit and the College's academic appeal process applies to PLA awards.
- When credit is awarded, students will receive notification from the Registrar's Office.
- Students and advisors should be aware whether PLA credit will satisfy credit load requirements for veteran benefits funding or other similar third party financial assistance programs.

Transcription of PLA Credit

- Prior learning credits can be used to satisfy any degree/program requirement.
- Maine Community College System (MCCS) uses a standard coding system for each method of PLA as reflected in the transcript's key.
- The college will award its own course title and number to the prior learning credit.
- Where the credit is transferred from another institution of higher education, it retains its own course title and number.
- Credits awarded via any prior learning method

indicate that learning has been assessed for that credit at a grade of C or better.

- Prior learning credits do not carry quality points and are not calculated in the grade point average.

Fees

- Fees are set for the review of two types of prior learning but not for any resulting credit: portfolio and campus based challenge exams.
- Payment of a PLA fee does not guarantee the award of credit and is non-refundable. In addition, lab fees and/or material costs for these assessments may apply.
- PLA fees will be clearly publicized for students prior to their request for credit evaluation.

\$100 per Challenge Exam attempted
\$125 per Portfolio attempted

Appeal

- Fees are reviewed on a consistent basis, similar to other MCCS fees and revised to reflect conformity with academic and administrative standards.
- Students wishing to appeal a PLA credit award or denial may do so in accordance with the College's academic appeals policy and procedure.
- Recommendations and scoring by any nationally- standardized exam organization (AP, CLEP, DSST, IB, or BYU-FLATS, etc.) are under the auspices of the evaluation organizations and cannot be appealed at the College level. Students will be directed to the appeals procedures for each testing agency or credit recommendation service.

Transferability

- MCCS colleges recognize PLA credit specifically awarded by sister colleges (i.e. credit from credential review, challenge exam, and portfolio) as transfer credit, as applicable to the academic program at the receiving institution. No further burden of proof will be required of students, where PLA credit appears on another MCCS transcript. This same reciprocity is extended to students/transcripts from the University of Maine System.
- This College cannot guarantee the transfer out of PLA credits to other colleges/universities, nor the applicability of credits to a student's future degree requirements.
- Students are encouraged to engage in careful academic and financial aid planning when their academic goals include transferring to other degree programs

SERVICES FOR STUDENTS WITH DISABILITIES

Students applying for admission to the college are encouraged to indicate a physical disability, learning disability or health problem that may require accommodations to the classroom or residential life environment. Requests for special accommodations must be submitted in writing to the director of counseling at least three weeks prior to admissions testing and/or the first day of classes each semester.

Students are also responsible for providing appropriate and current documentation from a qualified professional that supports such requests. In some cases students may be required (at their own expense) to undergo re-evaluation. Accommodations must be approved by the dean of students.

FULL-TIME, PART-TIME AND NON-DEGREE STUDENTS

Students who are admitted to a program of study at the college may choose to enroll as either full-time or part-time students in any given semester.

NMCC defines a full-time student as one who enrolls for 12 credit hours or more per semester. Most agencies and programs, including financial aid, veterans' assistance, the Social Security Commission and insurance benefits, also define a full-time course load as 12 credits per semester.

Anyone interested in taking one or more courses without enrolling in a degree program may do so by registering for the course(s) during registration periods. Course pre-requisites and co-requisites apply. Non-degree students do not need to apply for admission to the college in order to take courses.

NEW ENGLAND REGIONAL & NEW BRUNSWICK STUDENT PROGRAMS

Students who are legal residents of any New England state may be eligible for admission consideration under the New England Regional Student Program. Students in this program will pay tuition equal to 150% of applicable resident tuition.

Students admitted under the MCCS/NBCC agreement are eligible to take classes at in-state tuition rates. Not all programs are available under this agreement, and applicants must first contact the admission office at their local New Brunswick community college. All other New Brunswick residents are eligible to receive the New England Regional Program tuition rate of 150% of applicable resident tuition.

ACADEMIC SKILLS ASSESSMENT

Skills assessment is required of all applicants for admission. Performance on testing may affect a student's acceptance into a program in the college. Results are used for appropriate placement in English, reading and mathematics courses.

IMMUNIZATION

Maine Law (22-MRSA§6359) requires that all students born after 1956 attending any public or private postsecondary institution in Maine have on file at the institution a "Certificate of Immunization" signifying that (s)he is in compliance with the above stated Maine law, as amended. Some programs will require additional medical clearance.

EARLY ADMISSION OF HIGH SCHOOL STUDENTS (DUAL ENROLLMENT)

High school juniors who qualify may enroll as full-time matriculated students. With the recommendation of the high school principal and guidance counselor, students can simultaneously complete high school graduation requirements and their freshman year of college. The college will consider only highly motivated students who are entering their senior year, have a strong academic background and are in the upper half of their class. Particular consideration will be paid to the students' motivation and maturity. Applicants must follow the regular admission process with the addition of letters of recommendation from the high school principal and guidance counselor. *Note: These students will not be eligible for federal financial aid until they receive their high school diploma or GED/HiSET.*

ON COURSE FOR COLLEGE

On Course for College offers high school students a portfolio of activities, including dual enrollment, concurrent enrollment, articulated credit, and defined programs of study, to enhance the transition from high school to the college setting. Many of these opportunities are funded in part or fully by the College and its secondary partners.

Under the auspices of the Carl D. Perkins Career and Technical Education (CTE) Improvement Act of 2006, NMCC works in partnership with Maine's CTE regions and centers, their sending schools, business and industry, and communities to prepare students for success in the workplace or at the next level of learning.

Students who participate in On Course for College activities while still in high school could gain the following advantages:

- Transferable college credits awarded at a significantly reduced cost to the student;
- Less duplication of coursework at high school and college;
- Advanced standing in his/her program of study;
- A more efficient and effective transition from high school to college.

Interested students should check with their local CTE school or the On Course for College office at 207-768-2782 for more information.

Aspirations

This program, funded by the Maine Department of Education, the Maine Community College System and the College, enables qualified Maine high school students to receive a full tuition waiver at NMCC for the first course each semester and a 50 percent tuition waiver for the second course (up to a maximum of six credits/two courses) each semester (12 credits max. annually). This applies to courses taken while simultaneously enrolled in a Maine high school.

Guidelines:

- No more than six credits per student per fall or spring semester.
- Maine HS juniors or seniors with high school recommendation.
- Parent or guardian's approval.
- Students under the age of 18 must have a Minor Release form on file at NMCC.
- May not be used in conjunction with or as a replacement for any other tuition reduction program (except as stated above) currently available for Maine high school students (e.g. early admission, EMBARK, etc.).
- Student must satisfy all course pre-requisite conditions, which may include completion of Accuplacer testing, and must adhere to all college rules and regulations, including attendance requirements.
- Courses available under the program are limited to those taught by direct, on-site instruction.
- Students and/or their families are responsible for costs including tuition (if class credit hours exceed program maximum), books, supplies and/or other related expenses.
- Withdrawal from or failure to complete the course may void the waiver.

Funds and course space are limited and are available on a first-come, first-qualified, first-served basis.

Concurrent Enrollment

Students may complete college-level coursework while in high school. Courses are taught by qualified CTE instructors with the College's syllabus and materials. Students earn both high school and college credit for their work.

EMBARK

EMBARK is a college transition program of the Maine Community College System designed for high school students who are undecided about college, yet have the potential to succeed in college.

VETERAN'S SERVICES

NMCC is approved for the training of veterans and appropriate assistance is provided through the student affairs office. The VA coordinator serves as liaison to the Veterans Administration and the State of Maine's approval agency.

MAINE NATIONAL GUARD

Members of the Maine National Guard should check with the college's financial aid office regarding opportunities for tuition vouchers.

Students who are called up to active duty during a semester have the option of (1) receiving a per diem refund for the unexpired portion of the term for tuition and other refundable fees, or (2) having all tuition and course fees waived for one semester upon their return (as long as they return to school within one year of the end of their active duty). Unless otherwise requested, students will be re-admitted into the major they exited from, if available.

SENIOR CITIZENS

Senior citizens who are Maine residents and 65 years of age or older may attend the college tuition-free, for up to 24 credit hours, where course space is available. Student is responsible for all other fees are costs of textbooks.

CONTINUING EDUCATION DIVISION

The continuing education division provides a wide variety of professional development and personal enrichment courses designed to upgrade and strengthen job skills. Seminars, non-credit courses and workshops, as well as credit courses and certificate programs tailored to meet the needs of employees in business, industry and government agencies are offered both on- and off-campus. Courses meet during the day and evening, and some Saturday courses are

available. Instructors are professionals who have the combination of current expertise in their topic area and experience teaching adults.

Commercial Driving Academy

Our State of Maine licensed tractor-trailer driving school is designed to train students to become professional truck drivers. A combination of classroom and hands-on experiences will give you the skills necessary to handle a tractor-trailer safely and efficiently for a new career in one of today's fastest growing industries. Courses are available in day or evening/weekend formats. For a listing of admission requirements or additional information about truck driver training options, call 768-2768 or visit the continuing education link at nmcc.edu.

Distance Learning

Web-based, non-credit training is also available through a wide range of highly interactive courses that you can take entirely online. In addition, we offer online open enrollment programs designed to provide the skills necessary to acquire professional level positions for many in-demand occupations. A complete listing and registration options for online courses is available at nmcc.edu.

Customized Training for Organizations

Customized training will be tailored to meet the needs of groups, organizations and businesses and can be offered on campus or at the business location. A range of courses and workshops are offered in a flexible and creative manner to assist companies with their training needs. Professional staff members dedicated to contract training are available to provide information and assistance for securing funding support for training needs. Information about customized training options is available by calling 768-2768.

Fees, Insurance and Policies

The costs of continuing education/contract training offerings are based upon the level of customization, enrollment, and the cost of the training materials. Insurance may also be required depending on the nature of the course.

The Continuing Education Unit

Continuing Education Units (CEUs) are awarded for non-credit courses. The CEU recognizes individual and institutional participation in non-traditional studies and special activities. The CEU meets the need for uniformity in the planning and educational experiences for technical and professional people to improve their competency and skill levels through staff development. One CEU is awarded for each ten hours of satisfactorily completed course hours.



Tuition and Fees

TUITION AND FEES

TUITION

2020-2022

Resident	\$96 per credit hour
New England Regional Student Program	\$144 per credit hour
*New Brunswick Students	\$144 per credit hour
Non-Resident	\$192 per credit hour

Note: For planning purposes, 15 credit hours per semester may be considered average.

Note: Changing financial conditions, state legislative action and other considerations may necessitate adjustment of charges and expenses. The college reserves the right to make such adjustments as may from time to time be necessary in the opinion of the Board of Trustees.

**Students admitted under the MCCS/NBCC agreement are eligible to take classes at resident tuition rates. For more information on the agreement, contact the student affairs office.*

RESIDENCY

A student is classified as a Maine resident or non-resident for tuition purposes at the time of admission to a community college. No student, once having registered 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 presumed that the student is in Maine for educational purposes and that the student is not in Maine to establish a domicile as a permanent residence; thus, the burden will be on the student to prove that he/she has established a Maine domicile by the time of such registration. The domicile of the 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 resident's next registration. In general, members of the Armed Forces and their dependents are normally granted resident status during the period of active duty.

BUSINESS OFFICE

All monetary transactions are handled through the business office. **Payment for all bills, including tuition, assessed fees and room**

and board is due and payable on or before registration day for each semester. Students with outstanding bills will be unable to receive grades, transcripts or academic credentials.

DEPOSITS

Classroom Deposit.....	\$100
Housing Deposit.....	\$100

FEES

Room and Board annual rates

Double Room w/19 meals/week.....	\$7818
Double Room w/14 meals/week.....	\$7018
Double Room w/12 meals/week.....	\$6426
Single Room w/19 meals/week.....	\$8666
Single Room w/14 meals/week.....	\$7866
Single Room w/12 meals/week.....	\$7274

ADDITIONAL FEES

Registration Fee (full-time).....	\$13/sem.
(part-time).....	\$11/sem.
Comprehensive Fee.....	\$4/cr.hr.
Information Services Fee.....	\$6/cr.hr.
Course Fees (Lab).....	\$19/cr.hr.
(Non-Lab).....	\$9/cr.hr.
Student Activity Fee (full-time).....	\$26/sem.
(part-time).....	\$13/sem.
Health Fee (full-time).....	\$40/sem.
(part-time).....	\$15/sem.
Accidental Insurance.....	\$16
Liability Insurance (nursing students)..	\$15
Liability Insurance (EMS majors).....	\$61.50
Liability Insurance (ECE majors).....	\$17
Orientation Fee.....	\$35♦
Graduation Fee (Seniors).....	\$65
Early Cancellation Fee (Housing).....	\$350

*Note: All resident students must purchase a meal plan.
♦ Incoming first year students only.*

Note: Books and supplies vary with demands of individual programs. Many trade programs also have additional costs for tools. Insurance costs are subject to change based on premium changes.

TUITION AND FEE CHANGES

The Maine Community College System expressly reserves the right to change in any manner, including increasing tuition or any other fees. While, where practicable, the college will attempt to give as much notice as each situation allows, the college reserves the right to make any such changes without notice.

GRADUATION FEE

A required \$65 graduation fee covers the cost of the graduate's academic credentials and other graduation expenses.

REFUND POLICY

Students terminating enrollment at NMCC before the completion of any given semester are entitled to a refund of tuition, assessed fees (as indicated in the fees section), and room and board, based on the date official notification is given to the college or the last date of attendance, whichever is latest.

Students withdrawing from NMCC should go to the student affairs office to complete a withdrawal form. This will expedite the processing of any refund due. All refunds will be made in accordance with the official date of withdrawal.

The refund will be based on the current policy of the Maine Community College System.

For tuition and fees refunds, a student who officially withdraws from a course(s) within six business days of the semester's first day of classes will receive 100 percent refund of each dropped course.

- Withdrawal between seven and 10 business days of the semester's first day of classes will result in a 50 percent refund.
- No tuition refunds are awarded for withdrawal after the first 10 business days of the semester's first day of class, or for unofficial withdrawal at any time.
- Official withdrawal from a college residence prior to the semester's first day of classes will receive a 100 percent refund.
- Those officially leaving housing by the end of the semester's second week of classes will receive an 80 percent refund.
- By the end of the third week of classes is a 60 percent refund.
- By the end of the fourth week of classes is a 40 percent refund.
- By the end of the fifth week of classes is a 20 percent refund.
- Official withdrawal from campus housing after the fifth week of the semester, or unofficial withdrawal at any time, will result in no refund.

Alternative meal plans may be established by the college president based upon approved board charges. Refunds for alternative meal plans follow the guidelines above.

The financial aid award is based upon the expectation that a student will complete the entire period for which aid is awarded. Students withdrawing from college before the term completes are subject to the pro-rata refund policy and may be obliged to repay disbursed financial aid. The total refund amount is calculated on a pro rata basis through 60 percent of the payment period (payment period is semester of enrollment).

The period of enrollment will be based on calendar days. Scheduled breaks of five consecutive days or longer will be excluded from the calculation, based on the regulations set forth by the Higher Education Amendments of 1998.

Students who feel that individual circumstances warrant exceptions from the published policy may appeal by completing the Withdrawal & Tuition Refund Appeal form located on the portal.

Appeals may be made under the following reasons: death of an immediate family member, the student's medical incapacitation, military duty or computational/administrative error by the College. The complete appeal process is outlined on the appeal form. Refunds for non-credit courses are determined on an individual basis.

STUDENT PAYMENT PLAN

The college offers students the option of paying for college expenses in monthly installments over the course of the semester. Required payments will be approximately 25 percent of the balance owed the college after considering financial aid, scholarships and other support from outside agencies. An enrollment fee of \$25 will be assessed to each student participating in the plan. If a payment is not made by the due date, the balance is immediately due. A new plan can be established with an additional fee of \$25.

TRANSCRIPT FEE

Students requesting that a transcript be sent to a business or another college must sign a transcript release form. These forms are available in the student affairs office as well as on the college website. Students requesting a transcript must do so in writing. Expedited transcript requests (processed within one working day of the request) will cost \$25 per request. Facsimile transmissions will cost \$10, and overnight delivery will cost \$75, in addition to the expedited transcript fee.

DELINQUENT PAYMENT

The Maine Community College System Board of Trustees authorizes the college presidents to withhold grades, degrees, academic credentials and transcripts from students for failure to pay all lawful fees and charges.

STUDENT CREDIT BALANCES

Payment of student credit balances will be made to students no earlier than the day following the completion of four weeks of classes of each semester*. Student credit balances will be mailed to the student's address on file by the College.

Student loan checks will be available for disbursement no longer than 30 calendar days from the college's receipt of the loan(s) in accordance with U.S. Department of Education regulations.

**First time federal student loan borrowers must be in attendance a minimum of 30 calendar days in the semester in which they receive their first student loan before any loan proceeds may be disbursed to them.*

LAPTOP PURCHASING PROGRAM

All students are required to have a notebook-type computer with wireless internet capability and camera. Minimum specifications are available from the IT office. We do not recommend chrome books or Windows S mode laptops. Computers are available for purchase through the college bookstore.



Financial Aid

FINANCIAL AID

PURPOSE

The purpose of financial aid is to serve students who need assistance in meeting the basic cost of their education. Because funds are limited, federal and state regulations require that these funds go to students who demonstrate financial need. This section outlines the application procedure, how student need and eligibility are determined, and some of the major financial aid programs available at NMCC. For more information, students who think they may be eligible for financial aid should visit the financial aid office in the student affairs area located in the A.K. Christie Building.

HOW TO APPLY FOR AID

1. Apply for admission to the college.
2. Get a FSAID # at <http://www.fsaaid.ed.gov> to electronically sign FAFSA (Free Application for Federal Student Aid)
3. Complete FAFSA on web at www.fafsa.ed.gov. School code is 005760.
4. Complete **NMCC CONFIDENTIAL FINANCIAL AID APPLICATION.**
5. Complete and return all forms requested by the financial aid office.

Note: Priority is given to early applicants.

All documents must be received before the processing of a student's financial aid award. A new application with supporting documents must be filed every academic year for financial aid. Eligible students will be offered a financial aid award consisting of a combination of grants, work and/or loans.

Financial aid consists of programs which are funded and regulated by the federal and state governments. The programs are of three different kinds: grants, work and loans.

Grants

A grant is money for which students do not have to work or repay. Students with bachelor's degrees are not eligible for grants.

Federal Pell Grant: Pell grants range from \$555 - \$5,815 annually.

Federal Supplemental Educational Opportunity Grant (FSEOG): FSEOG is awarded according to a formula based on student need and generally will range from \$300-\$600 per academic year.

State of Maine Grants: This state and federally funded grant program provides college scholarships to Maine residents whose family resources are not sufficient to meet the cost of higher education. Awards are based on student need and generally will range from \$750 to \$1,500 per academic year. FAFSA must be received by May 1 for State grant.

Work

Work is offered under the Federal Work-Study program to students who are found eligible for financial aid.

Federal Work-Study (FWS): FWS allows students to earn money through part-time work while classes are in session and full-time work during vacations and summer. Jobs are available on campus and throughout the community and with the America Reads program in the elementary schools. This work can add to the educational experience and be a valuable asset when seeking employment after graduation.

Loans

Loans are money which is borrowed now and must be paid back after leaving school. Students with bachelor's degrees may be eligible. Federal Direct Student Loan Programs that NMCC students may participate in include:

1. **Federal Direct Subsidized Loans**
2. **Federal Direct Unsubsidized Loans**
3. **Federal Direct PLUS Loans for Parents**
4. **Alternative Education Loans**

Students receiving loans are required to do both an entrance and an exit on-line counseling session.

Note: If the student transfers to or from another college and wishes to delay loan repayments, a deferment/forbearance request is obtained from the lender and must be submitted to the lender.

SCHOLARSHIPS

Annually, the NMCC scholarship committee evaluates applications for scholarships awarded by the Northern Maine Community College Foundation and privately sponsored scholarships offered to students currently attending or transferring to NMCC. Scholarships are available to both first year and second year students.

Students may apply for these scholarships online through the financial aid section at my.NMCC.edu.

COLLEGE POLICY ON FINANCIAL AID

All financial aid at NMCC is administered in accordance with policies and procedures which have been established nationally. The basis of such programs is the belief that STUDENTS AND THEIR PARENTS HAVE THE PRIMARY RESPONSIBILITY to meet educational costs and that financial aid is available only to fill the gap between the family's and/or student's contribution and allowable educational expenses. The amount of expected student or family contribution is determined by a careful analysis of financial strength: income and net assets versus the allowable expenses which the family may have.

Education expenses which are considered a basis for establishing student need include tuition, fees, books and supplies, room, board, tools, transportation and personal expenses. The NMCC financial aid office has an established student budget to reflect the costs of each of these items based on local cost data.

All students who are awarded financial aid are required to sign a Statement of Educational Purpose which states that all funds received will be used only for educational purposes.

GENERAL ELIGIBILITY FOR FINANCIAL AID

Specific eligibility requirements vary from program to program. The following criteria apply to all financial aid programs.

To receive financial aid, a student must:

1. Have a high school diploma or its equivalent.
2. Be enrolled or accepted for enrollment in an eligible program leading to an associate degree or certificate.
3. Be a U.S. citizen, permanent resident, or refugee with an appropriate visa.
4. Have demonstrated financial need.
5. Maintain satisfactory progress in a course of study according to the standards and practices of NMCC.
6. Not owe a refund on a Pell Grant or Supplemental Grant at NMCC.
7. Not be in default on any: Federal Family Education Loan, Perkins (National/Direct Student) Loan, Stafford Loan (formerly Guaranteed Student Loan) or Unsubsidized Stafford Loan.
8. Have met legal requirements for selective service registration.
9. Complete their academic program of study within 150% of the program's catalog time for completion.

Note: Current federal regulations now prohibit the awarding of Pell grants for more than 12 full-time semesters of collegiate attendance. Only courses required in your academic major are eligible for financial aid. While financial aid rules do not prohibit individuals from taking courses outside of your program of study, those courses will not count toward the determination of your financial aid load.

[1/2 time = 6-8 credit hours in your program of study (major) per semester; 3/4 time = 9-11 credit hours in your program of study (major) per semester; Full time = 12 or more credit hours in your program of study (major) per semester].

DETERMINING FINANCIAL NEED

The amount of financial aid is subject to available federal and state funds. The type of aid and amount received will be determined by the financial aid office. Financial aid awards are based on demonstrated financial need which is the difference between allowable educational expenses and the total of the parents' expected contribution and/or the student's own expected contribution.

Contributions are determined from the financial aid application and other documentation as required, such as the Federal Income Tax transcript of the parents and/or student. All information is held in strictest confidence.

FINANCIAL AID PROBATION OR DISQUALIFICATION

Students must be matriculated in an academic major and maintain satisfactory academic progress (SAP) to be eligible for financial aid. SAP for financial aid includes meeting or exceeding College grade point average requirements (qualitative measurement) and PACE (quantitative measurement).

Academic progress is assessed at the end of each academic term, as stated in the handbook. Additionally, students must earn a cumulative total of 67% of credits attempted each term (PACE). Students failing to earn 67% of credits attempted in a given semester and/or failing to meet College academic progress requirements will automatically be placed on Financial Aid Warning. Any student placed on Financial Aid Warning may receive Title IV aid for the subsequent payment period. Failure to reestablish SAP as assessed at the end of the subsequent term will result in the loss of Title IV aid.

In order to comply with the Satisfactory Academic Progress standards for financial aid, students must have a 2.0 cumulative grade point average (GPA) at the end of the equivalent of two full academic years (64 credits.)

Students who accept funds for a specified number of credits but who either drop credits or

withdraw from school, thereby completing fewer credits than anticipated, will be placed on financial aid probation or disqualification, as applicable.

Students in default on any Perkins or Stafford Loan or any other federal or state-insured loans at NMCC will be disqualified from subsequent aid until repayment or satisfactory arrangements have been made.

Students who owe a refund on a Pell Grant or SEOG at NMCC will be disqualified from subsequent aid until repayment or satisfactory arrangements have been made.

A student who has been denied financial aid for any reason or who wishes to request a waiver of the financial aid policy has the right to file an official appeal. Forms are available on the NMCC portal. For more information contact the financial aid office.

If a written petition is denied, students have the right to a personal appeal. If a personal appeal is denied, students have the right to appeal to the financial aid advisory committee, consisting of administrators, faculty and staff. The committee's decision is final.

RIGHT TO INFORMATION

Students have the right to a full explanation of NMCC financial aid programs, policies and procedures. Complete information is contained in the *NMCC Financial Aid Policies and Procedures Manual* and the other written regulations available in the financial aid office.

For information on academic programs and facilities, faculty, accreditation, refund policies and non-discrimination policies, see the appropriate section of this catalog.

DISBURSEMENT OF FINANCIAL AID

See "Student Credit Balances" in the Tuition and Fees section of this catalog.

VETERANS INFORMATION

Programs at the College are approved by the Maine State Approving Agency for the education and training of veterans and other "GI Bill®" eligible persons. There are several "GI Bills®": three for active duty service members, depending on dates of service; one for disabled veterans with service connected disabilities; one for spouses and children of totally disabled or deceased veterans resulting from service connected conditions; and two for members of the Selected Reserve. The programs are described in greater detail in the student affairs section of this catalog.

Students who believe they qualify for veterans' educational benefits should contact the student affairs office.

Note: Veterans receiving monthly non-educational benefits must include those amounts on their FAFSA form.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at <https://www.benefits.va.gov/gibill>."

MAINE NATIVE AMERICAN TUITION WAIVER POLICY

Northern Maine Community College proudly serves all students and maintains the goal of assisting students in achieving a post secondary education while keeping costs as low as possible. Northern 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 NMCC 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 NMCC's criteria to qualify for in-state tuition charge.
- **Enrollment:** The student must be accepted into a degree or certificate program and enrolled in credit-bearing courses at NMCC. 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.
- **NMCC Native American Waiver Application:** The student must complete and submit an "NMCC Native American Tuition Waiver Application" to the NMCC Financial Aid Office. This application is available in the financial aid office and on the NMCC portal. Once eligibility is established, re-application is not necessary.
- **Financial Aid Application:** Applicants for the Native American Tuition 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.

Waiver Amount: The waiver is equal to the 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).

Duration of Eligibility: Eligibility for the waiver ends after the student has completed one degree or two certificate programs from NMCC or up to 90 attempted credit hours from NMCC, regardless of whether or not the student has earned a credential. Native Americans who have already achieved an associate degree or two certificates from Northern Maine Community College and have been laid off due to downsizing or business closure may appeal to use this scholarship for another program to develop new employment skills. Appeals should be sent to the Assistant Director of Financial Aid, Northern Maine Community College, 33 Edgemont Drive, Presque Isle, ME 04769.





Student Affairs

STUDENT AFFAIRS

The staff of the student affairs area provides a wide variety of services and experiences that complement academic pursuits at NMCC. The college strives to foster an educational environment that empowers students to assume personal responsibility for their education, social and professional development, as well as for their emotional and physical health and well-being. The dean of students administers the area and encourages students to make use of available services, programs, facilities and development opportunities.

ADMISSION OFFICE

The admission office provides information about NMCC to prospective students and helps students throughout the admission process. It also serves those students who wish to apply for a second degree or continue studies after graduation. The office is responsible for the evaluation and granting of credit earned at other institutions by students transferring to NMCC

CAREER PLANNING AND PLACEMENT

Career planning and placement assistance is available from several sources at NMCC. The staff in student affairs, as well as individual instructors, are willing to help graduates find jobs in their field. Because of their job market knowledge and employer contacts, instructors are often excellent sources of assistance. Each spring, seniors benefit from a strong effort to help them secure employment.

The Student Support Office delivers information, workshops and assistance to aid students exploring career options and plans. We encourage students to consider careers that are non-traditional for their gender. Informational sessions are held regularly on a wide-variety of job-search and career planning topics.

College Central Network is NMCC's career services website designed to meet students' career planning needs. Students have access to job boards and hundreds of articles, videos, and podcasts pertaining to various career-related topics including resume assistance and interview preparation. Please visit: <http://www.collegecentral.com/nmcc/Student.cfm> and click "Activate" to create your account. If you have any questions or need assistance creating an account, please contact the Counseling Office at 768-2839.

FINANCIAL AID OFFICE

The financial aid office provides counseling and assistance in obtaining aid from a variety of funding sources. Financial aid brochures, available in the office, provide information on sources of aid, application procedures and NMCC financial aid policies. (Please see the Financial Aid section for more information.)

The office is also responsible for certifying qualified veterans for appropriate VA education benefits.

REGISTRAR'S OFFICE

The registrar's office maintains official records for each past and present NMCC student. These records are maintained in full accord with the Family Educational Rights and Privacy Act. *(For details on student files and the policies ensuring their privacy, please see the section on Confidentiality of Student Records under Academic Information.)*

Students who wish to have a transcript of their record sent to another academic institution or prospective employer must make their request in writing to this office. Also, students can register for classes, drop or add courses and file graduation application forms here. Students are invited to contact the registrar's office with questions they may have about their records.

COUNSELING SERVICES

Counseling is offered to students through the student affairs office. Services available include: academic, personal and career counseling; student advocacy; coordination of related support services, including childcare and emergency transportation assistance; referral to other service providers; and coordination of special accommodations for disabled students. Inquires should be made to the director of counseling at 768-2747.

TRiO/Student Support Services Program

The Student Support Services program is federally funded and offers a wide range of services to eligible students. In order to participate in this program, a student must have low income status (as defined by federal guidelines), or be a first generation college student, or have a disability. Academic, personal and career advising; tutoring; assistance with the financial aid process; job search and job placement workshops; and transfer advising are among the services provided to program participants. Enrollment is limited. For more information, contact the program's director at 768-2747.

SUPPORT SERVICES FOR STUDENTS IN ACADEMIC JEOPARDY

Students who are on academic probation, or who have not met the minimum standard to advance in a major program of study, or who are in pre-probationary academic difficulty, are required to meet with a college counselor to develop a written plan for academic success. This plan may include a reduced course load, re-taking courses, establishing a tutoring schedule, enrolling in a study skills class or workshop, reducing outside commitments, extending an expected graduation date, or participating in career counseling, etc. After this plan has been completed, the student will meet with the counselor regularly during the semester in order that his or her academic progress can be monitored.

VETERANS, NATIONAL GUARD AND RESERVES EDUCATIONAL BENEFITS

Staff in the financial aid office assist veterans, their dependents and members of the National Guard/Reserves in determining their eligibility for education benefits through a program administered by the Department of Veterans Affairs and provides assistance in filing for benefits.

Programs administered by the VA include:

- Montgomery G.I. Bill®: Chapter 30 (Active Duty Educational Assistance Program)
- VEAP: Chapter 32 (Post-Vietnam-era Veterans Educational Assistance Program)
- Vocational Rehabilitation: Chapter 31 (Disabled Veterans)
- Post-911 G.I. Bill®: Chapter 33
- Survivors' and Dependents' Educational Assistance: Chapter 35
- Montgomery G.I. Bill®: Chapter 1606 (Selected Reserve Educational Assistance Program)
- Reserve Educational Assistance Program: Chapter 1607 (Program for Selected Reservists who are called to active duty for at least 90 days)

As each program has a different set of eligibility, filing and compliance rules, students are encouraged to schedule an appointment with the director of financial aid for an explanation of program benefits and requirements.

LEARNING RESOURCES

A variety of learning resources are available to assist students. Rooms for reading, research, completion of projects and quiet study are

available in the college's library. The library also has a group study room available for student use. Individual and group study areas are also available in the academic success center, Akeley Student Center and lounge areas.

Academic Success Center

The Academic Success Center (ASC) offers a variety of services that are free and available to all NMCC students. Students may be referred to the ASC by an instructor/counselor or seek these services themselves. A student may want to obtain feedback on a writing assignment, review for an exam, receive help with a homework assignment, complete assignments on a computer, receive supplemental instruction from instructors or peer tutors, improve study skills, or study individually or in a group. Services/facilities include: individual and group tutoring; writing resource center; math lab; on-line study skills information; academic success workshops; and supplemental instruction.

Library

The E. Perrin Edmunds Library offers a welcoming and comfortable environment on campus where students, faculty, and staff meet, study, collaborate, learn, and relax. The library provides print and online collections to support the curriculum and mission of the college. Diverse resources are available to encourage academic investigation, personal growth, and access to all points of view. The library serves students, faculty, staff, and the community.

Information-literacy instruction and reference and research assistance is available in person, online, and in classrooms. The library is committed to teaching students how best to collect, evaluate, and use information effectively. NMCC's definition of an information-literate student is one who can clearly articulate information needs, confidently search for and access information from a variety of sources, and evaluate and use the information ethically and legally for research and personal purposes.

Our library adheres to the American Library Association's Library Bill of Rights and Association of College and Research Libraries Intellectual Freedom Principles for Academic Libraries. We embrace and affirm the principles of equity, diversity, and inclusion in our library.

For additional information about library services, events, hours, staff, and policies, visit the library web page at www.nmcc.edu/academics/support/library/ The library is open to the public.

RESIDENTIAL LIFE

Campus housing at NMCC includes Andrews Hall, Snow Hall, Penobscot Hall and Washington Hall. Andrews Hall houses approximately 80 students in both two-person and one-person (when space is available) rooms equipped with single beds, chests of drawers and desks. Within Snow, Penobscot & Washington Halls are suites designed for 4-5 individuals each. Each suite has 2 or 3 bedrooms, a private bathroom & common living room. All suites come furnished with bedroom and living-room furniture.

All students living on campus must purchase a 19-, 14- or 12-meal per-week plan. Resident rooms and suites also have cable TV and Internet access. Students must provide their own cable ready TV and personal computer. Students living on campus must abide by the Student Code of Conduct, as explained in the NMCC Student Handbook, and the individual housing contracts agreed to when signed by both the student and the College. Violations may result in termination of the contract. For more information on campus housing contact the director of residential life.

