

# 2022 - 2024 Course Catalog



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

Reprint Fall 2023

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 on the basis of race, creed, color, national origin, religion, sex, sexual orientation, gender identity or expression, disability, genetic information, age, or Vietnam era veteran status in its programs and activities. Inquiries regarding the College's compliance with policies that prohibit discrimination on these basis may be directed to any or all the following:

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](mailto:AffirmativeAction@NMCC.edu)  
Internet: <http://www.nmcc.edu>

*and/or*

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

United States Department of Education  
Office for Civil Rights  
33 Arch Street, Suite 900  
Boston, MA 02110  
Telephone: 617-289-0111  
TTY/TDD: 617-289-0063  
Fax: 617-289-0150  
E-mail: [OCR.Boston@ed.gov](mailto:OCR.Boston@ed.gov)  
Internet: <http://www.ed.gov>

*and/or*

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/>

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.

*Cover Photography by Paul Cyr*

*Changes may be made, for most current version please visit [nmcc.edu](http://nmcc.edu)*

## Message from the President

Choosing a college is an exciting and challenging undertaking. Embrace the moment. Let us help you think through the process. We think you may determine that Northern Maine Community College is the smartest choice.

If you are looking for a small community college where the faculty gets to know their students — NMCC is the place for you.

If you are looking for an affordable education to improve your quality of life — NMCC is the place for you.

If you are looking for a college where faculty and staff are committed to making a positive difference in your life — NMCC is the place for you.

If you want to earn an associate degree in liberal studies with a goal of transferring to complete a bachelor's degree — NMCC is the place for you.

If you want to learn essential skills that will lead to an enjoyable and meaningful career — NMCC is 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](http://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](mailto:admissions@nmcc.edu).

Sincerely,



Timothy Crowley  
President



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# General Information

## **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 ongoing improvements and renovations, 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 individuals 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 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 accredited 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 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 of 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. The core also supports students in mastering a technical field and to develop 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 experience to find meaning and purpose in life.

An educated person engages in work that is fulfilling and does it to the best of their ability; understands their role as a citizen with a logical system of ethics and values; and is able to apply those values and morality every day 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 Rodney Smith Wellness Center features an open, naturally-lit design and offers high-quality, user-friendly strength-training machines available to full-time students at no cost. The facility 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 LifeFitness equipment, including cardio units with individual LCD screens and interactive apps for use during workouts. The certified trainers can help you individualize and personalize your routines.

The Wellness Center offers a variety of group classes such as zumba, circuits, spin classes, yoga and coordinated hiking trips (charges may apply). Visit the Center to learn more about the equipment, hours of operation and special classes or activities available.

# Admissions



## ADMISSIONS

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 all genders. Students are encouraged to enroll in programs considered nontraditional for their gender. Qualified persons with physical, learning or health disabilities are also encouraged to apply and are provided appropriate support services.

### Application Procedure

The following procedures constitute the admission process:

1. Submit an NMCC application.
2. A complete high school transcript, for all years attended, must be submitted to the Admissions 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 Admissions Office by those who have not received a high school diploma.
4. College transcripts must be submitted to the Admissions Office by applicants who have attended other colleges or postsecondary schools, including transcripts for dual enrollment college classes taken during high school.
5. Placement testing scores (SAT, Accuplacer, etc.) may be required. 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 part of the applicant's file. Minimum scores required: BT=85 or pBT=61.
6. Campus tours are strongly recommended.
7. Meet with an Admissions Counselor. An interview is required for some programs.

### 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 Admissions Office, preferably prior to enrollment. Requests for transfer credit after admission follows the Prior Learning Assessment process. Courses accepted for transfer credits 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's Office.
  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 a 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 apprentice program and may be awarded up to 24 credit hours. Assessment may be fulfilled by one or more of the following methods:
1. Applicants who have successfully completed a recognized apprenticeship training program approved by the Maine State Apprenticeship Council.
  2. Applicants who have successfully completed a Journeyman's Examination may submit a written application for lab credit.
  3. Applicants presently enrolled or having completed in-house training for which formal apprenticeship training or examinations are not used.
- III. 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 prior.

## **Services for Students with Disabilities**

Students applying for admission to the College are encouraged to indicate any 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 who 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 & 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**

NMCC uses multiple measures to assess academic skills including transcripts and test scores (SAT, PSAT, HiSET, GED, Accuplacer). 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.

NMCC uses multiple measures to assess course placements. (Ex: HiSET, Accuplacer, SAT, ACT, etc.)

	Credential	Algebra I	Algebra II	Geometry	Physics	Chemistry	2 yrs. HS Science w/ Lab	Accounting	BLS	Immunizations	EMT-Basic	Paramedic License or Equivalent	Valid Drivers License	Recommendations	Program Specific Medical Compliance
Accounting	AD	R	D					D		R				D	
Automotive Collision Repair	AD/CRT	R	D	D	D					R				D	R
Automotive Technology	AD/CRT	R	D	D	D					R				D	
Building Construction Technology	CRT	R	D	D	D					R				D	R
Business Administration	AD	R	D					D		R				D	
Career Studies	AD/CRT	R	D		D		D			R				D	
Community Paramedicine	AD/CRT	R	D		D	D	R			R		R		D	
Computer Numerical Control	CRT	R	R	R	D					R				D	
Diesel Hydraulics Technology	AD/CRT	R	D	D	D					R				D	
Early Childhood Education	AD/CRT	R	D				D			R				D	R
Electrical Construction & Maintenance	AD/CRT	R	D	R	D					R				D	
Emergency Medical Services	AD/CRT	R	D	D	D		R/D		R	R	R		R	D	R
Entrepreneurship	CRT	D						D		R				D	
Liberal Studies	AD/CRT	R	D		D		D			R				D	
Medical Assisting	AD/CRT	R	D			D	R	D	R	R				D	R
Medical Coding	CRT	R	D			D	D	D		R				D	
Network Administration & Cybersecurity	AD/CRT	R	D							R				D	
Nursing (RN)	AD	R	D		D	R	R		R	R			D	R	R
Office Assistant	CRT	D						D		R				D	
Plumbing & Heating Technology	AD/CRT	R	D	D						R				D	
Practical Nursing	CRT	R	D		D	D	R		R	R				D	R
Structural Welding	CRT	D	D	D	D					R				D	
Water Treatment Technology	AD/CRT	R	D	D	D	R	R			R				D	
Wind Power Technology	CRT	R	D	D	D					R				D	R

AD: Associate Degree - CRT: Certificate - D: Desired - R: Required

## **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 they are in compliance with the above stated Maine law, as amended. Some programs will require additional medical clearance. Students enrolled in only online courses are exempt from the immunization requirements.

## **PRIOR LEARNING ASSESSMENT PROCESS**

Prior learning is a term used to describe learning that a person acquires outside a traditional academic environment. This 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, and Dantes Subject Standardized Tests (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, which is available for students seeking a 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 through non 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 courses that have been awarded through PLA.
- NMCC is committed to transparency in the award or 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.
- When 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
- Fees are reviewed on a consistent basis, similar to other MCCS fees and revised to reflect conformity with academic and administrative standards.

### **Appeal**

- Students wishing to appeal a PLA credit 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.
- The College cannot guarantee the transfer out of PLA credits to other college/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.

## **TAKING COLLEGE COURSES WHILE IN HIGH SCHOOL**

### **Early Admission of High School Students**

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 student's motivation and maturity. Applicants must follow the regular admissions process with the added requirement 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 in full by the College and its secondary partners.

Under the auspices of the Strengthening Career and Technical Education Act of 2018, 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.

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

### **Dual Enrollment**

This program is funded by the Maine Department of Education High School Aspirations program, the Maine Community College System and the College which enables qualified Maine high school students to receive a full tuition and fee waiver at NMCC for up to twelve (12) credits each school year. This applies to courses taken while simultaneously enrolled in a Maine high school.

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.

## **SERVING OUR MILITARY MEMBERS**

### **Veterans' Services**

NMCC is approved for the training of veterans and appropriate assistance is provided through the financial aid 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.

## **LIFELONG LEARNING**

Maine residents who are 65 years of age or older may attend the College tuition-free, for up to six credit hours per semester and up to 23 credit hours total, where course space is available. The student is responsible for all other fees and 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.

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.



Continuing Education Units (CEU) 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.

## **Commercial Driving Academy**

This 8-week driving academy is licensed by the State of Maine and complies with the FMCSA guidelines for entry level driver training. This hands-on training program is designed to help students become professional class A drivers, ready to enter this high-wage and in-demand career.

Classroom instruction includes log books, trip planning, air brakes, hazmat, and doubles/triples/tankers. Students receive hands-on experience both on the driving range and on the road, learning how to handle a tractor and trailer safely and efficiently. This program is approved for the use of GI Bill® benefits.

## **Mechanized Logging Operations Training Program**

To address the immediate need for skilled entry-level operators trained on increasingly sophisticated harvesting equipment, Maine's community colleges developed the Mechanized Logging Operations Training Program offered at Northern Maine Community College. This is a 12-week hands-on program designed to help students move directly into a career as an operator.

Bringing together expertise from woodland owners, current logging contractors in Northern, Central and Western Maine, and other industry professionals, the non-credit mechanized logging operations certificate program is designed to prepare professional equipment operators with the knowledge and skills necessary for productive mechanical forest operations. In classroom and hands-on settings, students will learn machine operation and basic repair, maintenance of equipment, harvesting laws, and regulations and safety. Graduates will be prepared to work in commercial forestry operations as a crane operator or equipment operator. This program is approved for the use of GI Bill® benefits.