Occasional Housing

For individuals needing only occasional or temporary campus housing, a limited number of rooms are available for a modest fee. Dining privileges are included. Contact the director of residential life for more information.

Family Housing

A limited number of apartments are available for NMCC students and their families. Qualifying family members may include: a legal spouse/registered domestic partner, and at least one child (including step) up to 18 years of age, and/or grandchild up to 18 years of age for whom the student is legally responsible. Designated units cost \$750/month. Each unfurnished, two-bedroom unit has one full bathroom and a kitchen. The included utilities are: heat; cableTV; internet; electricity; water/sewer; and trash removal. Meal plans are not included with the family housing options.

Dinning Facilites / College Store

Dining facilities are located in the newly remodeled Reed Dinning Commons. Anyone wishing to purchase a full meal is welcomed during meal time service. Dinining a la carte food service, in addition to take-out, beverages, snacks, etc., is available in the College Store located in the Akeley Student Center. Meal swaps or equivalencies can

be used, for residential students at the College Store.

BOOKSTORE

Each student is required to provide at his or her expense all necessary textbooks, equipment and supplies. A bookstore account is established for each student based upon their academic load. Unused funds are returned to the student. To access these funds and for more information go to: <http://bkstr.com/nmccstore/home/en>. In addition to required books and classroom supplies, the college bookstore offers a wide variety of other collegiate items such as pens, pencils, notebooks, clothing, and mugs.

STUDENT HEALTH CENTER

The health center is located in the Akeley Student Center across from the bookstore. A nurse practitioner is available for walk-in traffic or by appointment. Hours for the center are Monday - Friday from 8am - 1pm when the college is in session; however, should the health center be closed due to some unforeseen circumstance, students should seek emergency or walk-in care at Northern Light AR Gould. The college will not assume any financial responsibility for any student's medical costs regardless of whether or not the campus health center is closed during scheduled hours.

Students may stop in for pamphlets on a variety of medical subjects, to have questions answered or to make appointments. Services include: physical exams, pap smears, breast examinations, sexually transmitted disease (STD) testing and treatment, lab tests, and treatment for routine health concerns. Birth control counseling and materials are available at the Health Center, as is personal counseling.

All students are required to provide immunization certifications as required by the State of Maine. For more information, contact the health center.

MOTOR VEHICLES

Students and employees have the privilege of using a vehicle on campus. All vehicles must be registered through the security office. Vehicles that have no parking permit affixed or are parked inappropriately or in non-designated areas, will be ticketed and fines will be assessed. Any damaged caused by vehicles to lawns, shrubbery, etc. will be assessed to the operator. Vehicles, like other personal property, are the sole responsibility of their owner. For the complete Parking Policy, please refer to the college's portal.

ATVs and snowmobiles are permitted on campus, but must also be registered. Recreational vehicles are not to be operated on any campus roadway, walkway, parking lot or other thoroughfare. Use is restricted to open fields and areas away from campus buildings.

Maintenance and campus security are the only vehicle permitted on any walkway. Failure to comply with vehicle use policies may result in the revocation of vehicle privileges.

STUDENT SENATE

The student senate is the governing body for all student activities and serves as the official student voice on campus. The senate includes at least one member from each academic area and functions under its own constitution and by-laws.

RECREATIONAL ACTIVITIES AND FACILITIES

The student senate helps the student affairs staff plan and promote a wide variety of activities for the campus community. New clubs and groups are formed whenever the demand arises, and ideas for new organizations are always welcome. Swimming, skiing, movies, cookouts, mountain climbing, hiking, biking and rafting trips are some of the activities sponsored by the student senate and staff coordinators. The school's gymnasium and wellness center are readily available for student use.

INTRAMURAL ATHLETICS

NMCC promotes leadership and physical health and wellness through intramural activities.

Activities may include basketball, softball, volleyball, soccer, and tennis. An esports team was formed in Fall 2019. Other activities may be added at any time if enough interest is shown. All men and women are encouraged to participate.

STUDENT RIGHT TO KNOW

Student right to know information is available on the college web site (Consumer Information link), upon request from the student affairs office or from the U.S. Department of Education's web site.

ACCESSIBILITY

Facilities at NMCC are designed to be accessible by persons with disabilities. The college is committed to providing, whenever possible, equal opportunities to all students, including assessment of and modifications to facilities and programs to

accommodate individual needs. Inquiries should be directed to the Director of Counseling.

Note: Students requesting specific accommodations have the responsibility, under the Americans with Disabilities Act or the ADA of 2009, of making sure that the college is aware of the need. Specifically, students should: 1) request the relevant adaptation in writing, and 2) provide documentation of that need to the satisfaction of the college. Once these responsibilities are met by the student, the college will attempt to provide the accommodation. Documentation of need should accompany the request if possible. A minimum of 30 days of lead time is suggested.

For more information visit: www.nmcc.edu/academic/support/student-services/disabilities.

STUDENT GRIEVANCE PROCEDURE

Students who have a grievance or complaint regarding an abridgement of rights have recourse to a student grievance procedure. A copy of the entire procedure can be found in the student handbook and in the student affairs office. In case of physical assault or sexual harassment (as defined by Maine law), the process for filing complaints is outlined in the student handbook. Students questioning their assigned grades can appeal that grade through the academic dean.

The affirmative action officer for NMCC is identified on the inside cover of this catalog, on the NMCC website, in the student handbook and at orientation activities. A student in doubt about the proper procedure for filing a complaint or grievance should seek direction from the affirmative action officer.

STUDENT HANDBOOK

The student handbook is updated annually and is available to all students. It contains information about policies, procedures and regulations, explains the Community College Student Code of Conduct, and delineates both students' and institutional rights and responsibilities, particularly with respect to issues of discrimination and sexual harassment.

STUDENT ID CARDS

ID cards are issued to all students. This card enables access to the library, residence halls, and college events. Other discounts are available across the community. Replacement fee is \$25.



Academic Information

ACADEMIC INFORMATION

PROGRAMS OF STUDY

The mission of NMCC is to provide career and transfer programs that lead to associate degrees or certificates. Each degree provides the opportunity to acquire the knowledge, skills, and values that are essential for a career or transfer to a college or university.

NMCC offers 14 associate in applied science, two associate in science, and one associate in arts degree, as well as, 22 certificates through five academic departments: Arts & Sciences, Business Technology, Emergency Medical Services, Nursing and Allied Health, and Trade and Technical Occupations.

- The Associate in Arts Degree (AA) is intended to provide a basic foundation for a Bachelor of Arts Degree program.
- The Associate in Applied Science Degree (A.A.S.) is intended to provide the preparation necessary for potential employment in an occupational specialty.
- The Associate in Science Degree (A.S.) is intended to provide the preparation necessary for potential employment in an occupation specialty and/or a basic foundation for a Bachelor of Science Degree program.
- A certificate is awarded for specific studies that one can complete in a one year program or less. Certificates can be the final goal or first step in developing, changing, or upgrading your career.

NMCC offers a limited number of hybrid and on-line classes. A hybrid format, means that only a portion of the class is conducted online. On-campus testing is usually required, for hybrid courses. The ultimate goal of these educational formats is to offer a wide array of individual courses and programs to students enrolled at NMCC who are interested in interactive learning. Online courses allow both traditional and non-traditional students the opportunity to pursue an education that may not have been available because of scheduling or traveling limitations.

SKILLS ASSESSMENT

Assessment of basic academic skills is required of all full-time students and may be required of part-time students. Performance on skills assessment testing may affect students' acceptance into a program at the college. Results will be used for appropriate placement in English, and mathematics courses.

COURSE REGISTRATION

Each student will begin the semester with a class schedule for which they have previously registered. Adjustments to that schedule may continue throughout the add/drop period, which usually is the first week of the semester. It is important that you follow the Add/Drop Policy which can be found later in this section of the course catalog.

Courses in automotive, diesel hydraulics and structural welding are taught sequentially throughout a semester. Students may register for those courses prior to the first class meeting.

FULL-TIME STUDENT STATUS

At NMCC, 12 credit hours or more per semester is considered full-time. Most other agencies and programs, including financial aid, veterans assistance, Social Security Commission and insurance benefits, also consider a full-time course load to be at least 12 credits per semester.

To complete an associates degree in four semesters or fewer, most programs will require more than 12 credits to be completed each semester. (See the Curricula section for specific program requirements.)

MATRICULATION POLICY

Matriculation is the formal registration of a student into a program leading to a certificate or associate degree. A matriculated student is one who has met prescribed admission requirements, has been officially admitted to a program of study and has registered for a course in the curriculum.

Matriculated students maintain their status for ten calendar years from the first semester of course registration at the college. A student must successfully complete a minimum of three credit hours each academic semester or an application for re-admission must be filed with the admission office.

To maintain matriculation status under a given program, a student must request a leave of absence from the dean of students for any semester during which he or she is not enrolled in any courses.

MINIMUM RESIDENCY REQUIREMENT

All programs (AA, AAS, AS and certificate) require that a minimum of 25 percent of major courses be completed at NMCC.

NON-DEGREE STUDENT STATUS

Anyone interested in taking courses without enrolling in a degree program may do so by signing up for the course(s) during registration. Non-degree students do not need to apply for admission to the college in order to take a course(s). However, if they intend to register for more than 11 semester hours, they must obtain permission from the dean of students. Non-degree students are not eligible for financial aid.

ACADEMIC ADVISING

Every full-time NMCC student enrolled in a program is assigned an academic advisor who assists in course selection and offers general information concerning the student's academic life.

Students may check at the student affairs office early in their first semester to learn the name of their academic advisor. The academic advisor is usually the student's major instructor for their chosen program of study. This information is also available on the student portal.

Students are encouraged to see their advisor as often as necessary to make certain they are taking courses that are appropriate to their academic and career plans. The advisor should also be consulted before students add or drop courses or change a program of study. Each semester, during a designated registration period, students meet with their advisor and register for the next semester.

Students should monitor their own academic progress. Descriptions of specific courses are in this catalog. Program curriculum sheets, which list specific course requirements for each academic program are available from several offices on campus or by accessing the college's web site.

ATTENDANCE

Class attendance is the student's responsibility. Regular attendance and punctuality at all classes is expected. Attendance is recorded in the learning management system, every class period. To encourage students to accept their responsibility to attend class, the following policy is established: Class attendance is a matter between the instructor and the student. Instructors are obligated to announce and interpret a specific attendance policy for their classes at the beginning of the semester, by way of their course syllabus. Faculty are encouraged to be considerate of students with special circumstances.

Excessive absences may interfere with successful completion of a course. Once a student violates the instructor's class attendance policy, the instructor may issue the student a grade of

"AF" – Attendance Failure. This grade designation will be treated as an "F" in the calculation of the student's grade point average. Students may appeal instructors' actions to the academic dean for review.

ADD-DROP POLICY

1. A student may add or drop a course during the first week of any semester without any academic or financial penalty.
2. A student may drop any course through the 12th week of the semester and receive a grade of WP or WF.
3. After the 12th week, the grade earned is recorded and will affect the GPA.

Withdrawing from a course could have adverse effects on financial aid as well as graduation requirements. Please talk with an advisor or counselor before dropping a course.

Note: Refunds of tuition and fees will be 100% for the first 6 business days of a semester, 50% between 7 and 10 business days with no refunds after that date. For abbreviated semesters, the above drop policy and any associated refunds will apply for the proportional equivalent in time.

WITHDRAW FROM NMCC

Any student withdrawing from NMCC is expected to complete an official withdrawal form which may be obtained from the office of the dean of students and complete an exit interview.

When circumstances prevent this, the student or parents should write to the dean of students concerning the reason requiring the students to leave. The date of withdrawal will be the date the student signs the withdrawal form; a grade notation of AW (Administrative Withdrawal) will be indicated on a student's academic transcript for those students who have been involuntarily separated from the college (examples: disciplinary dismissal, non-payment of bills, lack of attendance, etc.).

OFF-CAMPUS CENTER

NMCC offers program courses at the Houlton Higher Education Center. Courses may be offered at other locations, depending upon student demand.

Credit courses are organized at various times and locations on the basis of need, interest and availability of suitable facilities. The offerings are selected to meet predetermined community needs and to offer expanding technical and career programs. The course offerings are also designed to furnish an opportunity for intellectual pursuit and continuing education to those who may not

wish to work toward a college degree or who may already have one. The courses follow the same academic standards that apply in the on-campus program.

Class size is determined on a class-by-class basis and takes into consideration the subject matter, need for the course, the location and the impact it will have on the institution, including resources and the students enrolled.

Courses are offered at times which are convenient for most adult students with responsibilities of job and family.

GRADING SYSTEM

Letter grades used at NMCC to evaluate academic achievement are as follows:

93-100	A	4.00
90-92	A-	3.67
87-89	B+	3.33
83-86	B	3.00
80-82	B-	2.67
77-79	C+	2.33
73-76	C	2.00
70-72	C-	1.67
67-69	D+	1.33
63-66	D	1.00
60-62	D-	0.67
Below 60	F	0.00

Other grade symbols:

AF	- Attendance Failure (0.00)
AP	- Advanced Placement
AU	- Audit
AW	- Administrative Withdrawal
CE	- Challenge Exam
CL	- CLEP Exam
CR	- Credential Review
E	- (Pass/Fail) Failed
I	- Incomplete
ME	- Military Experience
NA	- Never Attended
NG	- No Grade
P	- (Pass/Fail) Passed
QT	- Qualify via Articulation
R	- Course Retaken (Most Recent Grade Used in GPA calculation)
*	- Course Retaken
T	- Transfer Credit
W	- Withdrew
WE	- Work Experience
WF	- Withdrew Failing
WIP	- Work In Progress
WP	- Withdrew Passing
X	- Exempt/Waived

1. In order to graduate from any prescribed program of study (i.e. certificate or associate degree), a student must have a cumulative grade point average of at least 2.00.
2. Academic warnings may be issued at mid-semester to any students whose performance has fallen below NMCC's academic standards.

COURSE GRADE APPEAL

The sole responsibility of evaluating student performance and of assigning course grades rests with the course instructor. Barring a grade change due to the miscalculation of a course grade or due to a successful appeal of a course grade by the student, all course grades are to be considered final. If a student believes that a final grade was unfairly derived (i.e., that the grade was determined utilizing criteria different from that for other students), the student may formally appeal that grade.

First, the student must submit to the instructor a written request for clarification of the grade (e-mail correspondence is sufficient; however, the student must keep a copy of what was sent). The appeal process cannot proceed without verification that this communication has occurred.

After clarification, if the student still wants to appeal the grade, he/she should contact the chair-person of the department for the course for which the grade was submitted in order to be advised on the appeals procedure.

REPEAT COURSES

If a course is repeated, the latest grade of the retaken course is used to calculate the grade point average.

AUDITING COURSES

Students may audit any course, provided space is available and they pay regular course costs. When a student audits a course, neither a grade or course credit is given. A student may not change a course from credit to audit after the add/drop period. If you are interested in auditing a course, see the Registrar for the Audit Application Form. The form is also available on the NMCC Portal.

ACADEMIC PROGRESS

A minimum grade point average of 2.0 is required to graduate with a certificate or degree from Northern Maine Community College. This implies that any course grade below a C may put

a student's graduation in jeopardy and/or indicates that the student's academic progress is in question. Further, satisfactory progress requires that a student earn a minimum of a C grade (2.0 grade point) in each major course within his/her program of study. Major courses are clearly identified in the curricula section of this catalog.

For associate degree programs, the faculty have carefully developed each program of study to provide students with the opportunity to maximize their knowledge and skills within four semesters. This achievement requires a substantial commitment to the learning process by the student. There are many campus resources available to aid students in their efforts toward academic success. These include tutorial services in the academic success center, developmental studies classes and study skills workshops, class attendance requirements, mid-term warnings, and faculty assistance.

Students are encouraged to contact their academic advisor, department chair, the academic dean, the dean of students or the director of counseling for assistance or to discuss their academic progress.

PROBATION & DISMISSAL POLICY

Students who do not earn a minimum 2.0 cumulative grade point average may be placed on academic probation or dismissed from the college. The probation and dismissal policies are outlined below:

ACADEMIC PROBATION:

Signifies that a student is in serious academic jeopardy. A student on probation must remove grade deficiencies during the subsequent semester or during summer session. Failure to do so may result in academic dismissal from the college. Students on academic probation are required to carry a reduced class load (fewer than 15 credit hours) and may be restricted from participation in extra-curricular activities. Probation and dismissal standards are outlined in the following chart:

Students in two year (4 semester) programs:

Cumulative Credit Hours	Cumulative GPAs Between the Following Ranges Result In:	
<u>Attempted</u>	<u>Probation</u>	<u>Dismissal</u>
12+*	1.25 to 1.75	1.249 or lower
30+	1.50 to 1.75	1.499 or lower
45+	1.75 to 1.99	1.749 or lower

Students in one year (2 semester) programs:

Cumulative Credit Hours	Cumulative GPAs Between the Following Ranges Result In:	
<u>Attempted</u>	<u>Probation</u>	<u>Dismissal</u>
12+*	1.50 to 1.99	1.499 or lower

*Students are not assessed for probationary or dismissal status until they have accumulated 12 credit hours of graded study.

A student on academic probation must achieve a cumulative grade point average sufficient to exceed the probationary standard or a semester grade point average of 2.0 during each probationary semester. Failure to achieve this standard may result in academic dismissal.

ACADEMIC DISMISSAL:

Students who have been academically dismissed may appeal to the academic dean for re-instatement in a program for the following semester. They may request re-admission to the college by formally reapplying not earlier than one semester after the date of dismissal. At the time of re-application, the applicant must show positive evidence that he or she will achieve academic success if accepted into a program. Such evidence might include course completion with satisfactory grades, a positive employment experience, etc.

ACADEMIC AMNESTY:

Students who have received failing grades in the past may appeal in writing to the academic dean for academic amnesty. Amnesty is the forfeiture of prior coursework below a 2.0 level. This request may be granted if there is a high probability of academic success. If amnesty is granted for a course, the course and its grade will remain on the student's transcript. The grade for the course however, will not be calculated in the student's GPA. Amnesty may only be granted to students who are currently enrolled or have completed the most recent semester with a semester GPA of 2.0 or higher. Academic Amnesty may only be granted once during a student's academic tenure.

ADVANCEMENT IN THE MAJOR PROGRAM OF STUDY

A minimum grade of 2.0 (C) / 2.33 (C+) for all NUR and CP courses is required of all courses designated as major courses within the student's program of study. These courses are identified in the course catalog. Students failing to achieve this standard will be unable to advance to the next higher-level class (if any) for which the previous

class grade is a pre-requisite. The registrar will notify a student in writing that he or she has failed to meet the academic standard required for any major course. A student will be given additional opportunities to retake the major course(s), providing that there is space available and he/she is otherwise maintaining satisfactory academic progress.

Students majoring in nursing and trade and technical programs may be allowed only one opportunity to retake a major subject. A student may request a waiver of the pre-requisite from the higher-level class instructor or the affected department chair, the department chair of the student's major and the academic dean. In the event a student is permitted to advance to the next level he or she must repeat the course in which a grade of less than C (<2.0) was received in order to graduate.

CHALLENGE EXAM POLICY

Selected NMCC courses may be challenged; however, challenge exams may not be available for all courses. When an appropriate standardized national exam exists (i.e. CLEP, DSST, PEP, Advanced Placement, etc.) this exam will be required. If no such national exam exists, the required exam shall be comparable to the comprehensive final examination taken by all students in the course.

Only one challenge exam per course will be approved by the department chair and academic dean. The following criteria apply to challenge examinations:

1. Only students who have been accepted in a NMCC program will be allowed to participate in the challenge exam process.
2. The student requesting a challenge exam will show written evidence of prior knowledge or proficiency in the subject area to be challenged. The student must contact the department chair as to the availability of the exam and the procedure.
3. Students intending to challenge courses must complete the Request for Prior Learning Assessment form (available on the NMCC portal) and have approval from the appropriate faculty member and department chair prior to taking the exam.
4. The student will be charged \$100 and the fee must be paid in advance.
5. The student must take the challenge exam prior to the semester in which the course is offered.
6. In order to receive credit, the student must score 73 (C) or better on the challenge exam. Students may not retake a challenge exam.

Note: Many colleges will not accept a challenged course for transfer.

DIRECTED STUDY

A directed study is the offering of a catalog course on an individual basis by an appropriate faculty member to a qualifying student. Directed studies are available to students pursuing an associate degree only on a limited basis. A student who has completed a minimum of 30 credit hours with a cumulative average of 2.5 or more may be eligible for a maximum of 9 credit hours from an approved directed study(ies). A directed study may be approved for a program completion candidate when it is evident that the course will not be offered as a part of the regular semester curriculum, resulting in a postponement of completion of program which would ordinarily be completed in that term.

A non-refundable fee of \$100, in addition to tuition and any other regular fees, will be charged to the student for each course taken as a directed study.

For more information, contact your academic advisor, your program department chair or Student Affairs. The directed study application is available on the Portal - Students Tab.

INDEPENDENT STUDY

A student with a cumulative GPA of 2.5 or higher may be eligible for a maximum of three credit hours in approved independent study. The student will conduct in-depth research on a topic(s) in his or her major occupational program and have the opportunity to develop abilities as an independent learner. An independent study project may carry 1, 2 or 3 credit hour values and will be completed during the semester or session of enrollment. Please see the college registrar for information on the procedure to be followed.

A non-refundable fee of \$100, in addition to tuition and any other regular fees, will be charged to the student for each course taken as an independent study.

For more information, contact your advisor, your program department chair or someone in Student Affairs.

SECOND NMCC CREDENTIAL

When a student enters NMCC, he or she chooses a program with the expectation of receiving a degree or certificate in that area. As a student progresses through his or her program, the instructional staff may encourage the student to broaden his or her background by taking electives in another program. These opportunities allow the student to broaden his or her area of expertise

without compromising or changing his/her career goal or primary purpose in coming to NMCC.

The following apply:

1. If a student wants a second credential, then he or she must complete at least 15 credits beyond the requirements of the first program as well as complete all requirements for the second credential.
2. Students may be given permission to complete a second credential only if they are demonstrating satisfactory academic progress and if space is available. Opportunities for second credentials may be limited due to program demand.
3. Students will not be considered for a second degree until they have completed a minimum of 30 graded credit hours and are in good academic standing.

Students pursuing more than one major must have written approval from the dean of students as well as a reference from his or her current academic advisor.

ACADEMIC HONORS

Dean's List

The Dean's List honors individual students who demonstrate outstanding scholarly achievement. Students achieving a 3.2 or above grade point average as a result of a semester's work will be recognized by inclusion on the Dean's List.

To be selected, students must be enrolled full-time, be matriculated in a program of study and be maintaining satisfactory academic progress. Full-time is defined as carrying 12 or more graded credit hours in a given semester, (Not included are pass/fail, transfer, audit, qualifying or work experience course work). A grade of incomplete for any course(s) in a semester will disqualify a student from inclusion on the Dean's List.

Part-time matriculated students who complete at least 6 credit hours during an academic year, achieve a minimum GPA of 3.2 and maintain satisfactory academic progress will be included on the Dean's List for Part-Time Students.

Phi Theta Kappa

Students achieving a 3.5 or greater cumulative grade point average while matriculated in an associate degree level program of study at NMCC may be invited to join Phi Theta Kappa, an international honor society for two-year college students. To maintain membership, the student member's cumulative grade point average may not fall below 3.25. Phi Theta Kappa emphasizes academic excellence, leadership and community

service.

MID-TERM WARNINGS

In an effort to help students determine their academic success in a particular course, instructors issue a mid-term warning to students doing marginal or unsatisfactory work. Students may view their mid-term grades under the student tab on the portal (my.nmcc.edu) Students who have "U" - Unsatisfactory or "M" - Marginal grades are encouraged to contact their instructors immediately after receiving a mid-term warning so they can be advised on possible strategies for course success. During the meeting, referrals may be made to other campus resources, including the Academic Success Center, Health Center, counselors and student advisors.

STUDENT RECORDS

Permanent Transcript

Each student's record is maintained in student affairs as a chronological list of course work taken and grades received. A student may examine it at any time upon presenting proper identification to the registrar.

Academic Record Changes

Considerable care is taken to ensure that all course registration and grade information entered on a student's permanent record is accurate. The record is confirmed as being accurate if the student does not report a discrepancy to the registrar's office within one semester of the completion of the course.

Transcript

Students requesting that a transcript be sent to a business or another college must sign a transcript release form. These forms are available in the student affairs office as well as on the college web site (www.nmcc.edu). Students requesting a transcript must do so in writing. Expedited transcript requests (processed within one working day of the request) will cost \$25 per request. Facsimile transmissions will cost \$10, and overnight delivery will cost \$75, in addition to the expedited transcript fee. Students may also order electronic transcripts through www.Parchment.com for a fee. Unofficial transcripts are available via the campus portal (my.nmcc.edu).

Confidentiality of Student Records

NMCC believes that it is of paramount importance and in the best interest of all its members that confidentially about personal information is maintained. NMCC is committed to safeguarding confidential information concerning its students from unauthorized disclosure.

The Family Educational Rights and Privacy Act of 1974, as amended, provide the following rights for students attending NMCC:

1. The right of a student, with limitations, to inspect and review his or her educational records.
2. The right, with exceptions, to prevent disclosure to third parties of information from his or her educational records.
3. The right to withhold public disclosure of any or all items of so-called "Directory Information" by written notification to the dean of students within two weeks after publication of this notice. The term "Directory Information" includes a student's name, confirmation of enrollment, degree earned (if applicable), and major course of study.
4. The right to file a complaint with the U.S. Department of Education concerning the alleged failure of NMCC to comply with requirements of the Act.

TRANSFER

NMCC has several program specific transfer agreements with senior colleges and universities. Students interested in transferring to an institution to pursue a baccalaureate degree should discuss their goals with their academic advisor to assure appropriate planning of their academic coursework at NMCC and to maximize the amount of transfer credit.

For the transfer of courses not covered by a current transfer agreement, the college or university to which the student is transferring has the final decision on granting of transfer credit.



Academic Programs

ACADEMIC PROGRAMS

ACADEMIC DEPARTMENTS

Northern Maine Community College offers four credentials. The Associate in Arts(AA) and the Associate in Science(AS) degrees are designed primarily to prepare the student for transfer to an upper division baccalaureate degree program. The Associate in Applied Science (AAS) degree is designed to prepare students for employment in a specific career field, although many of these programs have been articulated for transfer as well. All associate-level programs are designed to be completed in two years, although this varies based on student preference and preparation.

Certificates are designed for short-term career preparation and usually reflect the first year of an Associate in Applied Science degree. Indeed, many students pursuing certificates often continue their education into the associate-level program. Many certificate programs can be completed in one year.

Note: An individual with a felony conviction may not be able to obtain licensure in certain professions.

ARTS AND SCIENCES DEPARTMENT

The Arts and Sciences Department offers associate degrees in Liberal Studies and Early Childhood Education. The Liberal Studies Associate in Arts degree is a transfer degree program that replicates the first two years of a four-year program. The Associate in Applied Science degree in Early Childhood Education allows students to enter either the workforce or transfer. In addition, the department provides courses that support the general education core for degree programs in other departments. The general education cores instills in students the knowledge, skills, and values that define an educated person.

Early Childhood Education

NMCC's early childhood education program offers both a two-year associate degree and a one-year certificate level option. The associate degree program is designed to educate childcare professionals in the skills and knowledge necessary for advanced positions in organizations and agencies that serve children. It provides courses and field experience in childcare, as well as a well-rounded supporting education. This degree also provides transfer opportunities to four-year institutions.

The certificate program provides the training needed for entry-level positions and meets the more immediate need for those who do not choose the additional courses required for the degree. The core courses of this program align with the

educational requirements for the State of Maine Child Development Associate (CDA) credential.

Graduates will find employment opportunities in child care centers, summer and day camps, pre-school programs, public schools, recreational centers, one-on-one aide positions, and other agencies that serve children. Both, the two-year associate degree and the one-year certificate, provide the pathway for obtaining a State of Maine license as an owner/operator of a private child care facility.

Liberal Studies

An Associate in Arts degree in Liberal Studies is a flexible degree program designed for students whose educational goal is to transfer to another college or university. The curriculum provides a strong foundation in the liberal arts (math, science, humanities, and social sciences) that prepares students for advanced academic study at a baccalaureate-granting institution. As part of an agreement between the Maine Community College System and the University of Maine System, Liberal Studies graduates can complete up to 35 hours of the general education requirements of any campus in the University of Maine System as part of the Associate in Arts program. Those who are unsure of their future educational plans can enroll in Liberal Studies and work with experienced faculty to develop an educational plan that suits the student's needs. With small class size and experienced faculty who are committed to their craft of teaching, NMCC's Liberal Studies program is a great place to start.

To ensure maximum transferability, the college has entered into articulation agreements with regional colleges and universities such as the University of Maine at Presque Isle and the University of Maine at Fort Kent. The Arts and Science Department is also included in articulation agreements made by NMCC nursing, business, and technical programs at other institutions of higher learning. Finally, Liberal Studies is a starting point for those who are undecided about their educational and career goals. The flexibility of the Associate in Arts curriculum allows students to sample a wide variety of courses in both the liberal arts and career and technical programs.

BUSINESS TECHNOLOGY DEPARTMENT

The Business Technology Department promotes occupational and technical competence, individual growth and social responsibility in students preparing for careers in accounting, business administration, network administration and cybersecurity and various certificate programs. In addition, the students' preparation allows for upward

academic mobility when they wish to transfer credit to baccalaureate-granting colleges and universities.

Classroom learning experiences support the use of laptop computers and personal devices to create an active learning environment where students put into practice the principles, theories and technology that are fundamental to the understanding of their specialized field of study.

In addition, general education courses are an important part of the students' program of study. The faculty are committed to preparing students to function in the current job market and for transfer to baccalaureate-granting colleges and universities. Faculty maintain expertise in their specialized field through a variety of activities including involvement in professional organizations, attendance at workshops and seminars, and working in their respective field.

The department is nationally accredited by the Accreditation Council for Business Schools and Programs (ACBSP) for the offering of its accounting and business administration programs that culminate in the associate in applied science degree.

Accounting

Accounting combines the study and practice of accounting with the design, implementation and monitoring of information systems. Such systems use modern information resources, together with accounting controls and methods, to provide users the financial information necessary to manage their organizations. The purpose of accounting is to provide timely and accurate financial and statistical reports for internal management decision making and for external parties such as creditors, investors, and regulatory and taxation authorities.

NMCC's two-year accounting program provides knowledge and skills to maneuver newly emerging systems that require a combination of technical and financial knowledge. Students will learn the latest in electronic commerce, direct business-to-business communication, and paperless work processes in the College's wireless multimedia smart classrooms.

Graduates of this program will be prepared for entry level positions at accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems, churches, and government agencies.

Besides providing training for employment, the program prepares students to continue their education at a four-year college or university. Transfer agreements with several colleges and universities ensure that graduates can transfer, as an advanced student, into a four year program.

Business Administration

The business administration program is broad and diversified in its course offerings. Courses are designed to impart knowledge and to develop skills and abilities that will prove practical, useful and

marketable. Through its course offerings, the program continually strives to maintain relevance and a high-level of quality. Instructors, with their strong business and industry backgrounds, blend theory and practice in a unique and meaningful way.

Graduates will be qualified for employment as accounting clerks, loan officers, entry level managers, state and federal government employees, and related positions. Besides providing training for employment, the program prepares students to continue their education at a four-year college or university. Transfer agreements with several colleges and universities ensure that graduates can transfer, as an advanced student, into a four year program.

Entrepreneurship

The entrepreneurship certificate level program is designed to prepare prospective entrepreneurs to launch new ventures by educating them in the fundamentals of starting and operating their own business. For entrepreneurs who already have established a business, this program will help them strengthen their business and management skills.

Entrepreneurship is an employment strategy that can lead to economic self-sufficiency. Self-employment provides you with the potential to create and manage businesses, in which you function as the employer or boss, rather than being an employee. Graduates who want to expand their business management skills may choose to complete the business administration associate degree program at NMCC. Thirty of the 33 credits earned in the entrepreneurship certificate will apply toward an AAS in business administration.

Network Administration & Cybersecurity

Network Administration & Cybersecurity is a two-year program which prepares students to enter the workforce as an IT administrator, technician or to continue on to a four-year program. Students learn to build and optimize computers and servers, set-up and administer a computer network, and maintain operating systems. The first year provides training in Windows 10, Computer Repair, Introduction to Windows Server 2016, Introduction to Linux, and Networking Hardware. Seniors receive advanced training in Configuring Servers, Network Administration, Micro Electronics, Computer Forensics, and Cybersecurity. All courses have considerable hands-on labs to reinforce the theory.

Office Assistant

Office assistant is a certificate program designed to provide basic, entry-level clerical skills. The program teaches, improves and reinforces math, accounting, office procedures, oral and written communication, filing, and word processing skills. Graduates are prepared for entry-level office positions. Students may also choose to continue their education.

EMERGENCY MEDICAL SERVICES DEPARTMENT

The Emergency Medical Services (EMS) department prepares the pre-hospital provider to enter into professional practice and work in a variety of healthcare settings. The EMS department utilizes both an innovative educational delivery approach and state of the art equipment including a full simulation center and ambulance to ensure graduates are well prepared for the rigors of the healthcare environment they will face. Students will apply didactic knowledge gained from their studies as well as psychomotor skills to complete various clinical rotations throughout the program.

Community Paramedicine

The Community Paramedicine program is designed to educate practicing paramedics, who are primarily employed in the pre-hospital emergency environment, to become competent community paramedics. Community paramedics work collaboratively with public health, home care and primary care professionals in non-emergency settings, providing an invaluable service to an unserved population.

Community paramedics help patients meet critical health needs by establishing health systems that promote health and wellness, while serving as advocates, educators, facilitators, liaisons, and resource coordinators. The program is designed to allow paramedics to perform needs assessments and assist in the development of community paramedicine initiatives that meet very specific and individualized community needs. Paramedics having earned an academic credential (associate degree or higher, in any field) may enroll directly into the advanced certificate level of the program; those candidates who have not yet earned an associate degree will be considered for the Associate Degree in Science level of the program.

Community Paramedicine is a new and exciting career choice for experienced paramedics. In addition to serving communities in the traditional roles, community paramedics are employed by acute care hospitals, long term care facilities, assisted living organizations, public health entities, and municipalities.

Emergency Medical Services

The Emergency Medical Services program is designed to prepare individuals to become National Registered Paramedics. The curriculum combines intense classroom and lab instruction with extensive clinical experiences to assure that graduates are competent, confident practitioners.

The program follows national education standards and graduates are eligible to take the National Registry Paramedic License examinations. In addition to the core content, students earn certifications in Advanced Cardiac Life Support (ACLS), Pre-hospital Trauma Life Support (PHTLS), Pediatric Advanced Life Support (PALS), Paramedic Interfacility Transport (PIFT), Advanced Medical Life Support (AMLS) and Emergency Pediatric Care (EPC). The program is authorized as a training center by the Board of Maine EMS. The Emergency Medical Services Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Education Programs for the Emergency Medical Services

The multiple entry/multiple exit program permits students to exit after completion of specific course requirements and be eligible to take the national certification exams for EMT, Advanced EMT and Paramedic. Currently licensed providers may be accepted into the higher levels of the program.

NURSING AND ALLIED HEALTH DEPARTMENT

The Nursing and Allied Health Department provides programs which prepare graduates to be employed in a variety of health care settings as competent health care providers.

The programs are supported by general education studies and a number of required courses supplement the occupational areas of study. Students are expected to combine theory and didactic classroom content with practical application in both lab and clinical settings. Occupational areas offer current instruction by faculty members who maintain theoretical and clinical expertise in specialized fields of knowledge. Faculty seek on-going professional development in order to maintain their individual competencies in the rapid and ever-changing healthcare environment.

To participate in any of these healthcare related programs, students must attest to criminal history and pending criminal data. Convictions and pending charges of concern will be reviewed by clinical agencies to determine if students can work at these sites. Students who are not accepted at a clinical agency will not be able to meet program

requirements, resulting in dismissal from the program. Students found to be untruthful or misleading on the application form and/or program attestation statements may be dismissed from the program.

Graduates are able to secure employment in a variety of clinical settings and/or transfer to baccalaureate levels of education in their areas of major.

Medical Assisting

The college's two-year medical assisting program combines clinical and administrative training. In the clinical component of the program, students will have the opportunity to understand the concept of professionalism and therapeutic communication. Students will learn to measure vital signs, obtain and record a medical history, administer oral and parenteral medications, prepare the patient for examination and assist the health care provider with the physical examination. Students also learn to perform diagnostic tests such as 12-lead EKGs, perform specimen collection, perform venipuncture and CLIA-waived laboratory examinations, and teach patients about health and wellness. In the administrative component of the program, students will learn to maintain patient records, schedule patient appointments, perform bookkeeping procedures, as well as medical and diagnostic coding, and complete insurance claim forms.

Graduates of the medical assisting program will be competent entry-level medical assistants who can secure employment in medical offices or ambulatory clinics. In the State of Maine, medical assistants work under the direction of health care providers. Upon graduation, students may elect to sit for the Certified Medical Assistant (CMA) and/or the Registered Medical Assistant (RMA) national certification exams. The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board.

Medical Coding

Medical Coding is a two-semester certificate program that prepares students for the rapidly expanding field of medical coding, focusing on developing an understanding of the language of medicine and the ability to apply it to professional coding standards. Instruction concentrates on the areas of anatomy and physiology, medical terminology, pharmacology, and clinical classification systems. Coders are required to abstract medical documentation from a patient's chart and correlate the diagnosis and procedures performed into numerical code numbers. This is done in all healthcare facilities. The student gains

knowledge and practice in computer software programs, such as encoders and electronic medical records systems, which allows students to have real world, hands-on application of medical practice.

Graduates are eligible for certification as a Coding Associate (CCA) through American Health Information Management Association (AHIMA). With some experience, they become eligible for additional national certification examinations through AHIMA or the American Academy of Professional Coders (AAPC).

Graduates are prepared to work in various healthcare settings, including hospitals, clinics, physicians practices, long-term care facilities, and home health agencies. Employment opportunities can also be found in non-traditional healthcare areas such as insurance companies, government agencies, computer software companies, or consulting firms.

Nursing

The associate in science degree nursing program is designed to offer individuals the opportunity to enter the nursing profession as a registered nurse.

The nursing curriculum focuses upon basic human needs of individuals throughout the lifespan. Students develop the knowledge and skills necessary to provide nursing care to individuals with well-defined health problems. Legal, ethical and role responsibilities of the nurse are addressed within each level.

Guided learning experiences in the laboratory and structured health care settings are correlated with classroom instruction. The program holds national accreditation by the Accreditation Commission for Education in Nursing (3343 Peachtree Rd. NE, Suite 850, Atlanta, GA 30326; www.acenursing.org) and is fully approved by the Maine State Board of Nursing (161 Capital St., 158 State House Station, Augusta, ME 04333-0158; www.state.me.us/boardofnursing).

Candidates who are graduates of an approved practical nursing program are provided an opportunity for advanced standing in the nursing program. Graduates will be eligible to take the NCLEX-RN examination, administered by the National Council of State Boards of Nursing (NCSBN), to qualify as a registered nurse. Graduates will find employment opportunities as an integral team member in a variety of healthcare settings.

Upon completion of the associate degree nursing program, graduates may choose to continue their education toward a bachelor of science degree in nursing. NMCC's nursing program has an articulation agreement with the University of Maine Fort Kent (UMFK) for a seamless transition from RN to BSN.

Practical Nursing

The practical nursing program is designed to offer individuals the opportunity to enter the nursing profession as a practical nurse.

The nursing curriculum focuses upon basic human needs of individuals throughout the lifespan. Students develop the knowledge and skills necessary to provide nursing care to individuals with well-defined health problems. Legal, ethical and role responsibilities of the nurse are addressed within each level. Guided learning experiences in the laboratory and structured health care settings are correlated with classroom instruction. The program is fully approved by the Maine State Board of Nursing (161 Capital St., 158 State House Station, Augusta, ME 04333-0158; www.state.me.us/board).

Graduates will be eligible to take the NCLEX-PN examination, administered by the National Council of State Boards of Nursing (NCSBN), to qualify as a practical nurse. Graduates will find employment opportunities as an integral team member in a variety of healthcare settings.

TRADE AND TECHNICAL OCCUPATIONS DEPARTMENT

NMCC's trade and technical occupations department offers a wide range of programs that provide classroom instruction and hands-on training in three major cluster areas. The transportation trades include training of technicians in automotive collision repair, automotive technology and diesel hydraulics technology.

The construction trades include building construction technology, plumbing and heating, electrical construction and maintenance, and structural welding. The technical trades include computer numerical control, water treatment technology and wind power technology.

Each program requires a broad-based education centered on a core curriculum, including technical specialty and general education courses. Most programs offer both an associate degree and certificate level option. The certificate offerings focus primarily on technical course work. The comprehensive nature of the associate degree curriculum provides graduates with added flexibility in their careers, enabling them to adapt readily to new tasks and work environments.

Automotive Collision Repair

NMCC's automotive collision repair program offers a broad range of training from collision repair to custom painting, emphasizing the skill standards required for a technician to become Automotive Service Excellence (ASE) certified. The latest technology is used with computer matching

capabilities in paints and in the measuring of the automobile after sustaining collision damage along with creating a written estimate.

Instruction is given in plastic and composite repair in preparation for the application of paint. The second year of the program reinforces the skills learned in the first year; however, more emphasis is placed on major collision appraisal and repair and the auto body refinishing process. Processes includes acrylic urethanes, polyurethanes and basecoat, clear coat in solvent based and waterborne paint systems, and tri-coat paint systems. Emphasis is also placed on color matching, mixing and tinting colors with hands-on experience. To insure accountability for time and materials, second year students also utilize work order system.

Graduates of the program will find job opportunities with auto collision repair paint shops, new and used car dealers, auto glass shops, and truck body builders. With experience, advanced positions may be available in supervision, insurance adjusting, sales and service, auto product field representation with collision frame shops and in self-employment. The Automotive Collision Repair program is ASE accredited at the Master level.

Automotive Technology

Automotive technology is a program designed to provide broad fundamental training in all aspects of automotive service and repair, employing up-to-date methods and materials. The program emphasizes the ASE Education Foundation skills standards required for a technician to become Automotive Service Excellence (ASE) certified. In the first semester, students concentrate on the under-car chassis, including wheels/tires, tire pressure monitoring systems, wheel balancing techniques, brakes, ABS/traction control systems, steering suspension systems, and wheel alignment.

During the spring semester, first year students concentrate on major engine repair, including diagnoses, disassembly, inspection, and reassembly. Automotive electricity, including batteries, starting and charging systems, restraint systems, lighting, vehicle wiring. Also, motor vehicle inspection. In the second year, students cover the areas of engine management diagnostics and repair, including: computers and control systems, fuel delivery/air induction, ignition systems and emission control. In the final semester, the course covers areas of automatic/manual transmissions and final drive assemblies. Incorporated into the program are technical courses that enhance learning on the maintenance of current automotive standards.

These include basic automotive electricity,

automotive electronics, automotive heating and air conditioning, advanced electronics, hybrid and electric vehicles, and light duty diesel systems. The program meets the quality training of automotive certified technicians as set by ASE. Students will be eligible for ASE professional certifications upon completion of the program. Graduates of the program will be qualified as entry level technicians, finding employment with automobile dealerships, independent repair facilities, after-market specialty shops and other related businesses. The Automotive Technology program is ASE accredited at the master level.

Building Construction Technology

The building construction technology program provides up-to-date training in the tools of the construction trade including the proper methods of construction, the appropriate materials to use and the related knowledge necessary to enter the trade.

Students learn and practice the use and safety of power and hand tools, the principles of building construction, including floor framing, wall trusses, roof framing, wall partition framing, exterior finish, roofing, attic venting and insulating techniques. Students may work in conjunction with students from other building trade programs on projects.

Graduates will be qualified for entry-level positions with building contractors, building suppliers, governmental agencies, home specialty companies, manufacturing firms or other organizations. Building Construction Technology students gain knowledge on the total construction process in their education, which also provides good career advancement opportunities.

Computer Numerical Control

The computer numerical control program enables students to develop skills in setting up and operating conventional machine tools to produce precision parts and develop the required skills in preparation for CNC (computer numerical control) programming, setup and operation. Students will develop additional skills in process planning, blueprint reading, CAD/CAM, measurement and inspection, and custom work-holding design, leading to National Institute of Metalworking Skills (NIMS) or other credentials.

NMCC houses Maine's first HAAS Technical Education Center. The college's collaborative relationship with HAAS Automation, Inc. affords students access to state-of-the-art machine tools to support training in both entry-level and advanced machining processes. There is a strong general education component integrated into the program to satisfy demands for appropriate work force skills.

The computer numerical control program is a NIMS accredited metalworking training program at machining level I and machining level II.

Students have consistently had the opportunity to be employed as interns in the summer for several manufacturing facilities. Job opportunities for graduates include machine tool operators, precision machinists, tool and die makers, CNC operators/programmers, and quality control inspectors.

Diesel Hydraulics Technology

Diesel hydraulics technology is a program emphasizing the skill standards required for a technician to become Automotive Service Excellence (ASE) certified. Fundamental training in all aspects of medium/heavy truck technician training is employed through lecture and hands-on training.

In the first semester, students concentrate on preventive maintenance inspections and repair, basic principles of diesel engine operation with emphasis on engine tune-up and troubleshooting techniques (i.e., engine timing, and fuel systems operational components). The next semester follows with an emphasis on heavy equipment electrical/electronic troubleshooting and repair, air brake systems, and fundamentals of suspension and steering component servicing and diagnosis.

In the second year, students concentrate on the principles of hydraulics, hydraulic troubleshooting and diagnosis, followed by diesel engine rebuilding. The last semester's concentration is truck drive train systems, including transmission and differential rebuilding or replacement, followed by the theory and operation of mobile refrigeration units.

The diesel hydraulics program meets the quality training of diesel hydraulic technicians as set by ASE and is master level accredited. Students will be eligible for ASE student certifications upon completion of the program.

Graduates can find employment with construction companies, logging companies, farm machinery/heavy equipment dealers, and truck dealerships. Capable graduates may advance into management positions such as team leader, shift foreman, shop supervisor, parts manager, or sales associate.

Electrical Construction and Maintenance

Electrical construction and maintenance provides broad fundamental training in the principles used to install electrical equipment and the mathematics necessary to plan electrical systems. National electric code and theory are taught throughout the program.

The first year provides theory and practice in electrical and electronic basics. Studies

include the use of diagnostic test equipment and troubleshooting techniques while performing “hands-on” laboratory exercises.

The second year begins with an in-depth study of residential and commercial wiring systems and lighting design. Hands-on exercises include residential wiring, conduit bending and installation, and lighting and control system installation.

Following a thorough study of rotating machinery and power systems analysis, industrial wiring and motor controls are studied. Hands-on exercises include the planning, wiring and testing of motor control circuitry, as well as, programmable logic controllers (PLCs).

Graduates of the program will find employment opportunities as beginning electricians with electrical contractors, service shops, power companies, electrical industry equipment suppliers and industrial maintenance operations. After necessary experience and licenses have been obtained, positions may be available as managers, inspectors, supervisors, field representatives or as operators of individual businesses. Presently, two of the four years required for a Journeyman Electrician’s license are awarded to graduates upon completing this program at NMCC.

Plumbing and Heating

Students in the plumbing and heating program may choose to pursue an associate degree or a certificate in plumbing, in heating, or in both. Classroom and lab projects provide students with the skills necessary for today’s fast pace and ever evolving world of plumbing and heating.

The first year is spent in the plumbing classroom and lab learning to work with many types of piping systems, including copper, steel and plastics. The student will also learn to properly install and service domestic water pumps, water treatment equipment, plumbing fixtures, drainage and vent lines, and potable water lines. The student will work directly with the sizing of domestic water, drainage and venting systems. The Maine state plumbing code will be discussed in detail. The student will be eligible for the Maine Plumbers’ Journeyman exam upon successful completion of the first year.

The second year consists of class time in heating and refrigeration, along with participating in the lab, learning to work with many different heating and refrigeration systems and components. The student will learn the major concepts of heat flow, warm air and hydronic heating systems, piping systems and layouts, electrical component wiring, and Maine laws pertaining to oil heating appliances and refrigerant systems. After completion of the heating courses, the student will be eligible to sit for the Maine Journeyman’s exam for #1 and #2 oils up to 15

G.P.M. In addition, students will receive training in propane and natural gas and heat pump installation. Students will have the opportunity to take national certification exams in propane and natural gas, allowing students the ability to sit for the professional license of “Propane and Natural Gas Technician” license and refrigerant handling.

Graduates will be qualified for many employment opportunities in the plumbing, heating and cooling field, including service technician, installer, sales, and eventually self-employment.

Trade and Technical Occupations

This program recognizes proficiency at the associate degree level for various trades and technical occupations in which an individual has completed a formal registered* apprenticeship program (i.e. journeyman status). The program is open to individuals who have completed a registered apprenticeship program and apprentices who wish to complete the trade and technical occupations program simultaneously with dual enrollment in the apprenticeship program.

Participation is available to apprentices in a registered or college approved program that is at least three years in duration. Students may be enrolled in the program after they have earned 27 credits in their technical (apprenticeship) specialty area. The student is responsible for providing the necessary documentation to verify his or her successful completion of the technical specialty portion of the apprenticeship program, certification documents, a schedule of training required by the employer and other supporting credentials. The degree will not be awarded until the student has completed the requirements of the apprenticeship program.

**Registered by Maine State Apprenticeship Council; Bureau of Apprenticeship Training, U.S. Department of Labor; or formal programs approved by the college.*

Structural Welding

Structural welding certificate program students will be presented information on the materials being used, hand and power tools for the job, safety in the workplace, and the correct procedures for the assigned tasks. Students will have the opportunity to develop skills in the shielded metal arc welding process, in preparation for the exam. The curriculum for this program is designed to prepare students for the American Welding Society structural welding qualification test numbers D1-SM-F4-P-A-L, a national certification.

Graduates of the program may find employment opportunities with, industrial contractors, ship yards, machine shops, fabrication shops, and manufacturing facilities.

Water Treatment Technology

The Water Treatment Technology program prepares students for a career in the environmentally conscious field of municipal and industrial water and wastewater treatment.

The program provides students a fundamental understanding of the scientific principles used to treat drinking water as well as sanitize wastewater before it is discharged back into the environment.

Students will learn industry theory and gain better understanding of the information across the spectrum — from the basics to an in-depth study of Water and Wastewater Treatment degree and certificates. Students may choose the Associate's Degree option that covers both water and wastewater treatment, or a certificate option in either. Graduates will be eligible for the Maine DHHS Class I and II Water Treatment Plant Operator, Class I and II Waster Distribution Systems Operator, Maine DEP Class I and II Wastewater Treatment Plant Operator and NEWA Grade 1 and 2 Collection Systems exams.

Students may find career opportunities with municipal and industrial water and wastewater treatment facilities, state agencies, testing laboratories, and related equipment suppliers.

Wind Power Technology

The Wind Power Technology program is a certificate program that prepares students to enter into a rapidly emerging alternative energy industry as technicians. The program offers training in the fundamental skills required to work safely and effectively with utility sized wind power systems.

The first semester of the program offers an introduction to the power industry, electrical and electronics basics, related mathematics concepts, industrial safety practices, fluid applications, and mechanical drive systems. The second semester provides fundamentals of industrial control system applications including automation concepts, related electronics, communication networks, software applications, and power production and distribution. Each semester's curriculum provides a focus on developing a working knowledge of industry standards and skills required to complete operation, maintenance and troubleshooting tasks. Graduates of the certificate program will find career opportunities with wind farm operators, turbine manufacturers, and contractors providing construction, maintenance and turbine operational support. Opportunities may include local employers, as well as, global energy industry.





Curricula

General Education Core Curriculum

All associate degree candidates must complete the following minimum general education core requirements.

Core Requirements	Description of the Discipline	Learning Outcomes	Courses (see program requirements)
Writing & Communications 6 Hours	Communications focuses on developing skills to make meaning of symbols: words, images, documents, advertising and even technology to promote human interaction in a broad range of careers, disciplines and organizations and agencies in society. Persuasion and critical thinking are essential to the study of communications that overlaps a variety of secondary disciplines that can range from healthcare to mass communications to politics and organizations.	Students will be able to communicate effectively, both orally and in writing. Students will be able to search for, access, evaluate information from a variety of sources and use that information ethically and legally for research and personal purposes.	ENG 111 English Composition ENG 227 Advanced Composition COM 111 Speech COM 212 Business Communications COM 221 Technical Communications
Quantitative Literacy 3-4 Hours	Mathematics is the study of number, quantity, shape, and space and their interrelationships using numbers and symbols and logical thinking. Arithmetic, algebra, geometry, and calculus are branches of mathematics.	Students will understand and be able to apply mathematical concepts to solve quantitative problems.	MAT 115 Business Math MAT 116 Quantitative Reasoning MAT 118 Electrical Math MAT 119 Applied Math MAT 125 College Algebra MAT 210 Statistics MAT 227 Calculus
Natural Science 4 Hours w/Lab	Science is the systematic study of the structure and behavior of the physical and natural world through observation experiment, measurement, and critical analyses.	Students will develop the ability to reason scientifically using the scientific method and to apply that knowledge in a laboratory setting.	BIO 114 Human Biology BIO 201 Anatomy & Physiology I BIO 211 Anatomy & Physiology II BIO 218 Microbiology NUT 101 Nutrition PHY150 Physics
Social Science 3 Hours	Social Sciences are the study of human behavior, societies and the social processes that influence both. The social sciences include sociology, psychology, anthropology, economics, and political science.	Students will be able to analyze or explain causal forces which shape social structures, institutions, or behavior through time.	ECO 213 Macroeconomics HIS 117 World Civilization to 1715 HIS 119 World Civilization 1715-present HIS 123 U.S. History, 1500-1865 HIS 125 U.S. History, 1865 to Present HIS 203 Religion in America HIS 206 American Sports History HIS 207 Maine History POL 101 American Government PSY 101 General Psychology PSY 207 Developmental Psychology PSY 209 Abnormal Psychology SOC 111 Sociology SOC 215 Social Issues & Problems
Humanities 3 Hours	Humanities are those disciplines that help us understand what it means to be human. Study in the humanities help us to make meaning, find purpose, and choose values that enhance our understanding of ourselves and govern our relationships with others. The humanities include literature, fine art, philosophy, and history.	Students will be able to read, analyze, and interpret significant texts in order to make meaning, find purpose, and choose values that enhance our understanding of ourselves and govern our relationships with others	ART 101 Fundamentals of Art ART 122 Architectural History ART 201 Introduction to Film ENG 120 Introduction to Literature ENG 226 Introduction to Literature ENG 228 Topics in Literature ENG 231 Women in Literature ENG 239 Intro to Creative Writing HIS 123 U.S. History, 1500-1865 HIS 125 U.S. History, 1865 - Present HIS 203 Religion in America HIS 206 American Sports History HIS 207 Maine History PHI 106 Ethics in the Workplace PHI 111 Everyday Ethics PHI 151 Introduction to Philosophy PHI 201 Ethics PHY 206 World Religions
General Education Elective 1-3 Hours			COL 103 College Success SPA 101 Spanish I SPA 102 Spanish II

Core Total: 21 Hour Minimum

ACCOUNTING

Associate in Applied Science Degree Program

Program Outcomes

<u>First Semester</u>		C	L	CR
ACC 111	Principles of Accounting I	4	0	4
BUS 117	Business Law	3	0	3
CIS 105	Intro. to PC Operating Systems	1	0	1
CIS 113	Intro. to Microcomputer Apps.	3	0	3
ENG 111	English Composition	3	0	3
MAT 115	Business Mathematics	3	0	3
OR				
MAT 116	Quantitative Reasoning	3	0	3
		17	0	17
<u>Second Semester</u>				
◆ ACC 121	Principles of Accounting II	4	0	4
CIS 108	Spreadsheet Applications	3	0	3
COM 212	Business Communications I	3	0	3
ECO 213	Macroeconomics	3	0	3
MAT 125	College Algebra	3	0	3
		16	0	16
<u>Third Semester</u>				
◆ ACC 211	Intermediate Accounting I	4	0	4
◆ ACC 214	Federal Taxation I	3	0	3
◆ ACC 234	Accounting Info Systems I	3	0	3
CIS 129	Database Applications	3	0	3
COM 111	Speech	3	0	3
		16	0	16
<u>Fourth Semester</u>				
◆ ACC 221	Intermediate Accounting II	4	0	4
◆ ACC 225	Federal Taxation II	3	0	3
BUS 106	Effective Customer Service	3	0	3
	Business Elective	3	0	3
	Humanities Elective	3	0	3
		16	0	16
TOTAL REQUIRED				65

- Understand the application of the conceptual framework of accounting, generally accepted accounting principals, and current laws to financial information and understanding the various practices of business.
- Understand and create financial statements in accordance with generally accepted accounting principals.
- Apply the appropriate application of computer technology to complete accounting and business functions.
- Apply analytical and logical skills to use information retrieval and technology to solve accounting and business problems.
- Interpret, analyze, and communicate financial and managerial information for decision-making purposes.
- Communicate effectively with others utilizing appropriate forms of communication methods.
- Graduates will be satisfied with the accounting program.

◆ Major courses; a minimum grade of "C" or 2.0 required.

CURRICULA KEY:

C = Class Hours
L = Lab Hours
CR = Credit Hours

AUTOMOTIVE COLLISION REPAIR

Associate in Applied Science Degree Program

<u>First Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 111	Nonstructural Repairs	3	9	6
COL 103	College Success	1	0	1
ENG 111	English Composition	3	0	3
SAE 121	Industrial Safety	3	0	3
WEI 113	Thin Metals Welding	2	2	3
		12	11	16

<u>Second Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 121	Structural Analysis/Plastics	3	9	6
◆ AUT 115	Automotive Electricity	2	2	3
MAT 119	Applied Mathematics	4	0	4
WEI 133	Electric Welding	2	2	3
	Social Science Elective	3	0	3
		14	13	19

<u>Third Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 209	Auto Collision Blueprint & Est	3	0	3
◆ ACR 211	Painting & Refinishing	3	9	6
◆ AUT 125	Automotive Electronics	2	2	3
PHY 150	Physics	3	2	4
	Humanities Elective	3	0	3
		14	11	19

<u>Fourth Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 223	Structural Repairs	3	9	6
AUT 216	Motor Vehicle Inspection	2	0	2
◆ AUT 229	Auto Heating & Air Conditioning	2	2	3
COM 221	Technical Communications Elective	3	0	3
		13	11	17

TOTAL REQUIRED **71**

Certificate Program

<u>First Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 111	Nonstructural Repairs	3	9	6
ENG 111	English Composition	3	0	3
SAE 121	Industrial Safety	3	0	3
WEI 113	Thin Metals Welding	2	2	3
		11	11	15

<u>Second Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 121	Structural Analysis/Plastics	3	9	6
◆ AUT 115	Automotive Electricity	2	2	3
MAT 119	Applied Mathematics	4	0	4
WEI 133	Electric Welding	2	2	3
		11	13	16

TOTAL REQUIRED **31**

◆ *Major courses; a minimum grade of "C" or 2.0 required*

Prospective students must complete and return a medical clearance form prior to being admitted to the program.

Major Collision Repair and Refinishing Certificate Program*

<u>First Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 209	Auto Collision Blueprint & Est	3	0	3
◆ ACR 211	Painting & Refinishing	3	9	6
◆ AUT 125	Automotive Electronics	3	0	3
ENG 111	English Composition	3	0	3
		12	9	15

<u>Second Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ACR 223	Structural Repairs	3	9	6
AUT 216	Motor Vehicle Inspection	2	0	2
◆ AUT 229	Auto Heating & Air Conditioning	2	2	3
MAT 119	Applied Mathematics	4	0	4
		11	11	15

TOTAL REQUIRED **30**

Note: Must have completed the Auto Collision Repair Certificate Program or permission of the instructor to enroll in this certificate program.

Program Outcomes

- Communicate using proper technical terms and descriptions.
- Maintain a safe working environment for themselves and others.
- Understand the behavior and principles that govern automotive electrical circuits.
- Troubleshoot automotive circuits using available information.
- Read and comprehend schematic diagrams.
- Use mathematics in measuring, analyzing, and estimating tasks.
- Perform entry-level skills in metalwork and plastic fillers.
- Perform entry-level skills in refinishing vehicles to pre-accident condition.
- Effectively communicate with others using written and oral modes.
- Work independently with minimal supervision.
- Work cooperatively and collaboratively on larger repair projects.
- Follow verbal instruction on processes and repair procedures.
- Document repair procedures and costs by using a repair order system.
- Mix, apply, and finish paint products according to specifications.
- Demonstrate skills in color matching, mixing, and tinting of paints.
- Understand the principles of basic automotive electronic components.
- Select and use appropriate automotive electronic diagnostic equipment.
- Be eligible for the Maine State Motor Vehicle Inspection exam.
- Understand heating and air conditioning principles in automotive vehicles.
- Understand how the laws of the Clean Air Act pertain to the profession.
- Be eligible for ASE Student Certification Testing in Collision Repair.
- Demonstrate ability to write an accurate estimate manually and electronically.
- Work as closely as possible, within allotted time on a repair order.
- Demonstrate basic skills in oxyacetylene, MIG, TIG, silicon bronze and aluminum welding.

AUTOMOTIVE TECHNOLOGY

Associate in Applied Science Degree Program

Program Outcomes

<u>First Semester</u>		C	L	CR
♦ AUT 109	Intro. to Auto Tech	.5	1.5	1
♦ AUT 114	Suspension and Steering	*1.5	*4.5	3
♦ AUT 115	Automotive Electricity	2	2	3
♦ AUT 116	Brakes	*1.5	*4.5	3
COL 103	College Success	1	0	1
ENG 111	English Composition	3	0	3
WEI 103	Welding for Auto Tech	2	2	3
		11.5	14.5	17

<u>Second Semester</u>		C	L	CR
♦ AUT 124	Engine Repair	3	9	6
♦ AUT 125	Automotive Electronics	2	2	3
AUT 216	Motor Vehicle Inspection	2	0	2
MAT 119	Applied Mathematics	4	0	4
	Humanities Elective	3	0	3
		14	11	18

<u>Third Semester</u>		C	L	CR
♦ AUT 214	Engine Performance	3	9	6
♦ AUT 229	Auto Heating & Air Cond.	2	2	3
♦ AUT 231	Innovative Auto Technologies	2	2	3
AUT 233	Light Vehicle Diesel Systems	2	2	3
PHY 150	Physics	3	2	4
		12	17	19

<u>Fourth Semester</u>		C	L	CR
♦ AUT 223	Manual Drive Train and Axles	*1.5	*4.5	3
♦ AUT 225	Automatic Transmissions	*1.5	*4.5	3
♦ AUT 228	Alternative Propulsion Sys	2	2	3
COM 221	Technical Communications	3	0	3
	Social Science Elective	3	0	3
		11	11	15

TOTAL REQUIRED **69**

Certificate Program

<u>First Semester</u>		C	L	CR
♦ AUT 109	Intro. to Auto Tech	.5	1.5	1
♦ AUT 114	Suspension and Steering	*1.5	*4.5	3
♦ AUT 115	Automotive Electricity	2	2	3
COL 103	College Success	1	0	1
♦ AUT 116	Brakes	*1.5	*4.5	3
ENG 111	English Composition	3	0	3
WEI 103	Welding for Auto Tech	2	2	3
		11.5	14.5	17

<u>Second Semester</u>		C	L	CR
♦ AUT 124	Engine Repair	3	9	6
♦ AUT 125	Automotive Electronics	2	2	3
AUT 216	Motor Vehicle Inspection	2	0	2
MAT 119	Applied Mathematics	4	0	4
		11	11	15

TOTAL REQUIRED **32**

♦ *Major courses; a minimum grade of "C" or 2.0 required.*

- Communicate using proper technical terms and descriptions.
- Maintain a safe working environment for themselves and others.
- Understand the behavior and principles that govern automotive electrical circuits.
- Troubleshoot automotive circuits using available information.
- Read and comprehend schematic diagrams.
- Use mathematics in measuring, analyzing, and estimating tasks.
- Demonstrate ASE certification skills in Brakes, Suspension and Steering Systems.
- Demonstrate basic skills in oxyacetylene, and electric arc welding.
- Perform Wheel Alignments for both two-wheel and four-wheel application.
- Perform service work in tire changing and wheel balancing.
- Effectively communicate with others using written and oral modes.
- Work independently with minimal supervision.
- Work cooperatively and collaboratively on larger repair projects.
- Follow verbal instruction on processes and repair procedures.
- Document repair procedures and costs by using a repair order system.
- Understand the principles of electrical circuits and test equipment.
- Understand a variety of social, economic, and cultural operatives.
- Understand the principles of basic automotive electronic components.
- Select and use appropriate automotive electronic diagnostic equipment.
- Diagnose and repair fuel and emission systems.
- Diagnose and repair computerized engine controls.
- Perform major engine service including diagnostics, repair, and assembly.
- Diagnose and repair automatic transmissions.
- Diagnose and repair power trains, including manual shift transmissions.
- Be eligible for the Maine State Motor Vehicle Inspection exam.
- Understand how the laws of the Clean Air Act pertain to the profession.
- Understand heating and air-conditioning principles in vehicles.
- Be eligible for Section 609 certification of the Federal Clean Air Act in the proper use of Motor Vehicle Air Conditioning refrigerant recovery and recycling equipment.
- Understand the safety requirements for hybrid and electric vehicles.
- Understand the principles of hybrid/electric vehicle technology and advanced automotive technologies.

BUILDING CONSTRUCTION TECHNOLOGY

Certificate Program

<u>First Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆	BCT 111 Framing Systems	3	9	6
	DRR 117 Blueprint Reading for Construction Trades	2	2	3
	ENG 111 English Composition	3	0	3
	SAE 117 Occupational Safety	1	0	1
	TEC 112 Building Science I	<u>1.5</u>	<u>3</u>	<u>3</u>
		10.5	14	16
<u>Second Semester</u>				
◆	BCT 121 Interior Materials & Methods	3	9	6
	MAT 119 Applied Mathematics	4	0	4
	TEC 123 Building Science II	1.5	3	3
	Elective	<u>3</u>	<u>0</u>	<u>3</u>
		11.5	12	16
TOTAL REQUIRED		32		

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Program Outcomes

- Demonstrate the safe practice and use of construction tools along with safety precautions required on the job site.
- Perform framing of floors, walls and roof constructions; fascia, soffit and cornice constructions.
- Demonstrates a knowledge of window and door installations and applying interior trim of various types.
- Understand heat loss, venting and moisture control measures needed in today's "tightly" built houses by constructing these structures in a shop-built building.
- Understand and be able to explain to homeowners what Low-E technology means; how housewrap permeability affects building envelope performance and how to calculate appropriate attic venting.
- Demonstrate the ability to draw basic floor plans and prepare material lists and cost estimates.
- Demonstrate ability to calculate excavation depths utilizing a laser transit.
- Demonstrate good sanding, painting, staining, and clear-coating procedures on all trim and molding.
- Become familiar with typical construction materials and methods as they relate to residential and light commercial buildings.
- Read and understand plans for residential and light commercial buildings.