## **Web-Based Training**

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 are available at [nmcc.edu](http://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 the customized training options are available by calling 768-2768.

# Tuition & Fees

## 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 they have 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.

Tuition	
2022-2024	
Resident	\$96 per credit hour
New England Regional Student Program	\$144 per credit hour
*New Brunswick Student	\$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 Admissions Office.

## FREE TUITION INITIATIVE

To support the students who have been most impacted by the COVID-19 pandemic, graduates from the classes of 2020, 2021, 2022, 2023, 2024 and 2025 are eligible for two years of free tuition and mandatory fees at Northern Maine Community College.

To qualify, students must:

- Have a high school diploma or equivalent. This includes home-schooled students and students earning a GED or Hi-SET during those years.
- Enroll full-time (waivers available for special circumstances) and remain on track for program completion.
- Pursue an associate degree or academic credential.
- Accept all federal and state grants and scholarships.
- Participate in academic planning.
- Live in Maine at the time of enrollment and while enrolled in the program.
- Enroll during the 22/23 or 23/24 school years.



## STUDENT'S BUSINESS ACCOUNT

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.

Room & Board Fees	
Housing Deposit	\$100
Double Room with 19 meals/week	\$8,598
Double Room with 14 meals/week	\$7,720
Double Room with 12 meals/week	\$7,068
Single Room with 19 meals/week	\$9,938
Single Room with 14 meals/week	\$9,060
Single Room with 12 meals/week	\$8,406
Early Cancellation	\$350
<i>All residential students must purchase a meal plan</i>	

Mandatory Fees		
Registration	Full-time	\$13/semester
	Part-time	\$11/semester
Comprehensive		\$9.20/ Credit Hour
Information Service		\$6/ Credit Hour
Course	Lab	\$18.40/ Credit Hour
	Non-lab	\$9.20/ Credit Hour
Student Activity	Full-time	\$26/semester
	Part-time	\$13/semester
Health Services	Full-time	\$40
	Part-time	\$15
Accidental Insurance		\$16
Liability Insurance	Nursing Students	\$15
Liability Insurance	EMS Students	\$61.50
Liability Insurance	ECE Students	\$17
Orientation	Incoming 1st year students	\$35
Graduation	Seniors	\$65

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 & Fee Changes

The Maine Community College System 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 courses within six business days of the semester's first day of classes will receive a 100 percent refund of each dropped course. Withdrawal between seven and ten 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 a 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 awarded 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 required 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 for 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. If a payment is not made by the due date, the balance is immediately due.

## **Transcript Fee**

Students requesting a transcript be sent to a business or another college must sign a transcript release form. These forms are available in the registrar's office as well on the college website (nmcc.edu). NMCC has partnered with Parchment, Inc. to provide our students with a secure, online method for requesting transcripts. Parchment transcript request service is simple, secure and available 24/7. The cost of an official transcript through Parchment is \$6.00.

## **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 at the College.

## **Student Loan Checks**

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.

NOTE: 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

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 Federal Student Aid ID number at <http://www.studentaid.ed.gov> to electronically sign FAFSA (Free Application for Federal Student Aid).
3. Access and complete the FAFSA at [www.studentaid.gov](http://www.studentaid.gov).
4. School code is 005760.
5. Complete the NMCC confidential financial aid application.
6. 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-study 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 Grants range from \$700 - \$7,395 annually.

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

State of Maine Grants: Provide 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.

*NOTE: FAFSA must be received by May 1 for State grant.*

### Work-Study

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

Federal Work-Study (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, 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 students borrow now but must pay back after leaving college. Students with bachelor's degrees may be eligible. Students receiving loans are required to do both an entrance and an exit on-line counseling session. 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

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 Financial Aid Office evaluates applications for scholarships awarded by the Northern Maine Community College Foundation as well as 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](http://my.nmcc.edu).

## College Policy and Procedures 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.

## 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 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 the 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 percent of credits attempted each term (PACE). Students failing to earn 67 percent 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”* and *“Student Loan Checks”* in the *Student’s Business Account* section of this catalog.

## VETERANS, NATIONAL GUARD & RESERVES EDUCATIONAL BENEFITS

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
- Two for members of the Selected Reserve

*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 website at <https://www.benefits.va.gov/gibill>.

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 provide 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.

## 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 with documentation of 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 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 and 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 office 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.

### **Admissions Office**

The Admissions Office provides information about NMCC to prospective students and helps students throughout the admission process. Staff serves students who wish to apply for a second degree or continue studies after graduation.

### **Career Planning & Placement**

Career planning and placement assistance is available from several sources at NMCC. The student affairs staff, 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 future 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.