BUSINESS ADMINISTRATION

Associate in Applied Science Degree Program

Program Outcomes

First Semester		C	L	CR
ACC 111	Principles of Accounting I	4	0	4
◆ BUS 101	Introduction to Business	3	0	3
CIS 105	Intro. to PC Operating Systems	1	0	1
CIS 113	Intro. to Microcomputer Apps.	3	0	3
ENG 111	English Composition	3	0	3
MAT 115	Business Mathematics	3	0	3
	OR			
MAT 116	Quantitative Reasoning	3	0	3
		17	0	17
Second Semester				
ACC 121	Principles of Accounting II	4	0	4
	OR			
ACC 125	Managerial Accounting	4	0	4
◆ BUS 109	Entrepreneurship	3	0	3
CIS 108	Spreadsheet Applications	3	0	3
COM 212	Business Communications I	3	0	3
MAT 125	College Algebra	3	0	3
		16	0	16
Third Semester				
ACC 214	Federal Taxation I	3	0	3
	OR			
CIS 129	Database Applications	3	0	3
BUS 117	Business Law I	3	0	3
◆ BUS 217	E-Commerce	3	0	3
◆ BUS 229	Principles of Management	3	0	3
COM 111	Speech	3	0	3
ECO 213	Macroeconomics	3	0	3
		18	0	18
Fourth Semester				
BUS 106	Effective Customer Service	3	0	3
◆ BUS 214	Project Management	3	0	3
◆ BUS 239	Human Resources Mgmt.	3	0	3
◆ BUS 241	Principles of Marketing	3	0	3
	Humanities Elective	3	0	3
		15	0	15

TOTAL REQUIRED

66

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

CAREER STUDIES

Students pursuing the associate in applied science degree in career studies are required to complete a minimum of 60 credit hours. *These credits fall into three categories:*

Career/Vocational/Technical - 24

A total of 24 credits must be completed in a career track. Up to 20 credit hours may be awarded toward this requirement for related experiential knowledge within an occupational track at the College. [Students applying for experiential credits must provide a detailed portfolio to the college's academic dean for review and possible awarding of credit; students applying for portfolio credits must notify the admissions office at the time of application.]

General Education - 21

A student must have a minimum of 12 credit hours in Communications, Social Sciences, Humanities and Fine Arts plus a minimum of 8 credit hours in Math/Sciences

Electives - 15

A student may take any other courses from within the college to meet the total 60 credit hour requirement, except for developmental courses (courses numbered 099 or lower).

COMMUNITY PARAMEDICINE

Associate in Science Degree Program

<u>First Semester</u>		C	L	CL	CR
◆ ALH 124	Health & Safety Compliance	1	0	0	1
◆ BIO 201	Anatomy & Physiology I	3	2	0	4
◆◆EMS 243	Community Paramedicine	7	3	0	8
◆ NUT 101	Intro. to Nutrition	3	0	0	3
		14	5	0	16
<u>Second Semester</u>					
◆ BIO 211	Anatomy & Physiology II	3	2	0	4
◆◆EMS 245	CP Clinical	0	0	9	3
ENG 111	English Composition	3	0	0	3
MAT 116	Quantitative Reasoning	3	0	0	3
OR					
MAT 125	College Algebra	3	0	0	3
		9	2	9	13
<u>Third Semester</u>					
◆◆EMS 247	Community Paramedicine Seminar	1	0	0	1
PSY 101	General Psychology	3	0	0	3
	Communications Elective	3	0	0	3
	General Electives	*	*	*	10
		6	0	0	17
<u>Fourth Semester</u>					
◆◆EMS 246	Leadership in EMS	2	0	0	2
SOC 111	Sociology	3	0	0	3
	Humanities	*	*	*	3
	Diversity/Ethical Reasoning	*	*	*	3
	General Elective	0	0	0	3
		5	0	0	14

TOTAL REQUIRED **60**

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

◆◆ *Community Paramedicine Major Courses; require a minimum grade of '77' or (C+)*

Advanced Certificate Program

<u>Career/Vocational</u>		C	L	CL	CR
◆ ALH 124	Health & Safety Compliance	1	0	0	1
◆◆EMS 243	Community Paramedicine	7	3	0	8
◆◆EMS 245	CP Clinical	0	0	9	3
◆◆EMS 246	Leadership in EMS	2	0	0	2
◆◆EMS 247	Community Paramedic Seminar	0	3	0	1
		10	6	9	15
TOTAL REQUIRED					15

Note: The Advanced Certificate program is only available for those who already possess, at minimum, an associate degree.

Program Outcomes

- Describe the role of the community paramedic within the healthcare system.
- Prioritize healthcare needs based on disparate populations within the community.
- Promote positive health behaviors in high risk populations.
- Collaborate with healthcare team members to assist in the management of chronic disease through the reduction of social, behavioral, environmental and economic risk factors.
- Provide comprehensive, culturally competent care to individuals and groups.
- Integrate health literacy and evidenced based research application when caring for clients.
- Provide safe and effective care to diverse populations.
- Exhibit the understanding of the leadership role the community paramedic will assume in the EMS system.

COMPUTER NUMERICAL CONTROL

Certificate Program

Program Outcomes

First Semester

		C	L	CR
◆ DRT 108	Mechanical Print Reading & Drafting	1	2	2
	MAT 119 Applied Mathematics	4	0	4
◆ PMT 111	CNC Mill & Lathe Operations	1	9	4
◆ PMT 112	CNC Mill Programing	2	0	2
◆ PMT 114	CNC Lathe Programing	2	0	2
◆ PMT 116	CNC Mill Setup	1	3	2
◆ PMT 118	CNC Lathe Setup	1	3	2
		12	17	18

Second Semester

	ENG 111 English Composition	3	0	3
◆ PMT 119	Inspection	1	3	2
◆ PMT 121	CNC Mill & Lathe Programing, Setup, and Operations	1	9	4
◆ PMT 124	Basic CAM for Milling	1	3	2
◆ PMT 126	Basic CAM for Turning	1	3	2
◆ PMT 215	Auxiliary Devices for CNC Mills	1	6	3
◆ PMT 217	Auxiliary Devices for CNC Lathe	1	3	2
		9	27	18

TOTAL REQUIRED

36

- Demonstrate knowledge of operating CNC machining centers.
- Demonstrate knowledge of making mechanical and/or program adjustments to ensure machine components meet quality requirements.
- Demonstrate knowledge of operating CNC turning centers.
- Demonstrate knowledge of programming CNC machining centers.
- Demonstrate knowledge of programming CNC turning centers.
- Demonstrate knowledge of setting up CNC machining centers.
- Demonstrate knowledge of setting up CNC turning centers.
- Demonstrate knowledge of following OSHA safety rules and working safely in a machine shop/manufacturing setting.
- Demonstrate knowledge of prints, sketches, drawings, manuals, specifications, or sample part to determine dimensions and tolerances of finished work piece, sequence of operations, and setup requirements.
- Demonstrate knowledge of identifying and replacing any broken or worn tools and make tool offsets.
- Demonstrate knowledge of precision measurement and inspection.
- Demonstrate knowledge of mechanical prints and the creation of parts using computer drafting/modeling software.

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

DIESEL HYDRAULICS TECHNOLOGY

Associate in Applied Science Degree Program

Certificate Program

<u>First Semester</u>		C	L	CR
♦ AUT 115	Automotive Electricity	2	2	3
COL 103	College Success	1	0	1
♦ DIM 112	Intro to Diesel Hydraulics	3*	9*	3
♦ DIM 114	Engine Diagnosis/Tune-up	3*	9*	3
ENG 111	English Composition	3	0	3
SAE 121	Industrial Safety	3	0	3
		<u>12</u>	<u>11</u>	<u>16</u>

<u>Second Semester</u>		C	L	CR
♦ AUT 125	Automotive Electronics	2	2	3
♦ DIM 122	Heavy Equipment/ Electrical Systems	3*	9*	3
♦ DIM 123	Brake Systems	3*	9*	1.5
♦ DIM 125	Suspension/Steering Sys.	3*	9*	1.5
MAT 119	Applied Mathematics	4	0	4
WEI 101	Intro. to Welding	2	2	3
		<u>11</u>	<u>13</u>	<u>16</u>

<u>Third Semester</u>		C	L	CR
♦ AUT 229	Auto Heating and AC	2	2	3
♦ DIM 211	Hydraulics Technology	3*	9*	3
♦ DIM 213	Diesel Engine Rebuilding	3*	9*	3
PHY 150	Physics	3	2	4
WEI 133	Electric Welding	2	2	3
	Social Science Elective	3	0	3
		<u>13</u>	<u>15</u>	<u>19</u>

<u>Fourth Semester</u>		C	L	CR
AUT 216	Motor Vehicle Inspection	2	0	2
♦ DIM 221	Drive Train Systems	3*	9*	3
♦ DIM 222	Air Conditioning Systems/ Transport Refrigerations	3*	9*	3
COM 221	Technical Communications	3	0	3
	Humanities Elective	3	0	3
	Elective	3	0	3
		<u>14</u>	<u>9</u>	<u>17</u>
TOTAL REQUIRED		68		

♦ *Major courses; a minimum grade of "C" or 2.0 required.*

<u>First Semester</u>		C	L	CR
♦ AUT 115	Automotive Electricity	2	2	3
♦ DIM 112	Intro to Diesel Hydraulics	3*	9*	3
♦ DIM 114	Engine Diagnosis/Tune-up	3*	9*	3
ENG 111	English Composition	3	0	3
SAE 121	Industrial Safety	3	0	3
		<u>11</u>	<u>11</u>	<u>15</u>

<u>Second Semester</u>		C	L	CR
♦ AUT 125	Automotive Electronics	2	2	3
♦ DIM 122	Heavy Equipment/ Electrical Systems	3*	9*	3
♦ DIM 123	Brake Systems	3*	9*	1.5
♦ DIM 125	Suspension/Steering Sys.	3*	9*	1.5
MAT 119	Applied Mathematics	4	0	4
WEI 101	Intro. to Welding	2	2	3
		<u>11</u>	<u>13</u>	<u>16</u>

TOTAL REQUIRED **31**

♦ *Major courses; a minimum grade of "C" or 2.0 required.*

Note: DIM courses within a semester are scheduled sequentially, not concurrently.

Program Outcomes

- Maintain a safe work environment.
- Complete electronic work orders/record keeping functions.
- Perform preventive maintenance inspections.
- Inspect and adjust air brake systems.
- Test diesel fuel systems by pressure test and electronically.
- Service and repair diesel cylinder heads.
- Perform a complete overhead valve/injector adjustment.
- Troubleshoot and repair starting/charging systems.
- Perform diesel engine electronic diagnostic tests.
- Maintain diesel engine EGR systems.
- Maintain truck air systems.
- Troubleshoot repair ABS systems.
- Remove and/or replace truck clutch and adjust.
- Remove and/or install differential inspection repairs as needed.
- Maintain hydraulic systems, test and adjust as needed.
- Perform engine rebuilding operations.
- Perform steering axle alignment.
- Understand the principles of electrical circuits and test equipment.
- Understand heating and air-conditioning principles in vehicles.
- Be eligible for the Maine State Motor Vehicle Inspection exam.
- Be eligible for ASE Student Certification in Medium-Heavy Truck categories.

EARLY CHILDHOOD EDUCATION

Associate in Applied Science Degree Program

<u>First Semester</u>		C	L	CR
◆ ECE 101	Healthy Learning Environments	3	0	3
◆ ECE 105	Advancing Intellectual & Social Development in the Young Child	3	0	3
◆ ECE 192	Field Experience in ECE I	0	9	3
PSY 101	General Psychology	3	0	3
	Math Elective	3	0	3
		12	9	15
<u>Second Semester</u>				
◆ ECE 120	Programmatic/Professional Development in the Child Care Field	3	0	3
◆ ECE 196	Field Experience in ECE II	1	9	4
◆ ECE 200	Child Growth & Development	3	0	3
◆ ECE 205	Children's Literature	3	0	3
ENG 111	English Composition	3	0	3
		13	9	16
<u>Third Semester</u>				
BIO 114	Human Biology	3	2	4
COM 111	Speech	3	0	3
◆ ECE 210	Child Guidance/Discipline	3	0	3
◆ ECE 230	Curriculum in ECE (Birth-3)	3	0	3
ENG 226	Introduction to Literature	3	0	3
		15	2	16
<u>Fourth Semester</u>				
CIS 113	Intro to Microcomputer Apps	3	0	3
◆ ECE 197	Field Experience in ECE III	1	12	5
◆ ECE 220	Education of Young Children w/ Special Needs	3	0	3
◆ ECE 235	Curriculum in ECE (Ages 3-8)	3	0	3
SOC 111	Sociology	3	0	3
		13	12	17
TOTAL REQUIRED				64

Certificate Program

<u>First Semester</u>		C	L	CR
◆ ECE 101	Healthy Learning Environments	3	0	3
◆ ECE 105	Advancing Intellectual & Social Development in the Young Child	3	0	3
◆ ECE 192	Field Experience in ECE I	0	9	3
PSY 101	General Psychology	3	0	3
	OR			
SOC 111	Sociology	3	0	3
	Math Elective	3	0	3
		12	9	15
<u>Second Semester</u>				
CIS 113	Intro. to Microcomputer Apps.	3	0	3
◆ ECE 120	Programmatic/Professional Development in the Child Care Field	3	0	3
◆ ECE 196	Field Experience in ECE II	1	9	4
ENG 111	English Composition	3	0	3
		10	9	13

Summer Semester

◆ ECE 197 Field Experience in ECE III 1 12 5

TOTAL REQUIRED 33

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Program Outcomes

- Students will use their understanding of young children's characteristics and needs, and of multiple interacting influences on children's development and learning, to create environments that are healthy, respectful, supportive, and challenging for all children.
- Students will know about, understand, and value the importance and complex characteristics of children's families and communities; will use this understanding to create respectful, reciprocal relationships that support and empower families and to involve all families in their children's development and learning.
- Students will know about and understand the goals, benefits and uses of assessment, and will understand and use systematic observations, documentation, and other effective assessment strategies in a responsible way, in partnership with families and other professionals, to positively influence children's development.
- Students will know, understand, and use positive relationships and supportive interactions as the foundations for their work with young children.
- Students will identify and conduct themselves as members of the early childhood profession; they will know and use ethical guidelines and other professional standards related to early childhood practices; they will be continuous, collaborative learners who demonstrate knowledgeable, reflective and critical perspectives on their work, make informed decisions that integrate knowledge from a variety of sources; and they will be informed advocates for sound educational practices and policies.
- Students will know, understand, and use a wide array of effective approaches, strategies, and tools to positively influence children's development and learning.
- Students will understand the importance of each content area in young children's learning; they will know the essential concepts, inquiry tools, and structure of content areas, including academic subjects, and will be able to identify resources to deepen their understanding.
- Students will use their own knowledge and other resources to design, implement, and evaluate meaningful, challenging curriculum that promotes comprehensive developmental and learning outcomes for all young children.
- Students will integrate their understanding of and relationship with children and families; their understanding of developmentally effective approaches to teaching and learning; and their knowledge of academic disciplines to design, implement, and evaluate experiences that promote positive development and learning for all young children.

ELECTRICAL CONSTRUCTION & MAINTENANCE

Associate in Applied Science Degree Program

<u>First Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
COL 103	College Success	1	0	1
◆ ELE 112	Basic Residential Wiring	2	2	3
◆ ELS 117	Basic Electricity	2	4	4
ENG 111	English Composition	3	0	3
MAT 118	Electrical Math	4	0	4
		<u>12</u>	<u>6</u>	<u>15</u>
<u>Second Semester</u>				
DIB 113	Intro. to Digital Systems	2	2	3
DRR 117	Blueprint Reading for Construction Trades	2	2	3
◆ ELS 124	Industrial Electronics	2	3	3
◆ ELS 125	Motors & Controls	2	3	3
	Social Science Elective	3	0	3
		<u>11</u>	<u>10</u>	<u>15</u>
<u>Third Semester</u>				
EET 221	Control Systems & PLCs	2	3	3
◆ ELC 110	National Electrical Code	3	0	3
◆ ELE 210	Electrical Construction & Maintenance I	3	0	3
◆ ELE 212	Electrical Construction & Maintenance I Lab	0	9	3
PHY 150	Physics	3	2	4
		<u>11</u>	<u>14</u>	<u>16</u>
<u>Fourth Semester</u>				
COM 221	Technical Communications	3	0	3
◆ ELC 116	National Electrical Code for Industry	3	0	3
◆ ELE 222	Electrical Construction & Maintenance II	3	0	3
◆ ELE 223	Electrical Construction & Maintenance II Lab	0	9	3
	Humanities Elective	3	0	3
	Elective	3	0	3
		<u>15</u>	<u>9</u>	<u>18</u>
TOTAL REQUIRED				64

Certificate Program

<u>First Semester</u>		<u>C</u>	<u>L</u>	<u>CR</u>
◆ ELC 110	National Electrical Code	3	0	3
◆ ELE 112	Basic Residential Wiring	2	2	3
◆ ELS 117	Basic Electricity	2	4	4
MAT 118	Electrical Math	4	0	4
		<u>11</u>	<u>6</u>	<u>14</u>
<u>Second Semester</u>				
DRR 117	Blueprint Reading for Construction Trades	2	2	3
◆ ELC 116	National Electrical Code for Industry	3	0	3
◆ ELS 124	Industrial Electronics	2	3	3
◆ ELS 125	Motors & Controls	2	3	3
ENG 111	English Composition	3	0	3
		<u>12</u>	<u>8</u>	<u>15</u>
TOTAL REQUIRED				29

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Program Outcomes

- Understand the behavior and principles that govern AC and DC electrical circuits.
- Properly select and use diagnostic equipment.
- Troubleshoot electrical circuits and equipment using available information.
- Read and comprehend electrical blueprints in relation to building construction.
- Understand the general hazards associated with the installation and operation of electrical equipment and wiring systems and identify appropriate PPE.
- Plan and install residential circuits as required by the National Electrical Code.
- Understand electrical motors, including DC, single-phase, and three-phase.
- Read and draw ladder diagrams for motor controls.
- Install motor starters, pushbutton station controls, relays, and overload protection.
- Select circuit conductor sizes and properly select over current protection.
- Understand the mathematical relationships that govern electrical circuits.
- Use algebraic and trigonometric formulas to predict and analyze electrical circuits.
- Properly size a residential service entrance per the National Electrical Code.
- Demonstrate safe and proper use of typical tools for the electrical trade.
- Read, interpret, and explain requirements in the National Electrical Code.
- Effectively communicate with others using written and oral modes.
- Interpret and apply safety measures as they pertain to OSHA standards.
- Understand digital logic systems and numbering systems.
- Select and apply motors and their associated controls.
- Install and program a programmable logic controller.
- Write technical reports and interpret technical manuals.
- Understand the natural laws of physics as they pertain to the trade.
- Properly identify and use commercial and industrial tools of the trade.
- Plan and install conduit and cable systems for commercial installations.
- Plan and install lighting systems appropriate for the application.
- Understand, calculate, and predict the use of electrical energy.
- Understand the cost of electrical energy and identify alternative methods.
- Demonstrate a basic understanding of introductory scientific and environmental concepts by applying alternative energy solutions, focusing on solar photovoltaic systems.
- Analyze and solve photovoltaic installation and design challenges.
- Remain current on advanced concepts in solar photovoltaic installation, troubleshooting, net metering laws, local codes, and National Electrical Code (NEC) PV requirements.
- Qualified to take the North America Board of Certified Energy Practitioners (NABCEP) Photovoltaic Installer Entry Level exam.

EMERGENCY MEDICAL SERVICES

Associate in Applied Science Degree Program

Program Outcomes

Pre-requisite: EMT Basic Certificate

<u>First Semester - Fall</u>		C	L	F	CL	CR
◆	BIO 201 Anatomy & Physiology I	3	2	0	0	4
◆◆	EMS 112 Respiratory Emergencies	1.5	1.5	0	0	2
◆◆	EMS 113 Cardiology I	2	0	0	0	2
◆◆	EMS 114 AEMT Lab	0	3	0	0	1
◆◆	EMS 115 Fund. of EMS Systems	2.5	1.5	0	0	3
	ENG 111 English Composition	3	0	0	0	3
		12	8	0	0	15

Pre-requisite: EMT Basic Certificate/License

<u>Second Semester - Spring</u>		C	L	F	CL	CR
◆	ALH 124 Health & Safety Comp.	1	0	0	0	1
◆	BIO 211 Anatomy/Physiology II	3	2	0	0	4
◆◆	EMS 122 AEMT Clinical Extern. I	0	0	0	6	2
◆◆	EMS 126 AEMT Clinical Extern. II	0	0	6	0	2
◆◆	EMS 130 AEMT- Skills Seminar	0	3	0	0	1
	MAT 116 Quantitative Reasoning	3	0	0	0	3
	OR					
	MAT 125 College Algebra	3	0	0	0	3
		7	5	6	6	13

Third Semester - Summer

◆◆	EMS 213 Adv. Emergency Cardio. Care (ACLS)	3	3	0	0	4
◆◆	EMS 214 Emergency Pharmacology	2.5	.5	0	0	3
	PSY 101 General Psychology	3	0	0	0	3
	Communications Elective	3	0	0	0	3
		11.5	3.5	0	0	13

Pre-requisite: Emergency Medical Technician (EMT) AEMT Level Licensure

<u>Fourth Semester - Fall</u>		C	L	F	CL	CR
◆◆	EMS 205 Medical Emergencies (AMLS)	3	0	0	0	3
◆◆	EMS 216 Paramedic Clinical Externship I	0	0	0	15	5
◆◆	EMS 220 Pediatric Emergencies (PALS/NRP)	1.5	1.5	0	0	2
◆◆	EMS 222 Trauma Management (PHTLS)	1.5	2.5	0	0	3
◆◆	EMS 236 Paramedic Assmt. Mgt.	0	3	0	0	1
		6	7	0	15	14

Fifth Semester - Spring

◆◆	EMS 226 Paramedic Clinical Externship II	0	0	12	0	4
◆◆	EMS 229 EMT-Paramedic Skills	0	3	0	0	1
◆◆	EMS 231 Special Populations	1	0	0	0	1
◆◆	EMS 232 The Paramedic Clinical Capstone	0	0	0	45	1
◆◆	EMS 233 EMS Operations	0	3	0	0	1
	SOC 111 Sociology	3	0	0	0	3
	Humanities Elective	3	0	0	0	3
		7	6	12	45	14

TOTAL REQUIRED **69**

- ◆ *Major courses; a minimum grade of "C" or 2.0 required.*
- ◆◆ *Major (EMS) courses a minimum grade of "C" (73) or 2.0 required.*

- Integrate knowledge and skills in providing high quality, safe emergency care to individuals and groups throughout the lifespan experiencing complex health needs.
- Demonstrate critical thinking and decision making skills through the organization of safe, competent care for individuals experiencing life threatening emergencies.
- Utilize effective written, verbal and nonverbal communication skills in caring for patients and families in a variety of healthcare situations and settings.
- Delegate appropriately and work collaboratively with members of the healthcare team.
- Assume professional and legal responsibility and accountability within defined competency roles in managing and directing care to individuals or groups across the healthcare continuum.
- Provide culturally competent care for patients and groups of various ethnic, socio-economic, and cultural backgrounds.

Note: The NMCC curriculum integrates the U.S. Department of Transportation EMS education standards and the Committee on Accreditation of Educational Programs for the Emergency Medical Services (CoAEMSP) guidelines. The EMS program outcomes are dependent and mirror the dozens of outcomes identified by those organizations. Additionally, each of the EMS certificate programs, though capable of standing independently, build upon one another, culminating in the eventual attainment of the Associate Degree credential. For this reason, some of the outcomes identified are similar for all 3 credentials. However, the complexity and depth of the content learned increases based on length of program and scope of practice.

To be eligible for national AEMT and/or Paramedic certification, a cumulative average grade of '80', (B-) in all major EMS courses is required.

C - class hours
L - lab hours
F - field experience
CL - clinical
CR - credits

EMERGENCY MEDICAL SERVICES

Advanced Emergency Medical Technician (AEMT) Certificate Program

Pre-requisite: Active EMT Certificate or equivalent licensure.

<u>First Semester - Fall</u>		C	L	F	CL	CR
◆ ALH 124	Health & Safety Comp.	1	0	0	0	1
◆◆EMS 112	Respiratory Emergencies	1.5	1.5	0	0	2
◆◆EMS 113	Cardiology I	2	0	0	0	2
◆◆EMS 114	AEMT Lab	0	3	0	0	1
◆◆EMS 115	Fund. of EMS Systems	2.5	1.5	0	0	3
ENG 111	English Composition	3	0	0	0	3
		10	6	0	0	12

Pre-requisite: Active EMT Certificate or equivalent licensure.

<u>Second Semester - Spring</u>		C	L	F	CL	CR
◆◆EMS 122	AEMT Clinical Extern. I	0	0	0	6	2
◆◆EMS 126	AEMT Clinical Extern. II	0	0	6	0	2
◆◆EMS 130	AEMT Skills Seminar	0	3	0	0	1
MAT 116	Quantitative Reasoning	3	0	0	0	3
OR						
MAT 125	College Algebra	3	0	0	0	3
		3	3	6	6	8

TOTAL REQUIRED **20**

Program Outcomes

- Integrate knowledge and skills in providing high quality, safe emergency care to individuals and groups throughout the lifespan experiencing complex health needs.
- Demonstrate critical thinking and decision making skills through the organization of safe, competent care for individuals experiencing life threatening emergencies.
- Utilize effective written, verbal and nonverbal communication skills in caring for patients in the pre-hospital setting.
- Work collaboratively with members of the healthcare team.
- Assume professional and legal responsibility and accountability within defined competency roles in implementing care to individuals in the pre-hospital setting.
- Provide culturally competent care for patients and groups of various ethnic, socio-economic, and cultural backgrounds.

PARAMEDICINE Certificate Program

*Pre-requisite: AEMT Certificate or equivalent**

Pre-requisite: ENG 111 and MAT 125

<u>First Semester - Summer</u>		C	L	F	CL	CR
◆ BIO 201	Anatomy & Physiology I	3	2	0	0	4
◆◆EMS 213	Adv. Emergency Cardio. Care (ACLS)	3	3	0	0	4
◆◆EMS 214	Emergency Pharm.	2.5	.5	0	0	3
		8.5	5.5	0	0	11

<u>Second Semester - Fall</u>		C	L	F	CL	CR
◆ BIO 211	Anatomy/Physiology II	3	2	0	0	4
◆◆EMS 205	Medical Emergencies (AMLS)	3	0	0	0	3
◆◆EMS 216	Paramedic Clinical Externship I	0	0	0	15	5
◆◆EMS 220	Pediatric Emergencies (PALS/NRP)	1.5	1.5	0	0	2
◆◆EMS 222	Trauma Management (PHTLS)	1.5	2.5	0	0	3
◆◆EMS 236	Paramedic Assmt. Mgt.	0	3	0	0	1
		9	9	0	15	18

<u>Third Semester - Spring</u>		C	L	F	CL	CR
◆◆EMS 226	Paramedic Clinical Externship II	0	0	12	0	4
◆◆EMS 229	EMT-Paramedic Skills	0	3	0	0	1
◆◆EMS 231	Special Populations 1	0	0	0	1	
◆◆EMS 232	The Paramedic Clinical Capstone	0	0	0	45	1
◆◆EMS 233	EMS Operations	0	3	0	0	1
		1	6	12	45	8

TOTAL REQUIRED **37**

◆ Major courses; a minimum grade of "C" or 2.0 required.

◆◆ Major (EMS) courses a minimum grade of "C" (73) or 2.0 required.

Program Outcomes

- Integrate knowledge and skills in providing high quality, safe emergency care to individuals and groups throughout the lifespan experiencing complex health needs.
- Demonstrate critical thinking and decision making skills through the organization of safe, competent care for individuals experiencing life threatening emergencies.
- Utilize effective written, verbal and nonverbal communication skills in caring for patients and families in a variety of healthcare situations and settings.
- Delegate appropriately and work collaboratively with members of the healthcare team.
- Assume professional and legal responsibility and accountability within defined competency roles in implementing care to individuals in the pre-hospital setting.
- Provide culturally competent care for patients and groups of various ethnic, socio-economic, and cultural backgrounds.

To be eligible for national AEMT and/or Paramedic certification, a cumulative average grade of '80', (B-) in all major EMS courses is required.

C - class hours
L - lab hours
F - field experience
CL - clinical
CR - credits

ENTREPRENEURSHIP

Certificate Program

Program Outcomes

<u>First Semester</u>	C	L	CR
ACC 110 College Accounting	3	0	3
<i>OR</i>			
ACC 111 Principles of Accounting I	4	0	4
◆ BUS 101 Intro. to Business	3	0	3
CIS 105 Intro. to PC Operating Systems	1	0	1
◆ CIS 113 Intro. to Microcomputer Apps.	3	0	3
ENG 111 English Composition	3	0	3
MAT 115 Business Math	3	0	3
<i>OR</i>			
MAT 116 Quantitative Reasoning	<u>3</u>	<u>0</u>	<u>3</u>
	16/17	0	16/17
<u>Second Semester</u>			
◆ ACC 112 Computerized Accounting	3	0	3
ACC 113 Payroll Accounting	3	0	3
◆ BUS 109 Entrepreneurship	3	0	3
◆ BUS 241 Principles of Marketing	3	0	3
CIS 108 Spreadsheet Apps.	<u>3</u>	<u>0</u>	<u>3</u>
	15	0	15
 TOTAL REQUIRED			31

- Calculate, compile and analyze financial records to make practical business decisions.
- Develop knowledge of general business concepts necessary for the development of an effective business plan.
- Develop critical thinking skills to identify and evaluate entrepreneurial opportunities.
- Distinguish among the various forms of business ownership and various ways of getting a business started.
- Develop an understanding of the concept of risk and how its' effect on new ventures can be reduced or minimized.
- Demonstrate the capacity to identify and acquire the resources needed for the creation and implementation of a new venture.
- Understand the process that enables entrepreneurs with limited resources to transform a simple idea into a sustainable success.
- Apply effective written and oral communication skills to business situations.
- Select and integrate appropriate current and emerging technologies to support business functions.
- Utilize computer skills consisting of the Internet and the most common business software applications.

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

LIBERAL STUDIES

Associate in Arts Degree Program

Program Outcomes

First Semester	CR
*COL 103 College Success	1
◆ENG 111 English Composition	3
◆Social Science Elective	3
◆Humanities Elective	3
◆Diversity Elective (PHI 206 or HIS 206)	3
Total Credits	12-13
Second Semester	CR
◆Humanities- ENG 226 Intro to Literature	3
◆Creative Arts Elective (Art 101, 201, or ENG 239)	3
◆Social Science	3
◆MAT 116 Quantitative Reasoning or higher Elective	3
Total Credits	15
Third Semester	CR
◆Writing Elective (Recommend: ENG 227)	3
◆Science Elective Elective	4
	<u>9-10</u>
Total Credits	16-17
Fourth Semester	CR
◆Ethical Reasoning Elective (Recommend: PHI 201)	3
Elective	<u>13</u>
Total Credits	16
MINIMUM TOTAL REQUIRED	60

- Students will be able to communicate effectively, both orally and in writing.
- Students will be able to search for, access, evaluate information from a variety of sources and use that information ethically and legally for research and personal purposes.
- Students will understand mathematical concepts and be able to perform mathematical operations to solve practical problems.
- Students will demonstrate the ability to be consumers of biological and other scientific information to better inform their daily lives.
- Students will be able to analyze or explain causal forces which shape social structures, institutions, or behavior through time.
- Students will be able to read, analyze, and interpret significant texts in order to make meaning, find purpose, and choose values that enhance our understanding of ourselves and govern our relationships with others
- Students will develop knowledge and appreciation of the aesthetic dimensions of humankind.
- Students will demonstrate knowledge of cultural differences.
- Students will develop an understanding of ethical theories and develop a logical system of values and morality and be able to apply those values and principles to moral problems.
- Students will develop the basic academic skills and traits necessary to complete a college degree.

For a listing of courses that are included in each category: social science; natural science; and humanities; see the listing on page 52 of this catalog.

If you are planning to transfer to a University of Maine System institution, after completing your associate degree in liberal studies, speak to your advisor regarding the UMS-MCCS Block Transfer Agreement.

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Students are advised to select courses that provide a depth of knowledge when fulfilling the various program requirements. Pre-requisites must be considered in order to assure access to appropriate upper level courses. Students wishing to continue their education in a baccalaureate program should work with their academic advisor to select courses that ensure optimum transfer of credits.

A minimum of 21 credits must be completed at the 200 level.

University of Maine System General Education Core requirements in bold.

MEDICAL ASSISTING

Associate in Applied Science Degree Program

Program Outcomes

<u>First Semester</u>			<u>C</u>	<u>L</u>	<u>CR</u>
◆ ALH 124	Health & Safety Compliance		1	0	1
ALH 220	Medical Terminology		3	0	3
◆ BIO 201	Anatomy & Physiology I		3	2	4
CIS 105	Intro. to PC Operating Systems		1	0	1
CIS 113	Intro. to Micro. Applications		3	0	3
ENG 111	English Composition		3	0	3
◆ MDA 110	Medical Assisting Office Procedures		3	0	3
			17	2	18
<u>Second Semester</u>					
◆ BIO 211	Anatomy & Physiology II		3	2	4
◆ HIT 111	Medical Law & Ethics		3	0	3
◆ HIT 115	Clinical App. Pathophysiology & Pharmacology		3	0	3
◆ MDA 111	Medical Assisting Procedures with Lab I		2	2	4
◆ MDA 124	Medical Insurance Procedure		3	0	3
			14	4	17
<u>Third Semester</u>					
MAT 116	Quantitative Reasoning OR		3	0	3
MAT 125	College Algebra		3	0	3
◆ MDA 211	Medical Assisting		2	2	4
◆ MDA 212	Medical Coding		3	0	3
◆ MDA 224	Electronic Health Records		3	0	3
PSY 101	General Psychology		3	0	3
			14	2	16
<u>Fourth Semester</u>					
◆ MDA 223	Medical Assisting Externship		1	12	5
PSY 207	Developmental Psychology		3	0	3
	Communications Elective		3	0	3
	Humanities Elective		3	0	3
			10	12	14

TOTAL REQUIRED **65**

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of Medical Assisting Education Review Board.

- Demonstrate an understanding of anatomical structure and normal physiological functions in the human body and of medical terms descriptive of body systems.
- Demonstrate a basic understanding of the concepts and applications of pharmacology to include safe medication administration.
- Demonstrate effective communication with patients, their families, and other members of the health care team.
- Integrate principles of safety, sterilization and disinfecting in all aspects of patient/office procedures.
- Demonstrate administrative competency, to include but not limited to, scheduling, bookkeeping procedures, records management, coding and insurance processing.
- Demonstrate clinical competency, to include but not limited to, specimen collection, processing and analysis, obtaining vital signs, preparing patients for exams or treatments, assisting in procedures, and patient education.
- Demonstrate professional behavior that reflects an internalization of ethical, legal and self management concepts.
- Demonstrate critical thinking skills through organization of safe, competent care provided for individuals.

MEDICAL CODING

Certificate Program

Program Outcomes

<u>First Semester</u>			<u>C</u>	<u>L</u>	<u>CR</u>
◆ ALH 220	Medical Terminology		3	0	3
◆ BIO 201	Anatomy & Physiology I		3	2	4
CIS 113	Intro. to Microcomputer Apps.		3	0	3
ENG 111	English Composition		3	0	3
◆ HIT 113	Clinical Classification Systems I		<u>3</u>	<u>0</u>	<u>3</u>
			15	2	16
<u>Second Semester</u>					
◆ BIO 211	Anatomy & Physiology II		3	2	4
◆ HIT 111	Medical Law & Ethics		3	0	3
◆ HIT 115	Clinical App. Pathophysiology & Pharmacology		3	0	3
◆ HIT 213	Clinical Classification Systems II		3	0	3
MAT 116	Quantitative Reasoning		<u>3</u>	<u>0</u>	<u>3</u>
			15	2	16
TOTAL REQUIRED					32

- Demonstrate the ability to translate information from the medical record into standardized numerical codes accurately and in an efficient manner.
- Demonstrate professional behavior in the work place including patient confidentiality and professional ethics.
- Recognize factors that affect third-party reimbursement.
- Demonstrate entry level skills in coding with ICD-10-CM/PCS and CPT.
- Describe the relationship between coding and reimbursement in healthcare.
- Demonstrate clear and effective communication skills, critical thinking, and problem solving within their scope of practice.
- Demonstrate theory, technology, and interpersonal skills that may be applied to a variety of employment settings.
- Describe the principles and mechanics of the electronic health record (EHR).
- Transfer to an advanced degree in such areas as Health Information Management, if desired.

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

NETWORK ADMINISTRATION & CYBERSECURITY

Associate in Applied Science Degree Program

<u>First Semester</u>		C	L	CR
◆ COE 113	Operating Systems	2	2	3
◆ COE 116	A+ Cert. Prep	3	0	3
◆ COE 118	A+ Cert. Prep Lab	0	9	3
COL 103	College Success	1	0	1
ENG 111	English Composition	3	0	3
MAT 115	Business Math	3	0	3
	OR			
MAT 116	Quantitative Reasoning	3	0	3
		12	11	16

Second Semester

◆ COE 125	Comp. Network Hardware	2	2	3
◆ COE 128	Adv Operating Systems	2	2	3
◆ COE 217	Installing & Conf. Servers	2	4	4
COM 212	Business Communications	3	0	3
MAT 125	College Algebra	3	0	3
		12	8	16

Third Semester

COE 112	Intro to Linux	2	2	3
◆ COE 218	Network Administration	2	4	4
◆ COE 219	Electronics for Comp. Techs	2	3	3
◆ COE 228	Security+ Certification	2	2	3
ECO 213	Macroeconomics	3	0	3
		11	11	16

Fourth Semester

◆ COE 220	Intro to Computer Forensics	2	2	3
◆ COE 227	Conf. Adv. Windows Server	2	4	4
◆ COE 229	Ethical Hacking	2	2	3
PHI 111	Everyday Ethics	3	0	3
	General Elective	3	0	3
		12	8	16

TOTAL REQUIRED **64**

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Certificate Program

<u>First Semester</u>		C	L	CR
◆ COE 113	Operating Systems	2	2	3
◆ COE 116	A+ Cert. Prep	3	0	3
◆ COE 118	A+ Cert. Prep Lab	0	9	3
ENG 111	English Composition	3	0	3
MAT 115	Business Math	3	0	3
	OR			
MAT 116	Quantitative Reasoning	3	0	3
		11	11	15

Second Semester

COE 112	Intro to Linux	2	2	3
◆ COE 125	Computer Network Hardware	2	2	3
◆ COE 128	Adv Operating Systems	2	2	3
◆ COE 217	Installing & Conf. Servers	2	4	4
COM 212	Business Communications	3	0	3
	OR			
MAT 125	College Algebra	3	0	3
		11	10	16

TOTAL REQUIRED **31**

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Program Outcomes

- Demonstrate the ability to troubleshoot, upgrade, replace basic computer components, and reassemble servers and client systems
- Demonstrate the ability to implement and build Local Area Networks using both static and dynamic addressing techniques including subnetting.
- Demonstrate the ability to install, configure, and administer Active Directory based networks.
- Understand fundamental computer forensics
- Understand computer and network security and demonstrate proper techniques to secure a network.
- Understand the tools and penetration testing methodologies used by ethical hackers
- Install and troubleshoot Computer System Hardware, Networking Hardware, client operating systems, and server operating systems
- Demonstrate safe and proper use of typical tools for computer technicians
- Properly select and use electronic diagnostic equipment
- Demonstrate the ability to use current techniques, skills, and diagnostics necessary for the field.
- Demonstrate the ability to function on teams to accomplish a common goal
- Read and comprehend electronic schematic diagrams
- Communicate effectively on technical subject matters
- Identify, formulate, and solve computer-related problems
- Effectively communicate by using the proper computer and networking terminology.

NURSING

Associate in Science Degree Program

Program Outcomes

Pre-requisites

	C	L	CR
◆ BIO 201 Anatomy & Physiology I w/ lab	3	2	4
ENG 111 English Composition	3	0	3
MAT 116 Quantitative Reasoning	3	0	3
OR			
MAT 125 College Algebra	3	0	3

First Semester

◆ ALH 124* Health & Safety Compliance	1	0	1
◆ BIO 211 Anatomy & Physiology II	3	2	4
NUR 100 Nursing Program Success	1	0	1
◆◆ NUR 117** Nutrition	3	0	3
◆◆ NUR 125 Foundation of Nursing/ Nursing Care of Adults	4	9	7
	12	11	16

Winter Session

NUR 124 Role Transition	1	0	1
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(This course is required only for LPNs entering the program in second semester)

Second Semester

◆◆ NUR 115***Pharmacology for Nurses	3	0	3
◆◆ NUR 127 Nursing Across the Life Span I	4	9	7
PSY 101 General Psychology	3	0	3
	10	9	13

Third Semester

◆ BIO 218 Microbiology Lecture & Lab	3	2	4
◆◆ NUR 226 Nursing Across the Life Span II	5	12	9
PSY 207 Developmental Psychology	3	0	3
	11	14	16

Fourth Semester

COM 111 Speech	3	0	3
◆◆ NUR 229 Nursing Across the Life Span III	5	12	9
Humanities Elective	3	0	3
	11	12	15

TOTAL REQUIRED 60/61


- ◆ *Major courses; a minimum grade of "C" (73) or 2.0 required.*
- ◆◆ *Major Nursing (NUR) courses: a minimum grade of "C+" (77) required*

*ALH 124 must be passed within 12 months of enrollment into NUR 125

**NUR 117 is a co-requisite to NUR 125

***NUR 115 is a co-requisite to NUR 127

- Evaluate holistic nursing care provided to diverse clients, families, and groups across the lifespan from a variety of settings to ensure that it is compassionate, age and culturally appropriate.
- Collaborate with the interprofessional health care team to manage and coordinate the provision of safe, quality care for clients, families and groups.
- Demonstrate effective use of strategies and client care technology to mitigate errors and reduce the risk of harm to clients, self, and others in a variety of settings.
- Incorporate integrity and accountability while providing client-centered, standard-based nursing care consistent with established regulatory, legal and ethical principles.
- Utilize leadership, management, and priority setting in the provision of safe, high quality client-centered care in a financially responsible manner.
- Demonstrate use of best current evidence, clinical expertise, and quality improvement practices when making clinical decisions in the provision of client-centered care.

 **Pre-requisites for admission to two-year Nursing program. Credit applied toward degree requirements.**

The following must be successfully completed prior to entering the program (or concurrently for students direct from high school).

BIO 201 Anatomy & Physiology I w/ Lab

ENG 111 English Composition

MAT 125 College Algebra

OR

MAT 116 Quantitative Reasoning

OFFICE ASSISTANT

Certificate Program

Program Outcomes

<u>First Semester</u>		C	L	CR
ACC 110	College Accounting <i>OR</i>	3	0	3
ACC 111	Principles of Accounting I	4	0	4
◆ BUS 101	Intro to Business	3	0	3
CIS 105	Intro to PC Operating Systems	1	0	1
◆ CIS 113	Intro to Microcomputer Apps	3	0	3
ENG 111	English Composition	3	0	3
MAT 115	Business Mathematics <i>OR</i>	3	0	3
MAT 116	Quantitative Reasoning	<u>3</u>	<u>0</u>	<u>3</u>
		16/17	0	16/17
<u>Second Semester</u>				
◆ ACC 112	Computerized Accounting	3	0	3
ACC 113	Payroll Accounting	3	0	3
CIS 108	Spreadsheet Applications	3	0	3
◆ SES 129	Office Procedures	3	0	3
	Elective	<u>3</u>	<u>0</u>	<u>3</u>
		15	0	15
TOTAL REQUIRED		31	0	31

- Professionally format documents according to current business and discipline preferences.
- Demonstrate knowledge of the accounting cycle.
- Interact effectively with others.
- Demonstrate professional conduct and interpersonal communication skills.
- Demonstrate competence in keyboarding.
- Proficiently utilize common business software.

PLUMBING & HEATING

Associate in Applied Science Degree Program

First Semester		C	L	CR
COL 103	College Success	1	0	1
ENG 111	English Composition	3	0	3
◆ PLH 101	Plumbing Technology	3	0	3
◆ PLH 109	Plumbing Lab I	0	9	3
◆ PLH 113	Pipefitting Calculations	3	0	3
SAE 117	Occupational Safety	1	0	1
		11	9	14
Second Semester				
DRR 117	Blueprint Read for Const Trades	2	2	3
MAT 119	Applied Mathematics	4	0	4
◆ PLH 122	Plumbing Code Review	3	0	3
◆ PLH 123	Plumbing Lab II	0	9	3
◆ PLH 126	Water Pumps and Treatment	1	2	2
		10	13	15
Third Semester				
PHY 150	Physics	3	2	4
◆ PLH 211	Heating I	3	9	6
◆ PLH 212	Refrigeration & Air Conditioning	1	3	2
◆ PLH 216	Propane & Natural Gas I	2	2	3
	Humanities Elective	3	0	3
		12	18	18
Fourth Semester				
COM 221	Technical Communications	3	0	3
◆ PLH 213	Solid Fuel Equipment	1	3	2
◆ PLH 219	Propane & Natural Gas II	2	2	3
◆ PLH 222	Heating II	2	9	5
◆ PLH 225	Maine Oil/Solid Fuel Code I	1	0	1
	Social Science Elective	3	0	3
		12	14	17
TOTAL REQUIRED		64		

◆ *Major courses; a minimum grade of "C" or 2.0 required*

Program Outcomes

- Communicate effectively with peers, customers, technical support staff, and supervisors, through verbal and written modes.
- Perform required mathematical calculations for the trade, including pipefitting calculations.
- Perform required work safely in accordance with federal and state regulations.
- Understand the natural physical laws that govern the plumbing and heating trades.
- Read and interpret blueprints of the plumbing and heating trades, as well as, other related trades.
- Recognize, troubleshoot, and install safe electrical wiring for the associated heating cooling controls, plumbing appliances, lighting, receptacles, and supply circuits from the electrical service panel.
- Perform pipe joining procedures for all major piping systems, including PVC, copper, iron, and plastic (PEX).
- Demonstrate the safe use of hand and power tools.
- Demonstrate correct installation and servicing of jet and submersible pumps.
- Install plumbing pipes and fixtures according to the Maine Plumbing Code.

Plumbing Certificate Program

First Semester		C	L	CR
ENG 111	English Composition	3	0	3
◆ PLH 101	Plumbing Technology	3	0	3
◆ PLH 109	Plumbing Lab I	0	9	3
◆ PLH 113	Pipefitting Calculations	3	0	3
SAE 117	Occupational Safety	1	0	1
		10	9	13
Second Semester				
DRR 117	Blueprint Read for Const Trades	2	2	3
MAT 119	Applied Mathematics	4	0	4
◆ PLH 122	Plumbing Code Review	3	0	3
◆ PLH 123	Plumbing Lab II	0	9	3
◆ PLH 126	Water Pumps and Treatment	1	2	2
		10	13	15
TOTAL REQUIRED		28		

Heating Certificate Program

First Semester		C	L	CR
ENG 111	English Composition	3	0	3
◆ PLH 211	Heating I	3	9	6
◆ PLH 212	Refrigeration & Air Conditioning	1	3	2
◆ PLH 216	Propane & Natural Gas I	2	2	3
		9	14	14
Second Semester				
MAT 119	Applied Mathematics	4	0	4
◆ PLH 213	Solid Fuel Equipment	1	3	2
◆ PLH 219	Propane & Natural Gas II	2	2	3
◆ PLH 222	Heating II	2	9	5
◆ PLH 225	Maine Oil/Solid Fuel Code I	1	0	1
		10	14	15
TOTAL REQUIRED		29		

- Demonstrate correct and safe implementation of routine plumbing service procedures.
- Demonstrate proper threading, grooving and soldering techniques for copper and iron pipe installations.
- Demonstrate the safe/correct procedure for wiring heating appliances, such as warm air furnaces and boilers.
- Install oil or gas supply lines in a building in accordance with federal and state regulations.
- Estimate heating loads for a building.
- Design and install a warm air duct system.
- Size and install piping systems for hot water boilers according to the Maine codes.
- Install correctly, control systems for various types of heating systems.
- Understand the fundamental concepts of solar thermal technology.
- Perform routine service and troubleshooting on #1 and #2 fuel oil and gas fired heating equipment.
- Be eligible for National Propane Gas Association CETP certifications.
- Understand the fundamentals of refrigeration and air conditioning and be eligible for EPA 608 certification.
- Be eligible for Maine State Journeyman Heating License.
- Be eligible for Maine State Journeyman in Training Plumbing License-J.I.T.

PRACTICAL NURSING

Certificate Program

Program Outcomes

PREREQUISITES

	C	L	CR
◆ ALH 124* Health & Safety Compliance	1	0	1

First Semester

◆ BIO 201 Anatomy & Physiology I w/lab	3	2	4
◆ ENG 111 English Composition	3	0	3
◆ NUR 101 Fundamentals of Practical Nursing	8	0	8
◆◆NUR 104 Clinical Practicum I Adult/Geriatric	<u>0</u>	<u>9</u>	<u>3</u>
	14	11	18

Second Semester

◆ BIO 211 Anatomy & Physiology II	3	2	4
◆◆NUR 105 Pharmacology for Practical Nursing	3	0	3
◆ NUR 107 Practical Nursing Across the Lifespan	8	0	8
◆◆NUR 108 Clinical Practicum II Special Populations	<u>0</u>	<u>9</u>	<u>3</u>
	14	11	18

TOTAL REQUIRED **36**

- ◆ *Major courses; a minimum grade of "C" (73) or 2.0 required.*
- ◆◆ *Major Nursing (NUR) courses: a minimum grade of "C+" (77) required*

- Assume legal and ethical responsibility and accountability consistent with the Maine State Nurse Practice Act, Maine Board of Nursing rules and regulations, and professional standards of practice. (SLO1)
- Systematically apply the nursing process with individuals and groups across the lifespan to promote wellness, prevent illness and facilitate adaptation to stressors. (SLO2)
- Incorporate teaching/learning principles into the provision of care to individuals and groups. (SLO3)
- Implement best practice standards to achieve positive outcomes for clients across the lifespan. (SLO4)
- Incorporate quality improvement as an essential part of the nursing profession. (SLO5)
- Demonstrate professional nursing care that incorporates sensitivity and caring behaviors to culturally diverse clients and groups, including the older adult. (SLO6)
- Demonstrate safe and effective clinical judgements using critical thinking skills when providing nursing care for individuals and groups. (SLO7)
- Collaborate with health care team members, individual clients and groups to achieve optimal outcomes. (SLO8)
- Employ effective therapeutic and professional communication skills in the practice of nursing. (SLO9)
- Utilize healthcare technology and informatics to provide safe and effective nursing care. (SLO10)
- Deliver high quality client care within the changing healthcare system, using resources in a financially responsible manner. (SLO11)
- Demonstrate efficiency as manager of care through prioritization and delegation in providing optimal nursing care for individuals and groups. (SLO12)
- Develop plans for continued personal and professional growth. (SLO13)

ALH 124: Health and Safety Compliance must be successfully completed within twelve months or immediately prior to enrollment into NUR 104: Clinical Practicum I

Anatomy & Physiology and English Composition courses are offered every semester at NMCC, and may be taken prior to beginning the Practical Nursing courses when the schedule allows.

STRUCTURAL WELDING

Certificate Program

Program Outcomes

First Semester		C	L	CR
DRR 109	Print Reading for Welders	2	2	3
MAT 119	Applied Mathematics	4	0	4
◆ WEI 101	Intro. to Welding (*4 weeks)	2	2	3
◆ WEI 133	Electric Welding (*4 weeks)	2	2	3
◆ WEI 137	Structural Welding I (*7 weeks)	1.5	4.5	3
		11.5	10.5	16
Second Semester				
ENG 111	English Composition	3	0	3
SAE 121	Industrial Safety	3	0	3
◆ WEI 136	Intro GMAW and GTAW	2	2	3
◆ WEI 138	Structural Welding II (*7.5 weeks)	1.5	4.5	3
◆ WEI 139	Open Root Welding (*7.5 weeks)	1.5	4.5	3
		11	11	15
TOTAL REQUIRED				31

- Apply occupational safety and health (OSHA) standards related to the welding trade.
- Work cooperatively with others.
- Work independently with minimal supervision.
- Demonstrate safe and proper use of hand and power tools used by the welder.
- Identify the metals being used and the filler wire needed to weld them.
- Demonstrate the ability to fit and tack a v-groove weld correctly.
- Demonstrate the ability to properly weld a 3/8 v-groove in 4 positions.
- Demonstrate the ability to destructively test a 3/8 v-groove weld and meet AWS test specifications.
- Read and interpret welding symbols used on fabrication, manufacturing and construction prints.
- Demonstrate the ability to weld in all positions with all welding equipment.
- Understand how each of the major welding processes work.
- Be eligible for the American Welding Society (AWS) structural certification.

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Note: WEI courses less than 15 weeks are offered sequentially, not concurrently.

WATER TREATMENT TECHNOLOGY

Associate in Applied Science Degree Program

<u>First Semester</u>		C	L	CR
DRR 117	Blueprint Read for Const Trades	2	2	3
ENG 111	English Composition	3	0	3
◆ WTT 103	Intro to Water Treatment Tech	3	0	3
◆ WTT 111	Water Treatment I	2	2	3
◆ WTT 113	Water Plant Operation	3	0	3
		13	4	15

Second Semester

◆ CHM 201	Applied Sciences	2	2	3
MAT 119	Applied Mathematics	4	0	4
◆ WTT 201	Water Distribution Systems	2	2	3
◆ WTT 211	Water Treatment II	3	2	4
◆ WTT 120	Treatment Plant Safety	3	0	3
		14	6	17

Third Semester

◆ ELS 119	Intro to Electronic Systems	1	2	2
PHY 150	Physics	3	2	4
◆ WTT 205	Wastewater Collection Systems	2	2	3
◆ WTT 121	Wastewater Treatment I	2	2	3
	Social Science Elective	3	0	3
		11	8	15

Fourth Semester

COM 221	Technical Communications	3	0	3
◆ INS 110	Instrumentation & Process Controls	2	2	3
◆ WTT 221	Wastewater Treatment II	3	2	4
◆ WTT 124	Wastewater Plant Operation	3	0	3
	Humanities Elective	3	0	3
		14	4	16

TOTAL REQUIRED **63**

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

Drinking Water Certificate Program

<u>First Semester</u>		C	L	CR
DRR 117	Blueprint Read for Const Trades	2	2	3
ENG 111	English Composition	3	0	3
◆ WTT 103	Intro to Water Treatment Tech	3	0	3
◆ WTT 111	Water Treatment I	2	2	3
◆ WTT 113	Water Plant Operation	3	0	3
		13	4	15

Second Semester

MAT 119	Applied Mathematics	4	0	4
◆ WTT 201	Water Distribution Systems	2	2	3
◆ WTT 211	Water Treatment II	3	2	4
◆ WTT 120	Treatment Plant Safety	3	0	3
		12	4	14

TOTAL REQUIRED **29**

Wastewater Certificate Program

<u>First Semester</u>		C	L	CR
◆ ELS 119	Intro to Electronic Systems	1	2	2
ENG 111	English Composition	3	0	3
◆ WTT 103	Intro to Water Treatment Tech	3	0	3
◆ WTT 205	Wastewater Collection Systems	2	2	3
◆ WTT 121	Wastewater Treatment I	2	2	3
		11	6	14

Second Semester

◆ INS 110	Instrumentation & Process Controls	2	2	3
MAT 119	Applied Mathematics	4	0	4
◆ WTT 221	Wastewater Treatment II	3	2	4
◆ WTT 124	Wastewater Plant Operation	3	0	3
◆ WTT 120	Treatment Plant Safety	3	0	3
		15	4	17

TOTAL REQUIRED **31**

Program Outcomes

- Introduction to the water treatment regulatory authority
- Familiarity of industry definitions and acronyms.
- Competence in applied mathematics for operators.
- Competence in applied sciences for operators.
- Basic understanding of hydrology.
- Basic understanding of hydraulics.
- Works well in teams and shows versatility at various areas of study.
- Job safety training and awareness.
- Conduct various laboratory analyses.
- Fundamental knowledge of various pumps.
- Fundamental knowledge of open channel flow.
- Able to perform wastewater collection system inspections.
- Able to perform water distribution system inspections.
- Utilize computer technology and software applications for operations and reporting purposes.
- Utilize and maintain process documentation in the operation of water and wastewater systems.
- Utilize construction blueprints in the operation and maintenance of water systems.
- Utilize construction specifications in the operation and maintenance of wastewater systems.
- Understand water treatment plant administrative duties.
- Understand wastewater treatment plant administrative duties.
- Describe the various processes used within the water treatment industry.
- Describe the various processes used within the wastewater treatment industry.
- Must be able to lead a health and safety meeting.
- Understand the wastewater treatment unit processes including preliminary, primary, secondary and tertiary treatment.
- Understand the water treatment unit processes including preliminary, primary, secondary and tertiary treatment.
- Identify a specific number of legal and financial issues that influence water resource management.

WIND POWER TECHNOLOGY

Certificate Program

Program Outcomes

First Semester			C	L	CR
COL 103	College Success		1	0	1
◆ ELS 117	Basic Electricity		2	4	4
MAT 118	Electrical Math		4	0	4
◆ WPT 110	Safety Fundamentals for Wind Technicians		2	3	3
◆ WPT 114	Intro to Wind Power Industry		2	3	3
◆ WPT 119	Wind Turbine Drive Systems		2	3	3
			13	13	18
Second Semester					
◆ ELS 124	Industrial Electronics		2	3	3
ENG 111	English Composition		3	0	3
SAE 117	Occupational Safety		1	0	1
◆ WPT 213	Wind Power Control Systems		2	3	3
◆ WPT 214	Wind Power Delivery Systems		2	3	3
◆ WPT 215	Troubleshooting Auto. Systems		2	3	3
			12	12	16
TOTAL REQUIRED			34		

◆ *Major courses; a minimum grade of "C" or 2.0 required.*

- Function successfully as technicians on wind farms and/or in other energy production settings.
- Demonstrate an understanding of conceptual foundations of wind energy and the terminology used within the energy industry.
- Demonstrate an understanding of how power generation equipment functions and requirements for it to connect safely to the utility grid.
- Demonstrate an understanding of typical wind turbine construction methods and related safety considerations.
- Demonstrate good math, writing, verbal, and interpersonal skills.
- Demonstrate the skills associated with quality workmanship.
- Demonstrate understanding of electricity, electronics, mechanical systems, and fluid power systems utilized in modern wind turbines.
- Demonstrate an understanding of the National Electrical Code requirements for industrial electrical applications.
- Demonstrate an understanding of NFPA 70E, ANSI, and other industrial standards with respect to electrical safety requirements, HRC, PPE, and LOTO.
- Demonstrate an understanding of OSHA regulations as they apply to best working practices for industrial hygiene, workplace hazards, PPE, confined space, hazardous materials, working at heights, and fall protection.
- Demonstrate an understanding of troubleshooting techniques utilizing SCADA information, electrical, mechanical, fluid power schematics, technical manuals, and other available company resources.
- Demonstrate skills necessary to troubleshoot and repair electrical, electronic, mechanical, and hydraulic systems.
- Demonstrate an understanding of LAN applications, communication architectures, hardware, software, protocols, and troubleshooting skills related to SCADA system function.
- Demonstrate an understanding of communication links such as ethernet, serial, optical fiber, and wireless.
- Demonstrate a working knowledge of PC software applications used for communication activities such as email data entry, spreadsheets, word processing, and internet searches.
- Demonstrate the safe handling and proper use of hand tools, power tools, and rigging equipment.
- Demonstrate skills necessary to select and safely use diagnostic equipment.
- Demonstrate safety skills necessary when working with or around high voltage systems, high angle work sites, and tower rescue procedures.

Course Descriptions

COURSE DESCRIPTIONS

ACC 110 College Accounting **3 credits**

3 class hrs

Designed to meet the needs of students who are not accounting majors. Emphasis is on manually applying the process of the accounting cycle. Students will be required to journalize, post, adjust and close for an accounting cycle; prepare payroll and payroll tax records; and prepare financial statements. Service sole-ownership businesses are presented. Students are introduced to computerized accounting procedures after they become proficient with the manual process. *This course cannot be used for credit by accounting and business administration majors.*

ACC 111 Principles of Accounting I **4 credits**

4 class hrs

This introductory course covers fundamental principles of accounting as related to service and merchandising sole proprietorships. Emphasis is on developing technical procedures of the accounting cycle including journalizing, posting, adjusting entries, closing books and preparing financial statements. Exposes the specific areas of deferrals and accruals, inventories, payroll, receivables, payables and accounting systems. Practical application will be through the use of a computerized homework system and projects.

ACC 112 Computerized Accounting **3 credits**

3 class hrs

This course covers small business accounting using computerized accounting software. Topics include creating a chart of accounts, recording customer and vendor transactions, processing payroll, and printing reports. In addition, setting up a new company is covered, as well as advanced topics such as exporting to spreadsheet software, and using the audit trail of the computerized accounting software. Pre-requisite: ACC 110, ACC 111; or permission of instructor.

ACC 113 Payroll Accounting **3 credits**

3 class hrs

This course studies federal and state employment laws and their effects on personnel and payroll records with a full explanation of the subject matter using a building block approach to guide the student from the basic principles through the complex applications of payroll. This course is designed to give students a practical working knowledge of the current payroll laws and actual experience in applying regulations. Students are also exposed to computerized payroll procedures. Pre-requisite: ACC 110, ACC 111 or permission of instructor.

ACC 121 Principles of Accounting II **4 credits**

4 class hrs

The first part of the course continues to address topics in financial accounting that began in ACC 111. Emphasis is on the corporate form of ownership. Topics include accounting for bonds, investments in stocks and bonds, business combinations, financial statement analysis and the statement of cash flows. Students will apply concepts learned by the completion of a computerized homework system and projects.

ACC 125 Managerial Accounting **4 credits**

4 class hrs

Introduces a business-management approach to the development and use of accounting information to support managerial decision-making in both manufacturing and service organizations. Major topics include cost behavior, cost analysis, pricing, profit planning, control measures and the statement of cash flows. Cost-volume-profit relationships will be analyzed to make management decisions. Students will make use of standard costs to measure operating performance and profitability. Responsibility accounting, capital budgeting decisions and ethical challenges in managerial accounting are also covered. Pre-requisite: ACC 111

ACC 211 Intermediate Accounting I **4 credits**

4 class hrs

This is the first semester of a two-semester course designed to give the student an in-depth overview of generally accepted accounting principles and financial reporting. Topics include the foundations of financial accounting and routine activities of a business. Students will prepare comprehensive balance sheets, income statements, and the statement of cash flows. Other topics include inventory costing; accounts and notes receivables; the allowance method of accounting for bad debts; plant and equipment; investments; and other issues. Pre-requisite: ACC 121

ACC 214 Federal Taxation I **3 credits**

3 class hrs

Study of the U.S. Federal Income Tax laws to provide training in preparation of individual tax returns. Special emphasis is on recognition of taxable income, non-taxable income, personal deductions, gain or loss recognition basis, capital gains, monetary conversion, business expenses and itemized deductions. Pre-requisite: ACC 121 or ACC 125

ACC 221 Intermediate Accounting II **4 credits**

4 class hrs

Continuation of ACC 211. Additional activities of a business are covered. Emphasis is placed on special problems which may include debt and equity financing, leases, investments, income taxes and employee compensation. Other dimensions of financial reporting, such as earnings per share, accounting changes and error corrections, are also covered. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. Pre-requisite: ACC 211

ACC 225 Federal Taxation II **3 credits**

3 class hrs

A study of the current tax code as it relates to corporations, partnerships, estates and trusts, along with other selected topics related to taxation of the business entity. Also covered are estate and gift transfer taxes, with time devoted to family tax planning. Pre-requisite: ACC 214

ACC 234	Accounting Information Systems I	3 credits 3 class hrs	ALH 115	Introduction to the Healthcare Professions	3 credits 3 class hrs
<p>This course covers the functions of an accounting information system within an organization and examines topics in internal controls and system documentation. The course emphasizes a commercial software package integrated with accounting projects. These projects explore systems in banking, customers and sales, vendor purchases and inventory, payroll, budgets, reports, and graphics. Pre-requisite: ACC 111</p>			<p>Introduces students to the various roles of the healthcare provider and their professions. In addition to providing an overview of healthcare career choices, this class will present topics that will assist all students in being successful. It introduces common topics encountered by healthcare professionals including medical legal issues, medical asepsis, communication, knowledge of healthcare across the lifespan and professional behavior.</p>		
ACR 111	Non-Structural Repairs	6 credits 3 class hrs, 9 lab hrs	ALH 124	Health & Safety Compliance for Healthcare Professions	1 credit 1 class hr
<p>Covers shop safety and regulations as they pertain to the collision repair industry. Theory and hands-on experience with the removal, replacement and service of complete interior, glass (moveable and stationary), exterior trim and components are applied. Proper metalworking, straightening techniques, plastic and composite repair and pre-paint preparation are also covered.</p>			<p>In the past several years, regulatory agencies have significantly increased the life and environmental safety requirements for health care agencies. Emphasis on the increases in healthcare provider injuries, the spread of communicable diseases, and the protection of patient health information have resulted in the need for extensive orientation programs for staff and students employed or completing clinical experiences in these settings. This course is designed to meet these regulatory requirements.</p>		
ACR 121	Structural Analysis/Plastics	6 credits 3 class hrs, 9 lab hrs	ALH 220	Medical Terminology	3 credits 3 class hrs
<p>Covers intermediate body repairs with measuring systems used. Hydraulic equipment is introduced with hands-on training in structural alignment of the vehicle body. Frame measurement and repair on uni-body and full frame vehicles is covered along with proper sectioning techniques. Pre-requisite: ACR 111</p>			<p>This study introduces students to essential medical terminology analysis through knowledge of prefixes, suffixes, and root words. The study also includes vocabulary that cannot be analyzed, verbal pronunciation, medical abbreviations, spelling and medical vignettes.</p>		
ACR 209	Auto Collision Blueprinting & Estimating	3 credits 3 class hrs	ART 101	Fundamentals of Art	3 credits 3 class hrs
<p>Provides instruction and hands-on training in the blueprinting and estimating of collision damage. Course will also cover topics, such as insurance coverage, working with appraisers and customers. Pre-requisite: ACR 121</p>			<p>This course will provide the student with an understanding of the fundamental principles of the visual arts. Lectures and slide presentations will introduce students to the formal elements of the visual arts (line, shape, value, texture, color and space) and the organizing principles used by artists to create works of art. The course will also include a comprehensive overview of the stylistic and technical developments throughout the history of art up until the present moment, with emphasis on the key figures and movements of the 19th and 20th centuries. This course will benefit both practicing artists at any level as well as anyone wishing to gain a better appreciation and understanding of the arts.</p>		
ACR 211	Painting/Refinishing	6 credits 3 class hrs, 9 lab hrs	ART 201	Introduction to Film	3 credits 3 class hrs
<p>Covers all aspects of the refinishing industry, from safety to the final detailing of the vehicle. Students will also learn color matching procedures using the latest technology and hands-on techniques. Emphasis is placed on base coat/clear coat, tri-coat and waterborne paint products. Pre-requisite: ACR 121</p>			<p>This course is an introduction to the study and analysis of film as an art form. Students will view, discuss, and interpret movies from variety of historical and cultural contexts.</p>		
ACR 214	Airbrushing Techniques & Graphic Design	3 credits 2 class hrs, 2 lab hrs	AUT 109	Introduction to Auto Technology	1 credit .5 class hrs, 1.5 lab hrs
<p>Course focuses on fundamental techniques of using the airbrush for purposes such as custom painting graphics and murals. Hand lettering and pin striping techniques are demonstrated with students gaining hands-on experience. Pre-requisite: ACR 211 or instructor's permission</p>			<p>This is an entry level class designed to introduce students to the automotive field and the advances in technology. Students will start with the history of the automobile, then learn about the employment opportunities in the automotive field and what it takes to become an ASE master technician. Students will have the opportunity to learn about shop safety, and the types of tools they will be using and how to use them before going into the</p>		
ACR 223	Structural & Mechanical Repairs	6 credits 3 class hrs, 9 lab hrs			
<p>Covers the repair of major collision damage, including straightening frames, uni-body construction, replacing major body sections, aligning, reshaping and finishing of major damaged areas. Front end alignment theory, suspension and steering, power train, electrical, and restraint systems are also covered.</p>					

shop to start the basic repairs of an automobile such as changing oil, rotating tires and inspecting the vehicle for safe driving. This course meets for 3 weeks.

AUT 114 Suspension and Steering **3 credits**
1 .5 class hrs/4.5 lab hrs

Exposes students to the underside of cars and light trucks. Suspension systems: Theory and operation of tires, tire pressure monitoring systems, tire changing, wheel balancing, suspension systems (conventional and McPherson strut) will be discussed in detail. Diagnosis and repair of these systems will also be covered. Steering systems: Theory and operation of conventional and rack and pinion steering systems will be covered, along with how to properly diagnose and repair these systems. Wheel alignment: Theory of front-end geometry including purpose of caster, camber, steering axis inclination, scrub radius, turning radius and toe-in, toe-out will be discussed in detail; techniques of performing thrust angles and four wheel alignments; actual alignments will be done on operational vehicles.

AUT 115 Automotive Electricity **3 credits**
2 class hrs, 2 lab hrs

This course provides students with information in vehicle electricity, which will develop an understanding in vehicle electrical systems. Throughout the course, students will learn the basic concepts of electricity as they apply to vehicle service and repair using a series of trainer activities. Theory of electricity covered will include volts, ohms, amps, and the proper use of a digital multi-meter and other electrical diagnostic tools and equipment. Students will also learn to understand the flow of electricity in multiple types of electrical circuits. Students will apply information covered and show their understanding by completing job sheets/worksheets, on-trainer activities, on-trainer troubleshooting techniques and vehicle application, which will reinforce vehicle electrical theory. The understanding of voltage drops in circuits will be discussed and the voltage drop test will be performed with activities, along with electrical schematic reading and techniques in troubleshooting electrical circuit faults.

AUT 116 Brakes **3 credits**
1.5 class hrs/4.5 lab hrs

Exposes students to the automotive brake system and covers in detail the theory, operation, diagnosis, and repair of these systems. Students will have the opportunity to learn about drum brakes, disc brakes, and combinations of the two, along with parking brake systems and power assist. Principles of hydraulics will be discussed as it pertains to the brake system. The various switches, valves and electronic components related to the standard brake system and anti-lock brake system will be discussed and diagnosed.

AUT 124 Engine Repair **6 credit**
3 class hrs, 9 lab hrs

Theory and operation of the four-stroke engine will be discussed along with diagnosis of engine problems. Disassembly and care of reusable parts, cleaning and storage of engine parts, measurements of wear, replacement of parts and adjustments of parts; lubrication and lubricating clearances, temperature

effects and cooling systems, cylinder heads, valves, replacing and/or reconditioning cylinders, pistons, rings, cam shafts and hydraulic lifters. Live work is done when available. Pre-requisite: AUT 116 or instructor permission

AUT 125 Automotive Electronics **3 credits**
2 class hrs, 2 lab hrs

A continuation of AUT 115, this course covers electrical/electronic systems. Electronics theory is covered giving students an understanding of electronic solid-state components and systems, which will include charging systems, starting systems, ignition systems, anti-lock brakes, supplemental restraint systems and computer controls. Activities completed in this course allow students to learn and understand the concepts of electronics as they apply to vehicle electronic systems and proper diagnosing and repairing of these systems. These activities will include an introduction to electronics covering diodes, transistors, capacitors and how these semi-conductor components are used in electronic systems. Electronic system diagnostics will include the importance of using a digital multimeter and logic probe to prevent meter loading in electronic circuits. Laptop/tablet-based scan tools, graphing meters, oscilloscopes and other electronic diagnostic equipment will be used to understand and diagnose electronic systems during lab activities. Prerequisite: AUT 115 or instructor's permission

AUT 214 Engine Performance **6 credits**
3 class hrs, 9 lab hrs

Covers the theory and operation of OBD II (On-Board Diagnostics Generation Two) and CAN (Controller Area Network) systems. The complete fuel and emission systems are covered in detail from fuel tank cap to combustion chamber of the engine. Emphasis is placed on fuel injection, ignition and emission control as it pertains to the techniques of diagnostics and distinguishing and interpreting trouble codes by the use of scan tools. Pre-requisite: AUT 123 or instructor permission

AUT 216 Motor Vehicle Inspection Regulations **2 credits**
2 class hrs

This course prepares students for the Maine State Vehicle Inspection exams. State laws, regulations and proper vehicle inspection procedures are discussed and studied. Emphasized are safety related components for all classes of vehicle inspection classifications A, B, C, D, E and T. Specific tools, equipment and required materials to perform inspections is also discussed. The course develops diagnostic skills in checking vehicles for safety inspection under Maine motor vehicle safety inspection requirements. Student will be eligible to take the state motor vehicle inspection exams and achieve certification.

AUT 223 Manual Drive Train and Axles **3 credits**
1.5 class hrs/4.5 lab hrs

Consists of theory and operation of the manual transmission along with diagnosis, removal, repair and replacement of the clutch, manual shift transmissions (conventional and transaxle), drive line and final drive assembly. Transfer cases, four-wheel drive and all-wheel drive systems will be diagnosed and repaired along with drive shafts and related parts. This is a 7.5 week course. Pre-requisite: AUT 214

AUT 225 Automatic Transmissions 3 credits
1.5 class hrs/4.5 lab hrs

The history of the automatic transmission along with construction, theory and operation of the torque convertor, planetary gears, clutches, bands and their applications will be discussed. Emphasis on diagnosing and repair along with adjustments of the automatic transmission will be performed. Students will have the chance to diagnose and repair concerns on and off the vehicle. Co-requisite: AUT 223. This is a 7.5 week course.

AUT 228 Alternative Propulsion Systems 3 credits
2 class hrs, 2 lab hrs

Alternative Propulsion Systems is an advanced level course to enhanced students' knowledge and troubleshooting skills in today and tomorrow's hybrid HEV, electric EV, fuel cell, and other alternative propulsion technologies. Students will use and heighten their troubleshooting skills developed from previous courses to verify, understand and analyze system faults using schematics, laptop-based scan tools, vehicle diagnostic and repair information, technical service bulletins and special service information to pinpoint causes hybrid and electric vehicle drivability concerns. This course will also emphasize high voltage safety while working with hybrid/electric vehicles. Students will understand hybrid vehicle safety features and different procedures and components involved with hybrids today, whether full, medium, or mild hybrids. Students will learn proper techniques and procedures on powering down a hybrid prior to performing any service work and using appropriate tools and personal protective equipment. After successful completion of this course, students will have a greater knowledge on how alternative propulsion technologies operate and safety procedures involved with these systems. Pre-requisite: AUT 125 or instructor's permission.

AUT 229 Automotive Heating & Air 3 credits
Conditioning 2 class hrs, 2 lab hrs

This course provides students with refrigeration theory, heating, air conditioning, and ventilation system operations and methods used to diagnose, adjust and repair these systems. Information studied from previous course will help students when troubleshooting HVAC electrical/electronic circuit faults. Student will become familiar with laws of the Federal Clean Air Act related to motor vehicle air conditioning service and repair. Upon successful completion students will be eligible and be certified as required under Section 609 of the Federal Clean Air Act in the proper use of MVAC refrigerant, recovery and recycling equipment. Pre-requisite: AUT 125 or instructor's permission.

AUT 231 Innovative Automotive 3 credits
Technologies 2 class hrs, 2 lab hrs

This course is an advanced level course and continues with information learned from automotive electronics by increasing students' knowledge with modern electronic automotive systems. Topics covered in this course will include vehicle safety systems (vehicle-to-vehicle communications, vehicle-to-infrastructure communications, automatic brake control systems, and pedestrian detection systems). Other innovative

systems that will be discussed are semi and fully autonomous driving, telematics, night vision systems, blind-spot visibility, self-park systems, advanced lighting systems and vehicle cyber security. Vehicle computer communications and networks will be discussed, and testing procedures will be performed during lab activities using advanced level equipment. Students will also use their troubleshooting skills developed from previous courses to verify, understand and analyze system faults using appropriate service information. This course will also emphasize on safety while working with innovative electronic systems. After successful completion of this course, students will have a greater knowledge of innovative technologies found on vehicles today and future concepts. Pre-requisite: AUT 125 or instructor's permission

AUT 233 Light Vehicle Diesel Systems 3 credits
2 class hrs, 2 lab hrs

The Light Vehicle Diesel Systems course is based on developing changes in light vehicle diesel engines, diesel emissions and diesel OBD II electronic computer control systems. This course will cover diesel engine operational theory, engine fault diagnosing, engine inspection and repair. Other topics covered will be diesel fuels, air induction fuel systems, and turbo chargers. Advanced level topics in this course will include diesel electrical/electronic systems, diesel drivability and diagnostics. The students will use their troubleshooting skills developed from previous courses to verify, understand and analyze faults using schematics, laptop-based scan tools, digital storage oscilloscopes (Pico Scope), vehicle repair information, technical service bulletins and special service information in pinpointing system concerns. The student will at times use original equipment manufacturer (OEM) information to diagnose and repair vehicles when other sources of information are not available. The course will also emphasize the safety of working on diesel engines and related systems. The student will learn and understand the proper techniques on safely depressurizing fuel systems and powering down related systems prior to performing any service work and using proper tools and personal protective equipment. After successful completion of this course, students will have a greater knowledge of light duty diesel technologies found on vehicles today and future makes and models. Pre-requisite: AUT 124, AUT 125 or instructor's permission

BCT 111 Framing Systems 6 credits
3 class hrs, 9 lab hrs

The focus of the course is on the safe practice and use of hand and power tools needed during building construction. Students will learn floor, wall and roof framing skills. There is an emphasis on various on-center layouts and the mathematics and use of the framing square. There is also an introduction to finishing techniques with pine. Students will compute material lists from sketches, floor plans and scaled drawings.

BCT 121 Interior Materials and Methods 6 credits
3 class hrs, 9 lab hrs

This course continues the practice and use of hand and power tools needed during building construction. Students will expand

the study and practice of floor, wall and roof framing techniques with an introduction to roof venting. Students may work with electrical and plumbing personnel while building and insulating exterior and interior walls, floors and roof structures. Students will install various rigid and fiberglass insulation with the understanding of air quality and moisture effects. Students will install gypsum board and practice dry wall finishing procedures. Student will install asphalt shingles and clad eave and rake fascias with aluminum coil stock. Pre-requisite: BCT 111.

BCT 211 Adv Framing and Finish Apps 6 credits
3 class hrs, 9 lab hrs

This course focuses on the continued practice and use of hand and power tools needed during building construction. Emphasis will be on: understanding various house plans/sketches; floor and roof layouts; window and door installations with finish trim work; eave and rake fascia types and returns; stairs, stairwells, terminology and function; sheet rocking and dry walling and transit/elevation and site work. Pre-requisite: BCT 121.

BCT 221 Finish Carpentry 6 credits
3 class hrs, 9 lab hrs

This course will continue the practice and use of hand and power tools needed during building construction. Emphasis will be on understanding various building plans and sketches and material lists; window and door installation; along with more detailed finish trim work for windows and doors, including various moldings; kitchen cabinet and countertop construction and installation; advanced dry walling; house wraps, insulation and vapor barrier techniques; paint and finishing techniques. With both pine and hardwoods, students will demonstrate an understanding of building air quality, moisture control and various roof venting techniques. Pre-requisite: BCT 211.

BIO 114 Human Biology w/Lab 4 credits
3 class hrs, 2 lab hrs

Introduces the anatomy and physiology of the human body. All systems of the body are covered, and each system also has a chemistry component relating to its function. Detailed scientific data and terminology are not used, so that a concept approach can be used to learn about the human body. Recommended for students in early childhood education or liberal studies, as well as for those preparing for a medical career but lacking a biology and/or chemistry background.

BIO 201 Anatomy & Physiology w/Lab 4 credits
3 class hrs, 2 lab hrs

Designed for first year students preparing for a career in the medical field. Topics include: introduction, structure levels and anatomical positions and cavities. This will be followed in a topical manner by the skeletal, muscular and nervous systems. The intent of this approach is to allow the student to develop a concise understanding of how each system of the body functions and interacts. The concepts covered in the lecture course are explored in greater detail in lab. Models, prepared slides and preserved specimens will all be used to supply the student with a detailed view of the anatomy of the body. Those who have not successfully completed a high school or college lab-based chemistry and biology course are recommended to

take BIO 114 prior to this course. An introductory knowledge of both chemistry and biology is essential for course success.

BIO 211 Anatomy & Physiology II w/Lab 4 credits
3 class hrs, 2 lab hrs

Continuation of BIO 201. Topics include: sensory, circulatory, urinary, lymphatic, digestive, endocrine, reproduction systems and fluids, electrolytes and acid-base control, as well as nutrition and metabolism. The intent of this approach is to allow the student to develop a concise understanding of how each system of the body functions and interacts. The concepts covered in the lecture course are explored in greater detail in lab. Models, prepared slides and preserved specimens will all be used to supply the student with a detailed view of the anatomy of the body. Pre-requisite: BIO 201

BIO 218 Microbiology Lecture & Lab 4 credits
3 class hrs, 2 lab hrs

A basic introduction to the science of microbiology. Students develop a broad understanding of theoretical and laboratory aspects of the science. Topics include general characteristics of bacteria, viruses, protozoa and fungi; disease transmission; immunology; epidemiology; and microbial control. Students will have the opportunity to practice techniques for specimen collection, culturing, staining and microscope observation of representative species. Pre-requisite: BIO 201 or BIO 211

BTE 251 Business Internship 1 credit

Provides the student with on-the-job training at an approved worksite in an occupational field directly related to the student's major. At least 45 clock hours must be completed for 1 credit. To qualify for an internship, a student in an associate degree program must have completed 30 credits of course work, have attained a 2.5 GPA, and must be recommended by the department chair and course instructor. *Before registering for this course, students must meet with the course instructor to determine internship site and process paperwork.*

BTE 252 Business Internship 2 credits

Provides the student with on-the-job training at an approved worksite in an occupational field directly related to the student's major. At least 90 clock hours must be completed for 2 credits. To qualify for an internship, a student in an associate degree program must have completed 30 credits of course work, have attained a 2.5 GPA, and must be recommended by the department chair and course instructor. *Before registering for this course, students must meet with the course instructor to determine internship site and process paperwork*

BTE 253 Business Internship 3 credits

Provides the student with on-the-job training at an approved worksite in an occupational field directly related to the student's major. At least 135 clock hours must be completed for 3 credits. To qualify for an internship, a student in an associate degree program must have completed 30 credits of course work, have attained a 2.5 GPA, and must be recommended by the department chair and course instructor. *Before registering for this course, students must meet with the course instructor to determine internship site and process paperwork.*

and businesses used in class illustrate the relevance of each theoretical management concept and how those concepts apply to actual business situations. Due to constantly changing management practices, leadership and change management concepts are integrated in the issues and applications throughout the course.

**BUS 233 Supervisory Management 3 credits
3 class hrs**

Designed to provide theoretical and practical knowledge of the management process in a variety of organizational settings. Covers basics of management relationships, individual motivation and behavior in business, and development of skills for daily supervision. This course involves a high level of team work and interaction among students.

**BUS 239 Human Resources Management 3 credits
3 class hrs**

An organization's human resources management function focuses on its people. It includes practices that help the organization deal most effectively with all people in the pre-selection, selection and post-selection phases of the employment cycle. This course covers human resource management trends and changes, equal employment opportunity/affirmative action, job analysis, recruiting, testing, selection, training, performance appraisal, compensation/benefits, labor relations, discipline, workplace health and safety, ethical dilemmas, and cultural diversity.

**BUS 241 Principles of Marketing 3 credits
3 class hrs**

Designed for the student planning to take only one marketing course. Provides an overview of the marketing skills and techniques used in product planning and promotion. Explores the strategy behind and implementation of a marketing plan, while covering consumer behavior, product life cycle, marketing communications, and pricing tactics.

**BUS 242 Small Business Management 3 credits
3 class hrs**

Covers the concepts of starting and operating a small business. The application of marketing, accounting, human resources management and general management courses is essential for the completion of the required business plan.

**BUS 250 Advanced Seminar in Business Technology 3 credits
3 class hrs**

This in-depth course is intended to provide the opportunity to offer courses of variable content on emerging issues or technology of special interest to the college community that would not normally be part of the NMCC curriculum. As such, the topics and content will vary from semester to semester. This course will increase the awareness of the most current issues and technology surrounding the student. Pre-requisite: permission from the instructor.

**CHM 201 Applied Chemistry 3 credits
2 class hrs, 2 lab hrs**

This course is intended to serve as a broad introduction to a variety of chemistry concepts for students who have never

taken a chemistry course before or have limited knowledge of the study of chemistry. While it has heavy emphasis on application of these concepts with respect to water and water treatment, students who complete this course will find it useful in any science field, health care field, or any related skills/trade subject. Topics include: scientific measurement, the structure of matter, chemical nomenclature, chemical formulas, chemical equations, mole and stoichiometry, the gas laws, chemical energy, periodicity and the periodic table, solutions, acids and bases, chemical equilibrium, oxidation and reduction, and a brief overview of nuclear and organic chemistry. This course will develop students' ability to reason scientifically using the scientific method and to apply that knowledge in their daily lives.

**CIS 105 Introduction to PC Operating Systems 1 credit
1 class hr**

Provides an introductory overview of the most commonly used operating systems for personal computers.

**CIS 108 Spreadsheet Applications 3 credits
for Business 3 class hrs**

Provides a comprehensive coverage of electronic spreadsheets using Microsoft Excel. An important part of this course will be using Excel to solve business problems by completing hands-on activities to design, create and modify basic to advanced electronic spreadsheets. Activities will include the following concepts and techniques: formulas and functions, spreadsheet designs, charts and graphics, lists, sorting and filtering, templates, consolidation and 3-D formulas, protection, data validation, Web features, data tables, scenario management, importing data, using macros, and VBA.

**CIS 112 Fundamentals of Computer Concepts 3 credits
2 class hrs, 2 lab hrs**

This course is an introduction to end-user computer concepts and applications. The course focuses on personal computer software applications, computer concepts and terminology regularly used in a computerized business environment to solve business problems. An important part of this course will be hands-on activities using Microsoft Office Suite to demonstrate various information system concepts. Activities will involve the following introductory concepts: Windows operating systems and utility programs, word processing, electronic spreadsheets, database management systems, presentation graphics, and several Internet applications. It will also cover common computer concepts pertaining to security, safety, privacy and network communications and components of the system unit.

**CIS 113 Introduction to Microcomputer Applications 3 credits
3 class hrs**

Provides an overview of microcomputer applications, including a brief introduction to computer concepts, microcomputer operating systems, and hands-on experience with a business software suite consisting of word processing, spreadsheets, databases, and presentation graphics.

**CIS 118 Office Computer Applications 3 credits
3 class hrs**

This course is designed to develop student proficiency in data manipulation, data exchange and information presentation

using a desktop workstation. The lab software used is the Microsoft Office suite of applications operating in a Windows environment. Advanced projects in Word, Excel, Access and PowerPoint are complete. Pre-requisite: CIS 112 or CIS 113

**CIS 129 Database Applications for Business 3 credits
3 class hrs**

Provides a comprehensive coverage of database management systems using Microsoft Access. An important part of this course will be using Access to solve business problems by completing hands-on activities to design, create and modify basic to advanced database applications. Activities will include: designing databases, creating and maintaining a database, defining table relationships, using queries and action queries, creating forms and reports, using the switchboard manager, integration and Web features, using macros and VBA, managing and securing a database.

**CIS 220 Web Development and Publishing 3 credits
3 class hrs**

Examines the development, handling and moving of information primarily using Web based technology for the purpose of increased office information. The course emphasis is on Internet Web page development using HTML tagging language and Web authoring tools with emphasis using Microsoft FrontPage. Desktop publishing using Adobe PageMaker is included for exposure to various types of professional publications which can be converted to HTML or PDF formats for electronic viewing. Because the use of images in business publications is essential to effective print and Web publications, this course also provides a survey of digital imaging concepts and technologies. Pre-requisite: CIS 112 or CIS 113

**COE 112 Introduction to Linux 3 credits
2 class hrs, 2 lab hrs**

This course is intended for students who want to learn about the Linux operating system. It does not assume any prior knowledge of Linux and is geared toward those interested in systems administration as well as those who will use or develop programs for Linux systems. The course provides comprehensive coverage of topics related to Linux certification, including Linux distributions, installation, administration, X-Windows, networking, and security.

**COE 113 Operating Systems 3 credits
2 class hrs, 2 lab hrs**

Operating Systems covers the first of two exams required for Microsoft Certified Solutions Associate (MCSA); Windows 10 certification. This course prepares students to develop the skills needed to deploy and manage Windows 10 and to prepare to pass the Microsoft Specialist 70-697 certification exam. Students learn about the new features in Windows 10 and learn how to manage Windows 10 devices in a secure network environment. New topics include client Hyper-V, and using Microsoft Intune to manage Windows 10 mobile and desktop devices. The text includes a section devoted to troubleshooting and doubles as a manual that professionals can take on the job.

**COE 116 A+ Certification Prep 3 credits
3 class hrs, 2 lab hrs**

Principles of computer servicing including system configuration, memory interfacing, CPU and support circuits, keyboards, hard drives - SATA - SCSI - IDE, floppy drives and modems. Troubleshooting and maintenance of peripherals such as monitors, multimedia, and drives. Considerable hands-on time is spent gaining troubleshooting skills using test equipment and software diagnostics. Co-requisite: COE 118

**COE 118 A+ Certification Prep Lab 3 credits
9 lab hrs**

This course is the laboratory component of COE 116 A+ Cert Prep. Co-requisite: COE 116

**COE 125 Computer Networking Hardware 3 credits
2 class hrs, 2 lab hrs**

Provides the student with basic knowledge and skills needed to install and maintain a network. The course prepares students to become Network+ certified. Network+ is a leading vendor-neutral certification in the computer industry for network technicians. The course covers network security, installing operating systems (Windows 2008 Server and Windows 7); installing network interface cards; cabling; peer-to-peer networks; client/server networks; configuring TCP/IP, DHCP, TCP/IP utilities; 100BaseT; wireless technology; star, ring, bus topologies; monitoring network traffic; protocols and the OSI model; accessing the Internet; measuring server performance; analyzing network traffic; and maintaining and supporting the network. The Network+ exam is the final exam for the course. The cost of the exam is approximately \$141 (2016 academic pricing). Includes considerable hands-on experience.

**COE 128 Advanced Operating Systems 3 credits
2 class hrs, 2 lab hrs**

Helps prepare students for the second of two exams required for Microsoft Certified Solutions Associate (MCSA): Windows 8.1 certification. Students master configuration or support for Windows 8.1 computers, devices, users and associated network and security resources. Those in this IT Professional career field work with networks configured as a domain-based or peer-to-peer environment with access to the internet and cloud services. These IT Professionals could be consultants, full-time desktop support technicians, or IT generalists who administer Windows 8.1 based computers and devices as a portion of their broader technical responsibilities. Additional skills addressed, including the recent 8.1 objectives: Design an Installation and Application Strategy, Maintain Resource Access, Maintain Windows Clients and Devices and Manage Windows 8 Using Cloud Services and Microsoft Desktop Optimization Pack. The Microsoft 70.688 certification exam is the final exam. Approximate cost is \$150.00. Pre-requisite: COE 113

**COE 217 Installing & Configuring Servers 4 credits
2 class hrs, 4 lab hrs**

This course gives you in-depth coverage of the 70-740 certification exam objectives and focuses on the skills you need to install and configure Windows Server 2016. After you finish this course, you'll have an in-depth knowledge of Windows Server 2016, including installation, file and storage services,

virtualization, Windows containers, and Nano Server, among many other topics.

COE 218 Network Administration **4 credits**
2 class hrs, 4 lab hrs

This course gives you in-depth coverage of the 70-741 certification exam objectives and focuses on the skills you need to configure networking with Windows Server 2016. After you finish this course, you'll have an in-depth knowledge of Windows Server 2016 networking services, including TCP/IP, DNS, DHCP, IPAM, remote access, and advanced networking solutions.

COE 219 Electronics for Computer Technicians **3 credits**
2 class hrs, 2 lab hrs

The Electronics for Computer Techs course prepares students to solve electronic problems involving current, voltage, resistance and power. Students will be able to explain the relationship between current, voltage, resistance and power. Students will be able to discuss the relationship between electricity and magnetism. Students will construct DC circuits, using a schematic diagram as a guide, with components such as resistors, relays, switches, lamps, batteries and capacitors. Students will use multi-meters, power supplies and electronic trainers throughout the course.

COE 220 Introduction to Computer Forensics **3 credits**
2 class hrs, 2 lab hrs

This course focuses on the use of the most popular forensics tools and provides specific guidance on dealing with civil and criminal matters relating to the law and technology. Includes discussions on how to manage a digital forensics operation in today's business environment. In addition, this book also covers such valuable skills as: Data Acquisition, Processing Crime and Incident Scenes, Working with Windows and CLI Systems, Current Computer Forensics Tools, Macintosh and Linux Boot Processes and File Systems, Recovering Graphics Files.

COE 227 Configuring Adv Windows Server **4 credits**
2 class hrs, 4 lab hrs

Configuring Advanced Windows Server 2012 covers the third of three exams required for Microsoft Certified Solutions Associate (MCSA): Windows Server 2012 certification. This course will help validate the skills and knowledge necessary to administer a Windows Server 2012 Infrastructure in an enterprise environment. The three MCSA exams collectively validate the skills and knowledge necessary for implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2012 environment. This Microsoft Official Academic Course is mapped to the 70-412 Configuring Advanced Windows Server 2012 Services exam skills, including the recent R2 objectives. This course focuses on real skills for real jobs and prepares students to provide mastery of Advanced Windows Server 2012 Services such as advanced configuring tasks necessary to deploy, manage and maintain a Windows Server 2012 infrastructure. It covers such skills as fault tolerance, certificate services and identify federation. In addition, this course also covers such valuable skills as: Implementing Advanced Network Services, Implementing Advanced File Services, Implementing Dynamic Access Control, Implementing Network Load Balancing and Implementing Failover Clustering.

The Microsoft 70-412 exam is the final exam. Approximate cost \$150.00. Pre-requisite: COE 218

COE 228 Security+ Certification **3 credits**
2 class hrs, 2 lab hrs

This course offers a comprehensive guide for anyone wishing to take the CompTIA Security+ SY0-501 Certification Exam. It provides an introduction to the fundamentals of network security, including compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography. The course covers new topics in network security as well, including psychological approaches to social engineering attacks, Web application attacks, penetration testing, data loss prevention, cloud computing security, and application programming development security.

COE 229 Ethical Hacking **3 credits**
2 class hrs, 2 lab hrs

This course provides an in-depth understanding of how to effectively protect computer networks. Students will learn the tools and penetration testing methodologies used by ethical hackers. In addition, the course provides a thorough discussion of what and who an ethical hacker is and how important they are in protecting corporate and government data from cyber attacks. Students will learn updated computer security resources that describe new vulnerabilities and innovative methods to protect networks. Also covered is a thorough update of federal and state computer crime laws, as well as changes in penalties for illegal computer hacking. Pre-requisites: COE 125 and COE 228.

COL 103 College Success **1 credit**
1 class hr

College Success is designed to help students feel comfortable with the experience of being a college student. As a class, we will examine the academic culture of college and look at ways to be successful at NMCC. Through interactive exercises and assignments, the class will discuss a variety of topics including the transition to college life, goal setting, study skills, time management, campus resources, and information literacy. The ultimate purpose of the course is to provide an opportunity for students to learn and adopt strategies to be successful in college and beyond. Students who have successfully completed at least 15 hours with a GPA of 2.0 are exempt from this requirement.

COM 111 Speech **3 credits**
3 class hrs

An oral communication course offering experience in selection and organization of speech content, audience analysis and delivery. Classroom experience emphasizes preparation and delivery of informative, persuasive, short speeches plus other types of oral presentations.

COM 212 Business Communications I **3 credits**
3 class hrs

Focuses on principles of nonacademic spoken and written expression that will help the student succeed in a business occupation. Concentrates on the practical written and oral

applications of communication theory in the forms of business correspondence, memoranda, employment related documents and oral presentations. The class also includes technological applications and ethical and cross-cultural considerations in business communication practices. Other interpersonal communication topics that may be discussed are nonverbal communication, listening skills, telephone skills and business etiquette. Pre-requisite: ENG 111

**COM 221 Technical Communications 3 credits
3 class hrs**

Designed to strengthen oral and written skills. It focuses on the elements of technical writing, report writing and business correspondence. Particular emphasis is given to utilizing visual aides effectively, writing several types of job-related technical reports, and giving oral presentations. Pre-requisite: ENG 111

**DIB 113 Intro. to Digital Systems 3 credits
2 class hrs, 2 lab hrs**

Virtually all electronic and electrical systems today use digital techniques to accomplish their functions. After completing this course, students will be familiar with a wide range of integrated circuits, their uses and characteristics. Students will have a working knowledge of semiconductor devices, logic circuits, memory devices, data conversion, and digital troubleshooting. The course concludes with a design project which incorporates circuitry studied throughout the course. Pre-requisite: ELS 117

**DIM 112* Intro. to Diesel Hydraulics 3 credits
Technology 3 class hrs, 9 lab hrs**

Introduces the diesel technician to the field and shop operating procedures and preventive maintenance programs. Covered in detail are; preventative maintenance for trucks and equipment used in the transportation industry; personal, work and tool safety, laws regulating hazardous material, and shop record keeping requirements of the federal motor vehicle safety standards. Performing a preventative maintenance inspection will be practiced during an overview of the various P.M.I areas. ** This course meets for 8 weeks.*

**DIM 114* Engine Diagnosis & Tune-up 3 credits
3 class hrs, 9 lab hrs**

Diagnosis and service of diesel engines to include details of construction, theory of operating of two and four cycle engines, plus failure analysis. Disassembly and rebuilding for service and study of engine components is done on mechanical and electronic controlled engines. Engine tune-up, valve settings injector timing, and dynamic/static timing will be practiced for competency and accuracy. **This course meets for 8 weeks.*

**DIM 122* Electrical Systems 3 credits
(Heavy Equipment) 3 class hrs, 9 lab hrs**

Emphasizes the practical aspects of a charging system, starting system, lighting and accessory components, as well as the proper use of the test equipment needed. Reading wiring diagrams and schematics and following circuits through each is practiced. Introduction into the electronic controls of diesel engines is covered extensively with hands-on training. Pre-requisites: AUT 115, DIM 112 and DIM 114 **This course meets for 8 weeks.*

**DIM 123* Brake Systems 1.5 credits
3 class hrs, 9 lab hrs**

Truck air brake systems are explained in detail throughout this course. Air brake operation, system components and the Federal Motor Vehicle Safety standard will be discussed along with practical hands on learning of servicing, inspecting, adjusting and identifying common brake failures systematically to ensure brake balance. Basic ABS systems failure diagnosis is introduced. Basic component adjustment and replacement is also covered. Pre-requisites: DIM 112 and DIM 114 **This course meets for 4 weeks.*

**DIM 125* Suspension & Steering Systems 1.5 credits
3 class hrs, 9 lab hrs**

Detailed analysis of the four main suspension systems used in the trucking industry, walking beam, air, spring and torsion bar design. Troubleshooting and repair of these systems will be covered in detail. Maintenance of tire and wheel components along with wheel end adjustment, replacement and inspection procedures will be practiced. Front axle alignments and adjustments to toe angle will be practiced for competency and accuracy. Introduction to equipment suspensions will be introduced; tract and roller systems. Pre-requisites: DIM 112 and DIM 114 **This course meets for 4 weeks.*

**DIM 211* Hydraulics Technology 3 credits
3 class hrs, 9 lab hrs**

Introduction to fluid forces and their application to power transfer. Emphasis on troubleshooting and repair of hydraulic systems. To include schematic terminology, construction, circuit analysis and testing of the hydraulic system. This unit will also expand the student's knowledge of hydraulic braking and steering systems. Pre-requisites: DIM 122, DIM 123 and DIM 125 **This course meets for 8 weeks.*

**DIM 213* Diesel Engine Rebuilding 3 credits
Technology 3 class hrs, 9 lab hrs**

Diagnosis and service of diesel engines to include details of construction, theory of operation of two cycle engines and four cycle engines, plus failure analysis. Disassembly and rebuilding for service and study of engine components is done on mechanical and electronic controlled engines. Students have the opportunity to expand their knowledge and apply technical skills. Pre-requisites: DIM 122, DIM 123 and DIM 125 **This course meets for 8 weeks.*

**DIM 221* Drive Train Systems 3 credits
3 class hrs, 9 lab hrs**

Includes diagnosis, removal, repair and replacement of components from engine to drive axles. Includes clutches, manual transmissions, axles, differentials, propeller shafts, axle and tracked suspension systems. Pre-requisites: DIM 211 and DIM 213 **This course meets for 8 weeks.*

**DIM 222* Air Conditioning Systems/
Transport Refrigeration 3 credits
3 class hrs, 9 lab hrs**

Introduces theory of operation of mobile refrigerated units. Emphasis is on maintenance, service and diagnosis of air conditioners on automotive and heavy equipment. Students will have an opportunity to expand their knowledge of and apply

foundation skills and workplace competencies as described in SCANS. Pre-requisites: DIM 211 and DIM 213 ****This course meets for 8 weeks.***

DRR 109 Print Reading for Welders 3 credits
2 class hrs, 2 lab hrs

This course provides students the knowledge to read and comprehend the various types of prints found in the welding industry. Content includes print reading basics, math and measurement, an overview of welding processes, types of welds and joints, and welding symbol use.

DRR 117 Blueprint Reading for Construction Trades 3 credits
2 class hrs, 2 lab hrs

This course introduces students to orthographic drawings and interpretation of construction documents. Students will review architectural, civil structural, mechanical, and electrical prints to become familiar with drawing used in residential and light commercial construction. Interpreting technical specifications and preparing a construction cost estimate are also included.

DRR 215 Architectural Drafting I 2 credits
1 class hr, 3 lab hrs

This is a required course for students in the Building Construction Technology program and the emphasis of the class will be on residential design and drawing. Students will spend time learning basic computer drafting skills and become familiar with residential design criteria. Students will work on a floor plan, exterior elevations and a site plan for a house of their own design with a variety of guidelines and criteria that must met.

DRR 220 Architectural Drafting II 2 credits
1 class hr, 3 lab hrs

This course is a continuation of DRR 215 where students will continue to work on their house designs, by preparing more plans and detailed drawings. Students will advance their computer drafting skills using additional design features. Students will be able to use their design & drafting skills to prepare drawings for their projects, customers and employers during their careers. Pre-requisite: DRR 215

DRT 108 Mechanical Print Reading & Drafting 2 credits
1 class hr, 2 lab hrs

Mechanical Print Reading and Drafting is an introductory course in reading, understanding, and preparing basic mechanical drawings used in the machine trades industry. Students will learn the proper use of software, drafting and design techniques and the graphic presentation of mechanical components. Students will be able to understand dimensioning, orthographic projection and isometric drawing. Students will use computer software to develop manufacturing drawings for mechanical parts.

ECE 101 Healthy Learning Environments for Children 3 credits
3 class hrs

Examines organizing space and equipment for indoor and outdoor activities; helping children learn to play together; understanding and providing for children's health, safety and

nutritional needs; and maintaining a safe learning and play environment in and outside of the classroom.

ECE 105 Advancing Intellectual & Social Development in the Young Child 3 credits
3 class hrs

Covers the intellectual (cognitive) and social development of children and the ways that teachers support development in their daily interactions with young children. Topics will include encouraging young children to explain, experiment and question; advancing language use and comprehension; and building positive self-concept in the young child. Focus of the course will be applying developing knowledge of young children to help them learn in a manner that supports development in the whole child.

ECE 120 Programmatic and Professional Development in the Child Care Field 3 credits
3 class hrs

Covers topics including: techniques for establishing positive and productive relationships with the families of child care/development program participants; program management skills such as planning, record keeping, communication and cooperation; and the processes inherent in establishing and maintaining a demonstrated commitment to professionalism.

ECE 192 Field Experience in Early Childhood Education I 3 credits
9 lab hrs

Provides students with the opportunity to actively experience work in the child care/early education field through exposure and hands-on experience working with infants, toddlers, preschool and/or school-aged children in community-based group-care settings. Field experience allows students to implement and practice skills learned in related coursework, while periodic seminars help students to connect their field work to related theory and receive support from peers completing field experience in other settings. Satisfies the first 90 hours of total practical experience required for CDA credential. *Program immunization requirements and criminal background checks are required for course enrollment.*

ECE 196 Field Experience in Early Childhood Education II 4 credits
1 class hr, 9 lab hrs

Provides students with practical experience in working with and observing young children in a variety of community-based child care settings; allows students to actively experience work in the child care field and learn from skilled practitioners. Students will implement and practice skills learned in related coursework to observe, plan and implement developmentally appropriate learning activities for children in infant, toddler, preschool and/or school-aged children's programs. Regular (weekly or bi-weekly) seminars are an integral part of the experience and will allow students to connect their field work with professional theory and philosophy as well as experience support from colleagues enrolled in field experiences in a variety of settings. Satisfies 180 hours of total practical experience requirement for CDA credential. Pre-requisite: ECE 192. Enrollment limited to students matriculated in Early Childhood Education program. *Program immunization requirements and criminal background checks are required for course enrollment.*

**ECE 197 Field Experience in Early Childhood Education III 5 credits
1 class hr, 12 lab hrs**

Continues to build on the foundation of skills begun in previous practicum work. Students will have increased involvement with children and will develop, understand and practice techniques for child assessment and planning. Course requires students to take a more active role in observing, planning for and delivering curriculum to young children. Periodic seminars remain an integral part of the experience and allow students to share learning experiences from different field sites. Students may elect to conduct their field experience in a specialized area of early childhood education. Satisfies final 180 hours of total practical experience requirement for CDA credential. Pre-requisite: ECE 196. Enrollment limited to students matriculated in Early Childhood Education program. *Program immunization requirements and criminal background checks are required for course enrollment.*

**ECE 200 Child Growth and Development 3 credits
3 class hrs**

Development of children from conception to pre-adolescence will be studied. Focus of the course will be on four age groups of early childhood -- infants, toddlers, preschoolers, and early elementary children -- in relation to the four domains of development: physical, cognitive, social-emotional, and acquisition of language and communication. Includes exploration of the latest child development research, including the neurological bases of learning or "brain-based" learning. Students will develop an understanding of how experiences provided in childcare settings can impact the development of the young child.

**ECE 205 Children's Literature 3 credits
3 class hrs**

Emphasis is placed on the creation of an environment that supports development of emergent literacy and encourages young children's exploration and enjoyment of literature. Experiences will include development of reading centers; storytelling; creative dramatics; and evaluation, selection and presentation of age appropriate reading materials. Students will directly explore a variety of children's literature appropriate for use in early childhood settings.

**ECE 210 Child Guidance and Discipline 3 credits
3 class hrs**

Discusses the differences between punishment and discipline and techniques for guiding young children. Topics will include positive reinforcement, redirection of negative behavior, setting and enforcing limits, and the natural and logical consequences of a child's choices. Students will also learn techniques for self-control and stress management, and will develop an understanding that effective discipline follows development of a respect for the dignity of the child. Pre-requisites: PSY 101, ECE 105 and ECE 200 or commensurate experience

**ECE 220 Education of Young Children with Special Needs 3 credits
3 class hrs**

Includes: observation and documentation of child behavior; categories and descriptions of special needs; adapting curriculum to meet individual needs; and developing healthy

attitudes and behaviors in children, staff and parents toward the special needs child. Emphasis will be placed on developing and maintaining supportive relationships with parents of children with special needs and developing cooperative relationships with other professionals involved with the child, including therapists, social workers and medical personnel. Pre-requisite: ECE 200 or commensurate experience

**ECE 230 Curriculum in Early Childhood Education (Birth-3 years) 3 credits
3 class hrs**

Provides an in-depth study of the development and implementation of developmentally appropriate curriculum for infants and toddlers based on an understanding and knowledge of child development, individual children, the group of children, and community and program goals. Topics will include assessment of children; age-appropriate scheduling and instructional planning; and maintaining a physically and psychologically safe learning environment. Students will develop creative instructional materials and will evaluate and utilize commercially developed products. Pre-requisite: ECE 200 or commensurate experience

**ECE 235 Curriculum in Early Childhood Education - (Ages 3-8) 3 credits
3 class hrs**

Continues topics studied in ECE 230 with emphasis on the development and evaluation of curriculum and materials suitable for the preschool child and for school-aged children in childcare settings. Coursework will focus on curricula as exemplars of developmentally appropriate practice in early childhood education and on practical issues around implementation of curricula for children in this age group. Students will work toward development of their personal definition, goals and values around curriculum. Pre-requisites: ECE 105 and ECE 200 or commensurate experience

**ECO 213 Macroeconomics 3 credits
3 class hrs**

This course is based on a basic theory of macroeconomics which provides a unique textual and visual learning system that presents and reinforces core concepts, then immediately assesses comprehension to ensure understanding highlights the latest information on economic growth, income distribution, federal deficits, environmental issues, and other economic developments while applying concepts to everyday life.

**Note: Students who have already completed or are enrolled in ECO 111 Principals of Economics will substitute.*

**EET 221 Control Systems & PLCs 3 credits
2 class hrs, 3 lab hrs**

Programmable Logic Controllers are used extensively in process control and machine control. The course provides a strong foundation for understanding the fundamentals that apply to all PLC brands and offers an introduction to applications where PLC are used in industry. Theory will be reinforced by applying ladder diagram concepts from hard wired circuits to ladder logic programming using PLC equipment. Students will gain experience with hardware and software systems for the Koyo DL 105, Allen Bradley SLC 500, Compact Logix, and

Control Logix platforms. Introductions to DeviceNet and Panel View Plus systems will also be presented.

**ELE 110 National Electrical Code 3 credits
3 class hrs**

Presents the fundamentals of the current National Electrical Code (NEC). Classroom discussion emphasizes single and multi-family dwellings while reviewing concepts of motors, control wiring and commercial wiring systems. Introduces the concept of using the NEC book as a tool and emphasizes methodology of reading and understanding the NEC. Periodic examinations are given. An excellent course for beginning electricians preparing for the journeyman license exam.

**ELE 116 National Electrical Code 3 credits
for Industry 3 class hrs**

Presents the fundamentals of the current National Electrical Code (NEC). Classroom discussion emphasizes commercial and industrial wiring techniques while reviewing residential wiring concepts. Introduces the concept of using the NEC book as a tool and emphasizes methodology of reading and understanding the NEC. Periodic examinations are given. An excellent course for electricians preparing for the master license exam. Pre-requisite: ELE 110 or instructor's permission

**ELE 112 Basic Residential Wiring 3 credits
2 class hrs, 2 lab hrs**

A beginning course in electrical wiring methods using electricians' tools and wiring materials. Wiring projects include single-pole switching, 3-way switching, and 4-way switching of lighting circuits, receptacle circuits including GFCI and AFCI protection, and installation of romex cable, boxes, and associated hardware.

**ELE 210 Electrical Construction & 3 credits
Maintenance I 3 class hrs**

Students learn the elements involved in residential and commercial wiring, acquiring the skills necessary to plan, layout and install wiring materials and devices common to building construction in accordance with the guidelines set forth in the National Electrical Code and in accordance with usual practices in the industry. Students will obtain a basic fundamental knowledge of DC and AC power technology motors and transformers on which to build an applied knowledge of control techniques. Pre-requisites: ELE 112, ELS 124 and ELS 125; Co-requisite: ELE 212

**ELE 212 Electrical Construction & 3 credits
Maintenance I Lab 9 lab hrs**

Lab component of ELE 210. Co-requisite: ELE 210

**ELE 222 Electrical Construction & 3 credits
Maintenance II 3 class hrs**

Students will learn the key elements involved with commercial and industrial wiring, acquiring the skills necessary to install wiring materials and devices common to the commercial and industrial construction in accordance with the National Electrical Code and in accordance with usual practices in the industry. Pre-requisites: ELE 210 and ELE 212; Co-requisite: ELE 223

**ELE 223 Electrical Construction & 3 credits
Maintenance II Lab 9 lab hrs**

Lab component of ELE 222. Co-requisite: ELE 222

**ELS 117 Basic Electricity 4 credits
2 class hrs, 4 lab hrs**

Examines the subject at the beginner's level. Topics include current, voltage, resistance, OHM's Law, magnetism, electrical measurements, DC circuits, inductance, capacitance, AC measurements, and transformers.

**ELS 119 Intro to Electronic Systems 2 credits
1 class hr, 2 lab hrs**

This course will introduce students to the basic concepts required to maintain and troubleshoot electronic control systems. The course begins with a study of the relationships between current, voltage and resistance in both DC and AC systems, then progresses to a comparison of analog and digital measuring instruments. Electrical safety as well as an introduction to components used in industrial control systems will be presented next. The course concludes with an introduction to schematic diagrams and troubleshooting techniques used to maintain typical water and wastewater control systems.

**ELS 124 Industrial Electronics 3 credits
2 class hrs, 3 lab hrs**

Integrates concepts learned in AC and DC circuits as they apply to industrial manufacturing equipment. It provides an introduction to industrial control systems with a focus on equipment applications. Topics include power supplies, thyristers, discrete and analog sensors and devices, opto-electronics computer based control equipment, an industrial network communication. Lab exercises provide practical experience with shop equipment, troubleshooting circuits and reading schematics. Pre-requisite: ELS 117.

**ELS 125 Motors and Controls 3 credits
2 class hrs, 3 lab hrs**

Studies electric motors and how they are controlled. Units of study include: single phase motors; motor control basics; three phase motors and control; specialty motors and control; power distribution and monitoring systems; and DC motors, generators and control. Laboratory exercises using real life motors and control devices help students gain practical experience with equipment they will encounter in the work environment. Pre-requisite: ELS 117

**EMS 109 Emergency Medical 3 credits
Responder 30 class hrs, 45 lab hrs**

This course is designed to develop students through lecture, lab, high fidelity simulation, entry level knowledge and skills to provide basic on-scene emergency medical care 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 at the EMR level. Students will learn to perform necessary interventions and patient assessment skills to stabilize patients at the scene while awaiting higher levels of care within the Emergency Medical

detection and treatment of cardiac rhythm disturbances, 12-lead ECG analysis, and treatment of cardiovascular disorders. Lecture and lab sessions include cardiac arrest management, and clinical decision making. Students successfully completing this course will receive a certificate in Advanced Cardiac Life Support (ACLS). There is an additional cost for this certification. Pre-requisite: EMS 130

EMS 214 Adv. Emergency Pharmacology 3 credits
38 class hrs, 8 lab hrs

This course provides students with knowledge about the principles of pharmacology. It includes pharmacologic classifications, mechanisms of drug actions, pharmacokinetics, key adverse effects and drug interactions. An overview of the bodily effects of drugs as well as review of major drug categories. This course provides students with knowledge, responsibilities, and accountability in the administration of medications across the lifespan. This course will also cover dosage calculations necessary for safe preparation and administration of medications. Co-requisite: Matriculation into the Paramedic Certificate Program or associate degree program.

EMS 216 Paramedic Clinical 5 credits
Externship I 225 clinical hrs

This faculty directed practicum gives each student the changes to develop competency in the clinical setting while working one on one with an experienced preceptor. Clinical rotations occur in both the hospital and field, including: cardiac care units, emergency departments, operating rooms, ambulance services, to name a few. Students must complete the minimum number of skills and hours established by the program and CoAEMSP, to be eligible for certification exams. This is one of three required clinical courses at the paramedic level. Co-requisites: ALH 124, EMS 205, EMS 220 and EMS 222

EMS 220 Pediatric Emergencies 2 credits
23 class hrs, 22 lab hrs

This course is designed to allow students to integrate pathophysiologic principles and assessment findings to formulate a field impression, and implement an assessment and treatment plan for the neonatal and pediatric patient. Topics will include age specific assessment and management of respiratory, cardiac, trauma, neurological, obstetric and gynecological emergencies. The lab portion of this course includes Pediatric Advanced Life Support and Emergency Pediatric Care (EPC) (these certifications require additional fees).

EMS 222 Trauma Management 3 credits
31 class hrs, 37 lab hrs

This course covers the pathophysiology, kinematics and management of the trauma patient. Topics include, but are not limited to, multisystem trauma, burns, spinal, head, orthopedic, and internal injury, as well as current trends in trauma management. Through the lab portion of this course students will complete a Prehospital Trauma Life Support (PHTLS) course. There is an additional cost for this certification.

EMS 226 Paramedic Clinical 4 credits
Externship II 170 clinical hrs

Building on the skills and knowledge presented in previous courses, this externship will allow students to continue to grow and refine advanced EMS skills and assessment. Students will spend this rotation perfecting clinical and assessment skills in a variety of settings. Students will immerse themselves in emergency ambulance response, interfacility transport ambulances, OB units, Intensive Care Units, and physician offices. Students will continue to develop leadership skills while partnered with an experienced EMS preceptor. Students must complete the minimum number of skills and hours established by this program and CoAEMSP to be eligible for certification exams. This is one of three required clinical courses at the paramedic level. Pre-requisite: EMS 216

EMS 229 Paramedic Skills Seminar 1 credit
45 lab hrs

Designed as the capstone course for the paramedic education program, this course will provide students with an intense review of didactic and psychomotor experiences that simulates professional practice. Students completing this course will practice the skills necessary to successfully pass the national examinations and to become effective entry level field practitioners. Additionally, a comprehensive review of didactic content is included. Topics include ambulance service management, concepts of lifelong learning, Maine's Paramedic interfacility Transport Module (PIFT), quality improvement, and the ALS providers' role in the community. Students will have the opportunity to perfect assessment based management through a case scenario approach. Utilizing both high and low fidelity simulation, the course concludes with students taking the National Registry Certification Examination. Co-requisite: EMS 226

EMS 231 Special Populations 1 credit
15 class hrs

This course is designed to allow students to integrate pathophysiologic principles and assessment findings to formulate a field impression, and implement an assessment and treatment plan for the geriatric and psychiatric patient, as well as the patient with special needs. Topics will include age/condition specific assessment and management of respiratory, cardiac, trauma, neurological, and behavioral emergencies.

EMS 232 Paramedic Clinical Capstone 1 credit
45 clinical hrs

Designed as the clinical capstone course for the paramedic program. Students will apply and integrate all key didactic, psychomotor, affective, and clinical constructs of the EMS program and apply it to contemporary practice in the pre-hospital setting. Students will demonstrate and exercise the ability to function as an entry-level paramedic while being guided, overseen, and evaluated by experienced paramedic preceptors. Co-requisite: EMS 226

EMS 233 EMS Operations 1 credit
45 lab hrs

Upon completion of this course students will be able to utilize knowledge and skills gained to safely manage multi-casualty

incidents and rescue situations; utilize air medical resources; identify hazardous materials and other specialized incidents. *Some portions of this course may take place off campus for a better student experience.*

EMS 236 Paramedic Assessment Based Management 1 credit 45 lab hrs

Designed to be a summative laboratory course, students will be evaluated in both the team lead and team member role in scenarios. This course serves to culminate the skills practiced and evaluated in previous courses and evaluate the student's ability to be both a team member and the clinical decision maker in given patient care scenarios. The scenario lab component provides students the contextual opportunity to demonstrate competence in the simulated environment prior to progressing to the role of Team Lead in a field clinical environment. Co-requisite: Matriculation into the Paramedic Certificate Program or associate degree program.

EMS 243 Community Paramedicine 8 credits 90 class hrs, 30 lab hrs

This course takes the experienced paramedic and expands upon their role into the role of community paramedic. Course content includes medical legal issues, scope of practice, financial implications, nutrition, and public health. A significant portion of this course is reserved for discussion of the social determinates of health and the role of the community paramedic in public health. Students will learn about high risk populations, health promotion and injury prevention strategies, as well as chronic disease management. Advanced physical assessment, laboratory test interpretation and bed side diagnostics are introduced. Co-requisite: Matriculation in the Community Paramedicine program.

EMS 245 Community Paramedicine Clinical 3 credits 90 clinical hrs

Designed to allow students to apply the skills learned in the didactic and lab courses to a variety of clinical settings under the direction of a preceptor. Clinical rotations occur at hospitals, schools, public health facilities, long term care facilities, clinical diagnostic laboratories, primary care offices, and in a variety of other specialty areas. The goal of the clinical experience is to expose the student to a variety of roles.

EMS 246 Leadership in EMS 2 credits 30 class hrs

This course serves to provide the student with a deeper understanding of the major components and principles of a leadership role, as well as adapting to the changing role of the EMS provider. The student will learn different styles of leadership and investigate the qualities of a successful leader. The student will develop a comprehensive understanding of public relations, education, and medical direction; and their roles in the advancement of a stronger EMS system.

EMS 247 Community Paramedic Seminar 1 credit 45 lab hrs

Designed as a capstone course the seminar will provide the student with an intense lab experience that simulates professional practice, as well as present their capstone project,

worked on throughout the program. Additional topics covered include ambulance services management, concepts of lifelong learning, quality improvement, and the provider's role in their community. Pre-requisite: EMS 245

EMS 296 Critical Care Emergency Medical Transport 7 credits 100 class hrs

This course is the nationally accepted University of Maryland-Baltimore County Critical Care Emergency Transport Program. This program is designed to prepare paramedics and nurses to function as members of a critical care transport team. Critical patients that must be transported between facilities require a different level of care from hospital or emergency field patients. Participants will gain an understanding of the special needs of critical patients during transport, become familiar with the purpose and mechanisms of hospital procedures during transport. Topics include: The Critical Care Environment, Breathing Management, Surgical Airway Management, Hemodynamic Management, Cardiac Management, Pharmacological Management, GI, GU and Renal Management, Neurological Management, Complications of Transport and Special Considerations. Students with 100% attendance will be evaluated with a written examination at the end of the course. Successful participants are issued a renewable certificate from the University of Maryland-Baltimore County (valid for t three years). Pre-requisites: Must be a licensed Paramedic or Registered Nurse with certifications in BLS, ACLS, ITLS/NCC/PhTLS, PALS and one year of field experience.

ENG 017 Reading & Writing Fundamentals 4 credits* 4 class hrs

Designed to help students improve their reading vocabulary; writing skills, including paragraph and essay development; comprehension; and study and test-taking abilities. This course will cover critical reading and writing skills, main ideas, vocabulary development, supporting details, organizational patterns and inference. A wide variety of resources, such as the textbooks, a novel, newspapers, magazines, internet websites blogs and books, will be used to help the student strengthen and build reading and writing skills, as well as background knowledge, at the same time.

Note: Credit from this course is not applicable towards graduation.

ENG 111 English Composition 3 credits 3 class hrs

Basic writing course intended to strengthen the student's ability to think logically and to write clearly. The course will cover grammar, paragraph organization, the essay and the research paper with a strong emphasis on revision.

ENG 226 Introduction to Literature 3 credits 3 class hrs

An introduction to the study of literature designed to help students develop the ability to read, interpret, and criticize a variety of literary forms and to appreciate literature as a source of insight into human values. Pre-requisite: ENG 111

abbreviations with identification of disease symptomatology, differential diagnosis and evaluation of laboratory data and drug therapy through textbook readings. It will also focus on the principles of drug action and how the use of drugs alters the disease process. Also included will be the cellular mechanisms of drug actions and the mechanisms of adverse drug effects. Co-requisite: BIO 211.

**HIT 213 Clinical Classification Systems II 3 credits
3 class hrs**

Emphasizes the principles and conventions of the HCPCS/CPT clinical classification systems used in today's health care settings. Other topics include applicable licensing and regulatory issues relative to coded data, payment and reimbursement systems, professional ethics, content of the medical record, decision-making processes, data validity and integrity, classification systems and nomenclature, and quality assessment and improvement. Students will be expected to apply decision making in record review for complete, accurate, and timely coding. HCPCS/CPT coding will also be practiced and applied in conjunction with ICD-10-CM for hospital ambulatory surgery, the physician's office setting and other outpatient settings. The CMS developed Prospective Payment System for ambulatory care will be reviewed.

Pre-requisite: HIT113; Co-requisites: BIO 211 and HIT 115

**HPB 110 High Pressure Boiler Operator 3 credits
3 class hrs**

Meets the education requirements necessary to take the State of Maine high pressure boiler operator examination. Emphasis on boiler classification, design, accessories and theory of operation, as well as State of Maine boiler rules.

**INS 110 Instrumentation & Process Controls 3 credits
2 class hrs, 2 lab hrs**

This course will introduce students to the fundamentals of process measurement and control systems. The course will begin with a study of industrial instrumentation including pressure, level, flow and analytical measurement systems. A thorough understanding of 4-20mA process signals will be provided as well as an introduction to PID process loop controllers. The course will conclude with an introduction to motor speed control concepts including configuration and troubleshooting variable frequency drive systems.

Pre-requisite: ELS 119

**MAT 011 Foundational Mathematics 3 credits*
3 class hrs**

This course prepares the student for upper-level math courses.

**Credit from this course is not applicable for graduation.*

**MAT 115 Business Mathematics 3 credits
3 class hrs**

Designed to provide solid, practical and current coverage of the mathematical topics students must master to succeed in business today. Students will develop the computational and vocabulary skills necessary for retailing, marketing, accounting, business management, and finance. Topics include: interest, banking, depreciation systems, payroll, statistics, and graphs.

It includes expanded discussion of key business topics in an algebra-based context.

**MAT 116 Quantitative Reasoning 3 credits
3 class hrs**

This survey mathematics class includes use of basic quantitative skills with fractions, decimals, and percent; fundamentals of algebra; and the exploration of the mathematical concepts of unit analysis, personal finance, and basic statistics.

**MAT 118 Electrical Math 4 credits
4 class hrs**

Students learn to use numeric, algebraic and trigonometric methods to analyze DC and AC circuits and systems. Topics include measurement; series, parallel and series-parallel circuits; capacitance; inductance; transformers power; resistance of wire and the AWG; line drops; and three-phase systems.

**MAT 119 Applied Mathematics 4 credits
4 class hrs**

This applied mathematics course reviews and strengthens the student's understanding of fundamental algebra, measurement, plane geometry, solid figures and geometric constructions skills. Emphasis is placed on problem solving in the specific trade areas to prepare the student to meet the mathematical challenges that they will encounter in physics, technical lab, and field of employment.

**MAT 125 College Algebra 3 credits
3 class hrs**

Includes the number system, operations with algebraic expressions, factoring, linear equations, exponents, radicals, quadratic equations, fractions and graphs.

**MAT 210 Statistics 3 credits
3 class hrs**

Develops techniques for organizing, evaluating and analyzing data. Includes frequency distributions, measures of central tendency, variation, probability, the normal and binomial distributions and hypothesis testing. Pre-requisite: MAT 125 or any 100-level math course.

**MAT 227 Calculus 4 credits
4 class hrs**

Calculus focuses on differential and integral calculus. Topics include basic concepts of differentiation and integration and their applications. Pre-requisite: MAT 125.

**MDA 110 Medical Assisting Office Procedures 3 credits
3 class hrs**

Introduces the student to the healthcare industry and the medical assisting profession. It will assist the student to develop skills necessary to perform effectively within the medical office, to include: interpersonal skills, professional behavior, computer and telephone techniques, patient processing, office operations, health information management, financial and practice management. Co-requisites: BIO 201 ALH 124 and ALH 220

MDA 111 Medical Assisting Procedures with Lab I **4 credits**
2 class hrs, 2 lab hrs

Provides the groundwork for the fundamentals of medical assisting to include infection control, patient assessment, patient education, nutrition and health promotion, and vital signs. It will also cover assisting with the physical exam, emergency preparedness, venipuncture, and clinical laboratory and tests. In the lab, students practice skills introduced in the classroom. Pre-requisite: MDA 110 or ALH 124; Co-requisites: MDA 124, BIO 211, HIT 111 and HIT 115.

MDA 124 Medical Insurance Processing **3 credits**
3 class hrs

Focuses on understanding medical insurance and billing of the diverse medical insurances, including Blue Cross/Blue Shield, Medicare and Medicaid in the healthcare industry. Provides an overview of insurance claim procedures and legal aspects of billing. Provides a forum in which students strive for accuracy in completing medical insurance forms. Pre-requisites: ALH 124 and ALH 220; Co-requisites: BIO 211 and MDA 111

MDA 211 Medical Assisting Procedures with Lab II **4 credits**
2 class hrs, 2 lab hrs

Building on the content and skills of Medical Assisting Clinical Procedures with Lab I, this course examines the intricacies of care of the client in specialty offices. Obstetrics and gynecology, pediatrics, geriatrics, cardiovascular, urological, neurological, psychiatric, rehabilitative and surgical office practice skills are introduced. Lab skills include performance of specialized diagnostic tests, pharmacology and medication administration, electrocardiography and assisting with minor procedures. Pre-requisites: HIT 115 and MDA 111; Co-requisites: MDA 212

MDA 212 Medical Coding **3 credits**
3 class hrs

Emphasizes the principles and conventions of diagnosis and procedural coding systems used in today's healthcare setting. Emphasis is placed on ICD-9-CM/ICD-10-CM and CPT/HCPCS Classification Systems. Other topics in the course include: professional ethics, content of the medical record, data validity and integrity, legal standards related to reimbursement and retrieval of information. Pre-requisite: ALH 220; Co-requisite: MDA 211

MDA 223 Medical Assisting Externship **5 credits**
1 class hr, 4 lab/clinical hrs

Allows students to gain practical experience in performing administrative and clinical tasks that occur in a medical office. Students are given the opportunity to apply skills under professional supervision and to gain proficiency in all domains. Upon completion, students should be able to function as an entry-level health care professional. Pre-requisite: ALH 124 and MDA 211, must be passed within 12 months of enrollment in MDA 223; program director approval and current first aid and CPR certification (American Heart Association Health Care Provider level)

MDA 224 Electronic Health Records **3 credits**
3 class hrs

This course is designed to prepare the student to more efficiently use the computer software of an electronic health record. The course emphasizes that thorough documentation is essential for the highest reimbursement possible. Hands-on activities will provide students with transferable skills that will prepare them for success in the medical office, regardless of what software their practice uses.

MTT 113 Machine Tool Technology I **6 credits**
3 class hrs, 9 lab hrs

This course provides the student with an introductory experience in manual machine tool operations. The training introduces the student to precision measuring, layout, cutting tools, project planning, manual drilling, manual turning, machining formulas and work-holding. An integral part of the instruction will include safe work practices and material handling. Students will machine several projects to develop skills utilizing the various machining techniques. Co-requisite: MTT 115

MTT 115 NIMS Lab I **1 credit**
3 lab hrs

This course provides additional shop time to develop basic competency on milling machines, lathes, and precision measuring methods and instruments. This course will prepare students for NIMS Level I or other industry certification by completing a NIMS Performance Part(s) and other assigned projects. Co-requisite: MTT 113

MTT 119 NIMS Lab II **1 credit**
3 lab hrs

This course provides additional shop time to develop basic competency in milling machines, lathes, and precision measuring methods and instruments. This course will prepare students for NIMS Level I/II or other industry certification by completing a NIMS Performance Part(s) and other assigned projects. Co-requisite: MTT 125

MTT 125 Machine Tool Technology II **6 credits**
3 class hrs, 9 lab hrs

This course focuses on developing intermediate skills in manual milling and turning of machine components to industry standards of tolerance and finish. Training at this level will prepare students for NIMS Machine Level I & II Certification. An integral part of the instruction will include safe work practices and material handling. Pre-requisite: MTT 113; Co-requisites: MTT 119 and PMM 212

NUR 100 Nursing Program Success First Semester Experience **1 credit**
15 class hrs

This course is designed to equip the incoming nursing student with tools that promote success. Students will be engaged in several academic advising sessions in both individual and group formats and will be expected to complete a Personal Learning Plan, focusing on the student's strategy towards success in the nursing program. Classes will address issues such as learning styles, communication skills, study habits, time management, establishing professional collaborative relationships, test taking

NUR 125 Foundations of Nursing 7 credits
4 class hrs, 9 lab/clinical hrs

Introduces students to concepts that form the foundation for the practice of nursing. Student learning is focused on the basic human needs of individuals presented within the framework of the nursing process. Includes basic principles of nutrition, pharmacology, applied physiology, and the role of the nurse which addresses ethical and legal responsibilities. Clinical learning experiences provide an opportunity for students to develop, practice and refine basic nursing skills in both lab and clinical settings. Pre-requisites: Current American Heart Association BLS (Health Care Provider) certification; nursing major; Co-requisites: ALH 124, BIO 201, ENG 111, NUR 100 and NUR 115

NUR 127 Nursing Across Life Span I 7 credits
4 class hrs, 9 lab/clinical hrs

Provides students with continuing opportunity to assess the biopsychosocial aspects of individuals throughout the life span. Includes: an introduction to the biopsychosocial aspects of the childbearing/childrearing family through a family centered approach; exploration of the normal prenatal period and progresses throughout adulthood; common well-defined health problems and developmental needs of persons of all age groups; and common alterations of basic human needs from prenatal through death. Through the use of the nursing process, students further develop the necessary knowledge and skills to provide nursing care to the childbearing/childrearing family and to individuals experiencing alterations in meeting basic human needs. Selected clinical learning experiences utilize the nursing process in the development and provision of nursing care in structured health settings.
Pre-requisites: NUR 100, NUR 125, NUR 117 and NUR 124*;
Co-requisite: NUR 115.

Note: For LPNs, this pre-requisite must have been successfully completed within three years prior to acceptance into NUR 127.

NUR 195 Clinical Externship 3 credits
135 clinical hrs

Provides nursing students with an opportunity to develop and further refine nursing skills acquired in NUR 125 and NUR 127. This course is an elective for nursing students who have successfully completed the second semester in nursing. Enrollment may be limited based upon availability. Clinical learning experiences utilize the nursing process to provide nursing care to clients in structured health care settings.
Pre-requisites: NUR 117, NUR 127, BIO 211 and PSY 101

NUR 226 Nursing Across the Life Span II 9 credits
5 class hrs, 12 lab/clinical hrs

Emphasis is placed on a holistic approach to providing nursing care to an individual throughout the life span experiencing common, well-defined health problems. Through the use of the nursing process as the mechanism for the delivery of nursing care, emphasis is given to the restoration maintenance of an individual's biopsychosocial needs. Clinical learning experiences occur in structured health care settings and are correlated with classroom instruction. Pre-requisites: BIO 211,

NUR 117, NUR 127 and PSY 101; Co-requisites: BIO 218 and PSY 207.

NUR 229 Nursing Across the 9 credits
Life Span III 5 class hrs, 12 lab/clinical hrs

Focuses on a holistic approach to the care of the individual or groups of individuals throughout the life span who are experiencing multiple, common, well-defined health problems. Emphasizes the completion of the role change process as the student prepares to assume the full scope and legal framework of associate degree nursing practice. Students explore the impact of current issues in nursing on the role of the ADN. Clinical learning experiences occur in structured health care settings and are correlated with classroom instruction.
Pre-requisites: BIO 218, NUR 226 and PSY 207; Co-requisites: COM 111 and humanities elective

NUT 101 Intro to Nutrition 3 credits
3 class hrs

This course provides an overview of nutrition and wellness promotion. Fundamental concepts of nutrition across the lifespan are introduced, including the relationship of nutrition to health, necessary nutrients for healthy functioning, energy balance and fitness, food safety, and national guidelines, with applications to individuals and groups. Strategies include classroom presentations, nutritional assessments of self and case-study clients, planning of interventions, and evaluation of various nutritional approaches. Self-care strategies are presented, including the use of non-pharmacologic, integrative interventions.

PHI 111 Everyday Ethics 3 credits
3 class hrs

An introduction to virtue ethics and how the virtues apply to the dilemmas of everyday life.

PHI 121 Introduction to Philosophy 3 credits
3 class hrs

An introduction to reading, analyzing, and discussing philosophical texts. Students will explore the principal concerns of philosophy, including the limits of our knowledge, the nature of reality, the existence of God and free will, and the relationship between the individual and society. Students will apply philosophical concepts and methods to contemporary problems in the world.

PHI 201 Ethics 3 credits
3 class hrs

An introduction to morality, moral theory and moral thinking. Students will be exposed to basic moral concepts, theory, and reasoning before applying that knowledge to specific moral problems. Pre-requisite: ENG 111

PHI 206 World Religions 3 credits
3 class hrs

World Religions is an introduction to the world's major religions through the study of their founders, beliefs, rituals, practices, sacred texts, and sects.

PHY 150 Physics 4 credits**3 class hrs, 2 lab hrs**

Physics is the most basic of sciences. It deals with the behavior and structure of matter. This algebra/trigonometry-based course is designed to acquaint the student with basic physical concepts relating to measurement, the interaction of forces, work and energy, properties of fluids, vibrations and waves, and heat and thermodynamics. Employing a systems approach, unifying principles are applied to four major energy systems: mechanical, fluid, electric, and thermal. The student will read, attend lectures, view demonstrations, participate in class discussions, complete homework exercises in the text, and complete laboratory activities. Pre-requisite: MAT 118 or MAT 119

PLH 101 Plumbing Technology 3 credits**3 class hrs**

This course will introduce the student to the fundamental principles of plumbing technology. The course stresses quality plumbing installations along with the basic knowledge of how plumbing systems function with the relationship to the Maine State Plumbing Code. The course begins with safety, fundamentals of plumbing drainage, venting of the plumbing system, potable water pipe installation, subsurface drainage systems, pipe and fitting identification and several other basic principles of the art of plumbing. Common methods of pipe fitting assembly such as copper, IPS, PEX and PVC systems, drain waste and vent system fundamental and sizing, potable water fundamentals, fixture installation and plumbing service.

PLH 109 Plumbing Lab 1 3 credits**9 lab hrs**

Provides hands-on training in several areas associated with the plumbing career. Beginning with the assembly of the common piping systems including copper, IPS, PEX and PVC, students will work on installation of installing the 'rough in' practices of plumbing drainage and water supplies, faucet and fixture installations and service along with basic plumbing systems. Co-requisite: PLH 101

PLH 113 Pipefitting Calculations 3 credits**3 class hrs**

Introduces students to pipe fitting mathematics with particular attention given to the plumbing and heating trades. Emphasis is to help the student develop a strong skill in commonly used pipe calculations. This course will particularly help candidates for the Maine plumbing journeymen or master license examination.

PLH 122 Plumbing Code Review 3 credits**3 class hrs**

Introduces the student to the Maine State Plumbing Code and explains each chapter in detail. Particular attention will be given to the sizing of DWV, potable and storm piping systems. This course is designed to be a preparation for the Maine Journeyman's exam.

PLH 123 Plumbing Lab II 3 credits**9 lab hrs**

This is a skills based course which gives the student hands on training in many areas of the plumbing and pipe fitting trades. The majority of lab time will be used to develop skills in proper

assembly and testing of potable hot and cold water lines, DWV lines, various plumbing fixtures and appliances, domestic hot water sources, and faucet installation and repair.

Pre-requisites: PLH 101, PLH 109, PLH 113 and PLH 115;

Co-requisite: PLH 122

PLH 126 Water Pumps and Water Treatment 2 credits**1 class hr/2 lab hrs**

This course will introduce students to fundamentals of residential water pumps and water treatment. Review of well types, the hydrological cycle, basic operation of jet and submersible pumps, tank and pump accessories, troubleshooting and a review of Maine laws that apply to installation of water pumps will be the major focus of the water pump portions of this course. Water treatment includes the installation of water softeners, reverse osmosis systems, Biolight systems, as well as water filtration. Maine State Well Drillers and Pump installers codes will also be covered.

PLH 211 Heating I 6 credits**3 class hrs, 9 lab hrs**

Introduces the career of a heating technician. Students will gain knowledge of the fundamental process of supplying heat for comfort. The major focus is heating fundamentals, hydronic systems including radiant floor, system sizing and computer software for heat load calculations. Different piping distribution systems are discussed and explained. Pre-requisite: PLH 122, PLH 123 or instructor's permission.

PLH 212 Refrigeration and Air Conditioning 2 credits**1 class hr, 3 lab hrs**

The course covers the fundamentals of refrigeration and air conditioning. Upon completing the course, students can test for the EPA 608 Certification. The students will be trained to safely use the tools required for the trade. Major topics discussed will be: refrigeration, heat pump installation and service, compressors, controls, refrigerants, along with hematic systems. Considerable time will be spent on the refrigerant evacuation and re-fill and line testing. Students will work on installing and servicing of heat pumps.

PLH 213 Solid Fuel Equipment 2 credits**1 class hr, 3 lab hrs**

This course focuses on the different solid fuel appliances and the proper sizing, installation and service of the equipment for central heating of buildings. Pellet boilers, wood heating and wood gasification are covered along with proper installation practices. Thermal storage options and requirements are also discussed in regards to Solid Fuels.

PLH 216 Propane & Natural Gas I 3 credits**2 class hrs, 2 lab hrs**

Meets the criteria for three fuel gas licenses. Students will study basic principles and practices, appliance servicing, and installation of propane and natural gas equipment. Each section will include examination for state licensing, which is necessary for employment in the field of propane and natural gas in Maine. The coursework consist of a combination of lectures, demonstrations, homework and tests.

PLH 219 Propane & Natural Gas II 3 credits**2 class hrs, 2 lab hrs**

This course is a continuation of PLH 216 and meets the criteria for additional fuel gas licenses. Students will study the basic principles and practices, appliance servicing and installation of propane and natural gas equipment. Each section will include examination for state licensing which is necessary for employment in the field of propane and natural gas in Maine. Pre-requisite: PLH 216

PLH 222 Heating II 5 credits**2 class hrs, 9 lab hrs**

A continuation of PLH 211, covering the following: fuel oil and its application to domestic burners; oil tanks and tank piping; fuel units; combustion theory; chimneys and draft; commercial oil burners; combustion efficiency testing; heating control wiring; heating system design and sizing; and customer satisfaction. Lab time will also be used to properly install control wiring. Pre-requisite: PLH 211

PLH 225 Maine Oil & Solid Fuel Code 1 credit**1 class hr**

Introduces the student to the laws and rules that apply to all oil and solid fuel burning appliances in Maine. Discussions and lectures will be centered around the State of Maine rules book for the installation of oil and solid fuel burning appliances, National Fire Protection Association pamphlets #31 and #211, and portions of the National Electrical Code.

PMM 102 Intro to CNC Operations 2 credits**1 class hr, 3 lab hrs**

An introductory course in setting up and operating Computer Numerical Control (CNC) mills and lathes, to provide a variety of machined components. This course will focus on maintaining quality and safety standards; keeping records; maintaining equipment and supplies. Program training includes basic CNC operator skills and CNC set-up processes.

PMM 104 Machine Trades Print Reading 1 credit**1 class hr**

This is an introductory course in reading and understanding basic mechanical drawings in the machine trades industry. Actual industrial prints prepare the student for the real conditions found in a machine shop. This course will focus on print reading skills, specifically, views, lines, symbols, dimensions & tolerances, and notes. This course will reinforce use of the Machinery's Handbook to reference data and formulas.

PMM 117 CAM for Milling 2 credits**1 class hr, 3 lab hrs**

This course provides students with an understanding of how to create toolpath for parts requiring prismatic milling. It also includes an introduction to rotary axis indexing, suitable for both 4-axis milling. The student will also be introduced to the ToolStore, providing the basic knowledge required to begin adding user-specific cutting tools, stock, fixtures and setup information to the database. Students will learn how to create toolpath using solid models, focusing on toolpath creation

(CAM), with most of the classroom training spent on creating toolpath using solid models, not drawing part geometry (CAD). Importing DXF<DWG & IGES and sketching wire-frame geometry are also covered, but the focus is on machining solids. Pre-requisite: Knowledge of basic CNC machining; proficient with Microsoft Windows

PMM 119 CAM for Turning 2 credits**1 class hr, 3 lab hrs**

The course provides students with an understanding of how to create toolpath for parts requiring 2-axis turning. The class also introduces students to the ToolStore, providing the basic knowledge required to begin adding user-specific cutting tools, stock, fixtures and setup information to the database. Students will learn how to create toolpath using solid models. Please note that this class is focused on toolpath creation (CAM), with most of the classroom training spent on creating toolpath using solid models, not drawing part geometry (CAD)> Importing DXF, DWG & IGES and sketching wire-frame geometry are also covered, but the focus is on machining solids. Pre-requisite: Knowledge of basic CNC machining; proficient with Microsoft Windows

PMM 120 Intro. to CNC Setup, Programming & Operations 3 credits**1.5 class hrs, 4.5 lab hrs**

This course focuses on computer numerical control (CNC) milling machines. This course provides the fundamental technical information in machining systems, positioning and coordinate systems, as well as part programming, program procedures and basic setup and operation of CNC vertical milling machines. Students will write simple programs to perform contouring and hole-making operations for typical CNC milling machines and perform the required setup and operation to produce parts to print specifications in the college's state-of-the-art CNC lab. Emphasis is placed on developing an understanding of typical G and M codes used in modern CNC controls. Students will be required to perform calculations for speeds and feeds for various tooling. Safe work practices and materials handling will be an integral aspect of the classroom and work environment. Pre-requisites: MTT 113 and MTT 115

PMM 212 Geometric Dimensioning & Tolerancing 2 credits**1 class hr, 3 lab hrs**

The guidelines for consistent and clear application of dimensions and tolerances are defined by the standards of the American National Standards Institute (ANSI) as written by the American Society of Mechanical Engineers (ASME). This course provides the student with the complete fundamentals of geometric dimensioning and tolerancing (GD&T) concepts as adopted by ANSI and published by ASME. It builds on prior knowledge of prints and machined parts and applies that knowledge to geometric toleranced drawings. Students will learn the terminology and definitions of geometric dimensioning and tolerancing and how to apply its concepts. This comprehensive course will prepare students for ASME's GDTP Certification. Pre-requisites: MTT 113, MTT 115 and PMM 104

PMM 223 Intro. to Precision Metals Mfg. 6 credits
3 class hrs, 9 lab hrs

This course offers hands-on experience under work-like conditions and in-depth "live" CNC projects that build on skills acquired in MTT 113, MTT 125, and PMM 120. Set-up of CNC machine tools including the selection of tooling, developing custom work-holding fixtures, manual programming techniques, troubleshooting, calculation and input of offsets, and maintaining quality through a production run are developed beyond the introductory level of PMM 120. An integral part of the instruction will include safe work practices and material handling. Pre-requisites: MTT 125 and PMM 120; Co-requisite: PMM 227

PMM 227 NIMS Lab III 1 credit
3 lab hrs

This course provides additional shop time to develop intermediate competency in programming, setup and operation of CNC mills and lathes, as well as precision measuring methods through the use of a coordinate measuring machine (CMM). Co-requisite: PMM 223

PMM 231 Advanced Precision Metals 6 credits
Manufacturing 3 class hrs, 9 lab hrs

This course offers the student intermediate to advanced hands-on experience, under work-like conditions and in-depth "live" CNC projects including 3 and 4 axis operations. Manual programming and CAM software will be used to prepare CNC programs for both mills and lathes. Training in manufacturing process improvement will focus on the methods used by leading firms to eliminate non-value added activities from their manufacturing processes. Machine tool probes will be used to establish machine set-ups, inspect cutting tools and measure machined components. An integral part of the instruction will include safe work practices and material handling. Pre-requisite: PMM 223; Co-requisite: PMM 233

PMM 233 NIMS Lab IV 2 credits
6 lab hrs

This course provides additional shop time to develop intermediate competency in programming, setup and operation of CNC mills and lathes, as well as precision measuring methods through the use of a coordinate measuring machine (CMM). This course will prepare students for NIMS Level II (CNC) or other industry certification by completing a NIMS Performance Part(s) or other assigned project(s). Co-requisite: PMM 231

PMM 235 Multi-Axis Milling 2 credits
1 class hr, 3 lab hrs

This intermediate Edgecam training course provides insight into effectively using the software for multi-axis CNC milling. This course is geared to users who want to gain a deeper understanding of creating toolpath for multiple setups, multiple parts and rotary axis applications. By learning through hands-on exercises, students will learn software functions for changing work coordinate systems within a program, 4th and 5th axis indexing, using multiple setups within a single part, and machining multiple parts. The course provides the Edgecam user with the software knowledge needed for multi-plane rotary

axis and multiple part milling applications.

PMT 111 CNC Mill & Lathe Operations 4 credits
1 class hr, 9 lab hrs

CNC Mill and Lathe Operations is an introductory course in operating Computer Numerical Control (CNC) mills and lathes, to produce a variety of machined components in work-like conditions. This course will focus on maintaining quality and safety standards; keeping records; maintaining equipment and supplies. Program training includes basic CNC operator skills, inspection, and process adjustments.

PMT 112 CNC Mill Pograming 2 credits
2 class hr

CNC Mill Programming introduces the student to basic CNC Mill programming. Students will write simple programs to perform facing, contouring and hole-making operations for typical CNC Vertical Machining Centers. Emphasis is placed on developing an understanding of typical G and M codes used in modern CNC controls. Throughout the course, students will be required to perform calculations for speeds and feeds for various tooling and machining applications.

PMT 114 CNC Lathe Pograming 2 credits
2 class hrs

CNC Lathe Programming introduces the student to basic CNC Mill programming with an emphasis on the following: coordinate system; G-Code motion commands; M-Code functions; cutting tool selection; machining conditions such as speeds, feeds, data points, tool nose compensation.

PMT 116 CNC Mill Setup 2 credits
1 class hr, 3 lab hrs

CNC Mill Setup is an introductory course in the set up of 3 axis CNC mills through practical application. Every aspect of machine setup is covered from selecting the starting stock to performing a first article inspection on the completed part. Students will load tools, set up work-holding fixtures, set work and tool offsets. Students will verify their setup is correct before machining by running a graphic simulation and above-part verification. They will cut first piece and inspect their own work, adjusting offsets as necessary to produce a part within customer specification.

PMT 118 CNC Lathe Setup 2 credits
1 class hr, 3 lab hrs

CNC Lathe Setup is an introductory course in the set up of 2 axis CNC lathes through practical application. Every aspect of the machine setup is covered from selecting the starting stock to performing a first article inspection on the completed part. Students will load tools, set up work-holding fixtures, set work and tool offsets. Students will verify their setup is correct before machining by running a graphic simulation and above-part verification. They will cut the first piece and inspect their own work, adjusting offsets as necessary to produce a part within customer specification.

SES 129	Office Procedures	3 credits 3 class hrs		TEC 123	Building Science II	3 credits 1.5 class hrs, 3 lab hrs
Includes lectures, discussion and/or experience concerning office-support topics; technical and knowledge; communication, problem-solving, compilations, office-support, employment, and critical-thinking skills. A training/teaching presentation and a program-specific application project are included. Pre-requisite: CIS 113				This course continues to familiarize the student with building construction materials and methods, with an emphasis on sustainable building technology. Students will have practical experience working with a variety of materials and building construction products. Heat loss analysis for a residential or light commercial building will be conducted. Pre-requisite: TEC 112		
SOC 111	Sociology	3 credits 3 class hrs		TEC 221	Construction Management	3 credits 3 class hrs
Introduces students to sociology, the "science of society," and its approach to human social life. The course shows students how sociologists conduct research, and it describes the basic concepts and theories sociologists use to explain the social world.				Introduces construction specifications, project manuals, contract management, quantity take-off, cost estimating, construction procedures and scheduling. Pre-requisite: TEC 123		
SOC 215	Social Issues and Problems	3 credits 3 class hours		TTE 251	Trade Internship	1 credit
An analytical introduction to contemporary social issues and problems in the United States, with emphasis on the underlying causes of and competing solutions to each issue. Issues to be discussed include abortion, aging, crime and violence, race and ethnic relations, medical care, family dysfunction and overpopulation.				Provides the student with on-the-job training at an approved worksite in an occupational field directly related to the student's major. At least 45 clock hours must be completed for 1 credit. To qualify for an internship, a student in an associate degree program must have completed 30 credits of course work, have attained a 2.5 GPA, and must be recommended by the department chair and course instructor. Before registering, students must meet with the course instructor to determine internship site and process paperwork.		
SPA 101	Elementary Spanish I	3 credits 3 class hrs		TTE 252	Trade Internship	2 credits
By using five aspects of language learning...speaking, listening, reading, writing and culture...the student will begin to attain an understanding of and ability to use the Spanish language.				Provides the student with on-the-job training at an approved worksite in an occupational field directly related to the student's major. At least 90 clock hours must be completed for 2 credits. To qualify for an internship, a student in an associate degree program must have completed 30 credits of course work, have attained a 2.5 GPA, and must be recommended by the department chair and course instructor. Before registering, students must meet with the course instructor to determine internship site and process paperwork.		
SPA 102	Elementary Spanish II	3 credits 3 class hrs		TTE 253	Trade Internship	3 credits
Builds upon the skills learned in SPA 101, allowing students to attain a greater understanding of and ability to use the Spanish language. Pre-requisite: SPA 101 or instructor's permission				Provides the student with on-the-job training at an approved worksite in an occupational field directly related to the student's major. At least 135 clock hours must be completed for 3 credits. To qualify for an internship, a student in an associate degree program must have completed 30 credits of course work, have attained a 2.5 GPA, and must be recommended by the department chair and course instructor. Before registering, students must meet with the course instructor to determine internship site and process paperwork.		
SUR 214	Construction Surveying	2 credits 1 class hours, 3 lab hours		WEI 101	Intro to Welding	3 credits 2 class hrs, 2 lab hrs
Construction Surveying is an introductory course into the basic requirements of construction survey techniques. The emphasis is on proper usage of equipment, layout of horizontal angles, determining distance, elevation and slopes, layout, and interpreting field data. Students will also increase their skills in the preparation and understanding of civil engineering drawings including topographical and cross section plans. Students who successfully complete the course can expect to gain skills necessary to become entry-level survey party technicians working for engineers, contractors, and surveyors.				This is an introductory welding course that helps students develop a basic knowledge of welding processes. An introduction to gas welding techniques including oxy-acetylene welding, cutting, and plasma cutting is provided. Students are also introduced to the arc welding process. Discussion of equipment and materials used is also provided. Lab activities provide practice in developing an understanding of the equipment, proper selection of the welding process determined		
TEC 112	Building Science I	3 credits 1.5 class hrs, 3 lab hrs				
Introduces students to appropriate materials and methods as found on residential and light commercial construction projects. Units of instruction include: site work, concrete, foundations, masonry, framing systems, and roofing. Environmentally sustainable construction materials will be highlighted.						

by materials being joined, and the differences in technique necessary for welding in different positions. Safe handling of welding equipment and supplies is strongly emphasized as is overall shop safety.

WEI 103 Welding for Automotive Tech 3 credits
2 class hrs, 2 lab hrs

This is an introductory welding course that helps students develop a basic knowledge of welding processes. An introduction to gas welding techniques include oxy-acetylene welding, cutting and plasma cutting is provided. Students also develop a basic knowledge of the gas metal arc welding (GMAW) process. Discussion of equipment and materials used is also provided. Lab activities provide practice in developing an understanding of the equipment, proper selection of the welding process determined by materials being joined, and the differences in technique necessary for welding in different positions. Safe handling of welding equipment and supplies is strongly emphasized as is overall shop safety.

WEI 113 Thin Metals Welding 3 credits
2 class hrs, 2 lab hrs

Provides classroom and hands-on training in the welding skills commonly used in automotive collision repair. The course covers the proper safety, setup, and operation of oxyacetylene welding and GMAW welding equipment for welding on the metals used in the manufacturing of automobiles. Students will perform GMAW plug welding, continuous welding, and stitch welding on various metals with a concentration on the thin metal welding in the horizontal, vertical and overhead positions. Students will perform oxyacetylene cutting, heating, brazing and welding. The course includes all elements of the welding module in I-CAR standards.

WEI 133 Electric Welding 3 credits
2 class hrs, 2 lab hrs

This course helps the student develop basic knowledge and skills necessary to the understanding of welding through a primary focus on arc welding. Discussion focuses on developing an understanding of the different arc welding processes, associated types of equipment and welding materials, and the appropriate selection of welding process as dictated by the materials being joined. Lab activities provide practice in developing basic skills in arc welding processes related to the student's chosen field. The focus is on developing an understanding of equipment operation, proper selection of welding process determined by the material being joined, and the differences in technique for welding in different positions on different thickness materials. Safe handling of equipment and supplies and overall shop safety is strongly emphasized. Pre-requisite: WEI 101, WEI 113 or permission of instructor

WEI 136 Gas Metal Arc Welding and Gas Tungsten Arc Welding 3 credits
2 class hrs, 2 lab hrs

This is an introductory welding course that helps students develop a basic knowledge of the Gas Metal Arc Welding and the Gas Tungsten Arc Welding processes. An introduction to G.M.A.W. techniques and G.T.A.W. techniques is provided.

Discussion of equipment and materials used is also provided. Lab activities provide practice in developing an understanding of the equipment, proper selection of the welding process determined by materials being joined, and the differences in technique necessary for welding in different positions. Safe handling of welding equipment and supplies is strongly emphasized as is overall shop safety. Pre-requisite: WEI 101; Co-requisite: WEI 133

WEI 137 Structural Welding I 3 credits
1.5 class hrs, 4.5 lab hrs

This course provides students with an understanding of the requirements of the American Welding Society Structural Welding Code D1.1, and A.W.S. 3 – 89 Standard for Certified Welders. The student will be given the opportunity to develop skills in the Shielded Metal Arc Welding process on 3/8 steel plate with E7018 electrodes. Co-requisite: WEI 133

WEI 138 Structural Welding II 3 credits
1.5 class hrs, 4.5 lab hrs

This course provides the student with the practice time required to prepare for The American Welding Society's Structural Welder Certification. The student will be given the opportunity to further develop the skills in the shielded metal arc welding process using E7018 electrodes. Students will work on 3/8 steel plate in the 3G and 4G positions. Safe handling of equipment, supplies and overall shop safety is strongly emphasized. Pre-requisite: WEI 137

WEI 139 Open Root Welding 3 credits
1.5 class hrs, 4.5 lab hrs

This course is designed to give the student the ability to develop the skills necessary to successfully complete open root welds on mild steel plate in four positions using E6010 electrodes with the shielded metal arc welding process. Safe handling of equipment, supplies and overall shop safety is strongly emphasized. Co-requisite: WEI 138

WPT 110 Safety Fundamentals for Wind Technicians 3 credits
2 class hrs, 3 lab hrs

Course focuses on understanding safety and risk assessment related to working with wind turbine systems. Topics include evaluation of high angle work considerations, tower rescue systems and procedures along with related electrical safety standards. Lecture discussions and lab activities include evaluation of power industry tasks related to working with automated systems. These include risk mitigation methods such as training requirements and working procedures for electrical hazards, LOTO, confined space, elevated working surfaces, cranes, rigging and tool safety. Course references include OSHA Regulations 29 CFR 1910, 29 CFR 1926, ANSI Z359 and NFPA 70E Standards. Students may earn certifications for Competent Wind Energy Rescue and Rigging Basics upon satisfactory completion of this course. Course requirements: Basic First Aid, CPR, AED certifications and CPT physical assessment.

**WPT 114 Introduction to Wind Power Technology 3 credits
2 class hrs, 3 lab hrs**

Students will be introduced to the wind power industry through discussions on technician skill requirements, career opportunities, latest industry trends and challenges, along with an overview of wind turbine systems, and project operations. Classroom discussions and lab activities will include review of wind data resources, wind turbine siting requirements, hands-on exercises with a variety of wind turbine systems and simulation trainers, industrial wiring practices, along with electric motor function and control. Co-requisite: ELS 117

**WPT 119 Introduction to Wind Power Technology 3 credits
2 class hrs, 3 lab hrs**

This course provides an understanding of mechanical systems utilized in wind turbine systems. Discussion topics include: mechanical drive systems, shafts and sealing devices, gear systems, and bearings. The course will also cover hydraulic principles necessary to control modern wind turbines such as pumps, actuators, fluid control devices and ancillary systems. Discussion will focus on preventative maintenance practices, which include lubrication requirements, fastener technology, component alignment and vibration testing and monitoring. Some discussions will focus on the use or preventative maintenance data analysis that may be utilized for process improvements through predictive maintenance planning.

**WPT 213 Wind Power Control Systems 3 credits
2 class hrs, 3 lab hrs**

Considers systems utilized to control wind turbines: AC and DC motor applications, motor control system applications, automated process controls (PLCs), communication systems, remote access and related farm operations. Topics include: basics of AC & DC motor types and function, motor control system fundamentals, introduction to motor control ladder logic & applications, PLC architecture, I/O device introduction, PLC programming fundamentals and use of wind farm management tools. Course also includes an introduction to communication media fundamentals for Ethernet & optical fiber network applications. Lab exercises provide hands-on activities with basic motor and control applications, automated system applications with PLCs and motor control, introduction to PLC programming, networking basics, along with data storage, transfer and analysis activities. Network activities include hardware assembly, cable installation and related testing equipment. Pre-requisite: ELS 117.

**WPT 214 Wind Power Delivery Systems 3 credits
2 class hrs, 3 lab hrs**

This course considers the elements fundamental to generate electricity and then move that electricity to an end-user. Subjects of study include generators; converters; collection, transmission and distribution of energy; and the architecture of power electronics. Lab activities include use of electrical test instruments for circuit analysis, power quality and insulation resistance along with a variety of exercises on transformer technology and related power system operation. Pre-requisite: ELS 117

**WPT 215 Troubleshooting Automated Systems 3 credits
2 class hrs, 3 lab hrs**

Course considers troubleshooting and repair of electrical, electronic, hydraulic and mechanical systems utilized to operate wind turbines, wind farm infrastructure and remote equipment operations. Topics include: use of control system information such as fault codes, operations data, production data along with service activity reports to assist with system defect analysis and correction. Discussions also use system diagrams, schematics, manufacturers supplied information and other resources for troubleshooting and repair activities. Lab exercises provide hands-on activities with control system assembly, troubleshooting and repair. Pre-requisite: ELS 117

**WTT 103 Intro to Water Treatment Tech 3 credits
3 class hrs**

This course is designed to introduce the students to the field of Water and Wastewater Treatment. This course will begin with a discussion of current issues in water and wastewater treatment. The course will then discuss the basics of water treatment to include water regulations, water purification, coagulation and flocculation, sedimentation, filtration, disinfection, and distribution. The course will continue with the basics of wastewater treatment to include wastewater regulations, wastewater sources and treatment, Collection systems, preliminary, primary, biological, secondary, advanced, wastewater disinfection, and various solids treatment processes. This course will prepare students to succeed in subsequent program major courses outlined in the curriculum.

**WTT 111 Water Treatment I 3 credits
2 class hrs/2 lab hrs**

This course will begin with a study of the safe drinking water and public health protection through operation of water treatment facilities. Topics include coagulation, flocculation, sedimentation, filtration, disinfection, corrosion control, and taste and odor control. This course will prepare students for the State of Maine DHHS Class I & II Water Treatment Operator License Exam. Co-requisite: WTT 103.

**WTT 113 Water Plant Operation 3 credits
3 class hrs**

This course is designed to introduce students to the fundamentals required to understand the regulatory requirements and the day-to-day operational processes used by water treatment plants. It will also provide an introduction into various physical and chemical processes used with the industry. This class will introduce the student to documentary and record keeping procedures used in the industry. This course will prepare students for the State of Maine DHHS Class I & II Water Treatment Operator License Exam. Co-requisite: WTT 111.

**WTT 120 Treatment Plant Safety 3 credits
3 class hrs**

This course is designed to introduce the students to the need for safety requirements within the water and wastewater industry. This course will begin with a discussion on safe work

Faculty, Professional Staff & Governance

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GOVERNANCE

*The college is governed by the Maine Community College System Board of Trustees
Their business affiliation and their location are:*

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Standish
President Emeritus
Washington County Community College

Peter DelGreco
North Yarmouth
President & CEO
Maine & Company

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Hermon School District

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Nonantum Resort

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East Millinocket

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Appleton
Student Trustee

Pender Makin
Commissioner (Ex officio, voting member)
Maine Department of Education

Laura Fortman
Commissioner (Ex officio, non-voting member)
Maine Department of Labor

*Maine Community College System
323 State Street
Augusta, Maine 04330.*

Telephone (207) 287-1070.

NORTHERN MAINE COMMUNITY COLLEGE ACADEMIC CALENDAR 2020-2021

FALL SEMESTER 2020

August	31	First Day of Classes
September	7	Labor Day (No Classes, Offices Closed)
	8	End of Add/Drop*
	25	Grades due for any Spring '20 incomplete courses
October	12 & 13	Indigenous Peoples Day (No Classes, Offices Closed Oct 12)
	23	Mid-semester
November	11	Veterans' Day Observed (No Classes, Offices Closed)
	20	Last day to drop classes without academic penalty
	25-27	Thanksgiving Break (No Classes, Offices Closed Nov 26 & 27)
December	18	Last Day of Classes
	21	Grades Due by Noon

SPRING SEMESTER 2021

January	11	First Day of Classes
	18	Martin Luther King Holiday
	19	End of Add/Drop*
February	5	Grades due for any Fall '20 incomplete courses
	15-19	Winter Break (No Classes)
March	12	Mid-semester
	29-31	Spring Break (No Classes)
April	1-2	Spring Break (No Classes)
	16	Last day to drop classes without academic penalty
	19	Patriots' Day (No Classes)
May	14	Last Day of Classes
	15	Graduation
	17	Grades Due by Noon

All day and evening classes will meet on all scheduled days unless designated a No Class day.

* If you drop a class after the end of the add/drop period, you will be charged tuition and fees for that class. See your academic advisor if you have questions.

NORTHERN MAINE COMMUNITY COLLEGE ACADEMIC CALENDAR 2021-2022

FALL SEMESTER 2021

August	30	First Day of Classes
September	6	Labor Day (No Classes, Offices Closed)
	7	End of Add/Drop*
	24	Grades due for any Spring '21 incomplete courses
October	11 & 12	Indigenous Peoples Day (No Classes, Offices Closed Oct 11)
	22	Mid-semester
November	11	Veterans' Day Observed (No Classes, Offices Closed)
	19	Last day to drop classes without academic penalty
	24-26	Thanksgiving Break (No Classes, Offices Closed Nov 25 & 26)
December	17	Last Day of Classes
	20	Grades Due by Noon

SPRING SEMESTER 2022

January	10	First Day of Classes
	17	Martin Luther King Holiday
	18	End of Add/Drop*
February	4	Grades due for any Fall '21 incomplete courses
	14-18	Winter Break (No Classes)
March	11	Mid-semester
	28-31	Spring Break (No Classes)
April	1	Spring Break (No Classes)
	15	Last day to drop classes without academic penalty
	18	Patriots' Day (No Classes)
May	13	Last Day of Classes
	14	Graduation
	16	Grades Due by Noon

All day and evening classes will meet on all scheduled days unless designated a No Class day.

* If you drop a class after the end of the add/drop period, you will be charged tuition and fees for that class. See your academic advisor if you have questions.

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Admissions Specialist	Nicole Poulin	768-2785

Arts & Sciences

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Business Office

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College Store

768-2824

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Director	Tammy Nelson	768-2747
Counselor	Johna Lovely	768-2829
Counselor	Kent DeMerchant	768-2793
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Administrative Specialist	Kelly Dooner	768-2810

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Houlton Center

Joe Fagnant 521-3100

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President Timothy Crowley 768-2812

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For a more complete listing of employee phone numbers, including faculty, please see your Student Handbook or visit nmcc.edu



- Administration 8
- Admissions 6
- Akeley Student Center 2
- Andrews Hall 11
- Aroostook Hall 13
- Athletic Field B
- Auto Collision Lab 10
- Bookstore 6B
- Business Office 6A
- Christie Complex 6, 6A, 6B, 6C, 7
- College Store 6B
- Commuter Parking D
- Continuing Education 8
- EMBARK 6B
- Edmunds Conf. Center 5
- Financial Aid Office 6A
- General Purpose Parking C
- Gymnasium 7
- Health Center 6B
- Information 6
- Library 5
- Mailman Building 9
- Martin Building 8
- On Course for College 6
- Penobscot Hall 14
- Reed Dining Commons 12
- Security 2
- Smith Wellness Center 3
- Snow Hall 16
- Soccer Field B
- Tennis Courts A
- Testing Center 6
- Truck Driving 8
- Visitor/Student Parking C
- Washington Hall 15
- Wellness Center Parking D