### **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. Inquiries should be made to the Director of Counseling at 768-2747.

### **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. (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 regarding their records. The office is responsible for the evaluation and granting of credit earned at other institutions by students transferring to NMCC.

## **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 to monitor academic progress.

## **TRiO/Student Support Services Program**

This 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.

## **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; online 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 are 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's web page at [www.nmcc.edu/academics/support/library/](http://www.nmcc.edu/academics/support/library/). The library is open to the public.

## **CAMPUS HOUSING**

Campus housing at NMCC includes Andrews Hall, Snow Hall, and Penobscot Hall. Andrews Hall houses approximately 40 students in large single rooms equipped with single beds, chests of drawers and desks. In Snow and Penobscot Halls, there are suites and quads designed for 4-5 individuals. Each suite has 3 bedrooms, a split bathroom, and common living room. Each quad has two double-bedrooms, a full bathroom, and a common living room. All suites and quads 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 have internet access through campus Wi-Fi. Students living on campus must abide by the Student Code of Conduct as explained in the NMCC Student Handbook and the individual housing agreement. Violations may result in termination of the agreement.

### **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.

### **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, 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, internet, electricity, water/sewer and trash removal. Meal plans are not included with the family housing options.

For more information on campus housing, occasional housing, and family housing, contact the Director of Residential Life at (207)768-2795.

## **REED DINING COMMONS & COLLEGE STORE**

Dining facilities are located in the newly remodeled Reed Dining Commons. Residential students purchase a meal plan along with a housing plan. Anyone else wishing to purchase a meal is welcomed during meal time service. An 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 / LAPTOPS**

The NMCC Bookstore is managed by Barnes & Noble. Each student is required to provide at his or her expense all necessary textbooks, equipment and supplies. For more information go to: <http://nmcc.bncollege.com/shop/northern-maine/home>. 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. Students may transfer financial aid funds to the bookstore to purchase a laptop from models offered by Barnes & Noble.

## **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 damage 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.

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

## **STUDENT SENATE / ACTIVITIES**

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.

The Student Senate assists the student affairs staff to 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, 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.

NMCC promotes leadership, 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 individuals are encouraged to participate.

## **STUDENT RIGHT TO KNOW**

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

## **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](http://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.

## **IDENTIFICATION CARDS**

Identification cards are issued to all students and employees. This card enables access to the library, residence halls, some classrooms and college facilities. Access to college events and discounts at other community events may be available with your NMCC ID card. Replacement fee is \$25.

# Academic Information

## ACADEMIC INFORMATION

### Programs of Study

The mission of Northern Maine Community College is to provide career and transfer programs that lead to associate degrees or certificates. Each credential 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 12 associate in applied science degrees, two associate in science degrees, and one associate in arts degree, as well as 24 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 (AAS) is intended to provide the preparation necessary for potential employment in an occupational specialty.
- The Associate in Science Degree (AS) 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.

### Delivery of Academic Programs

Courses in academic programs at NMCC are taught in a variety of formats: traditional classrooms and laboratories; interactive web conferencing, media-enhanced classrooms; and individualized learning experiences such as independent study, internships/externships, practicums, field experience and distance education.

### Distance Learning

Northern Maine Community College's distance learning courses offer a complementary alternative to the traditional in-person learning environment. These course formats allow students to engage with and complete courses from any location. Currently, NMCC uses the learning management system D2L by Brightspace and the web-conference software ZOOM to conduct courses from a distance.

Distance learning courses require a computer, basic computer skills and reliable internet access. They may also require supplemental hardware and software.

**Online:** Courses are delivered online using the institution's Learning Management System (LMS). A computer or laptop is recommended for participating in and completing online course work. Students interact with their instructor and classmates via online discussions, assignments, group projects and adhere to deadlines set within the LMS and course syllabus. If the suffix number for a course is 20-25, the course is being offered online.

**Hybrid:** Instruction is split between learning activities in the LMS online and the rest of the time learning in-person, in the classroom(s) or laboratory setting. If the suffix number for a course is 26-30, the course is being offered as a hybrid course.

NMCC offers a limited number of hybrid and online classes. A hybrid format means that only a portion of the class is conducted online. On-campus testing is usually required. 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, veteran's 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 associate 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 Admissions 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 associate degree and certificate programs require that students satisfactorily complete a minimum of the program requirements directly from NMCC courses. All students must complete at least 25% of the program credit hours directly through the College. Credits received for all prior learning, including challenge and standardized exams, portfolios, apprenticeship and work experience, articulation agreements and transfer credit, will not count towards meeting the academic residency requirement.

## **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 website.

## Attendance

Class attendance is the student's responsibility. Regular attendance and punctuality for 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 (Withdrew Passing) or WF (Withdrew Failing).
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 percent for the first 6 business days of a semester, 50 percent 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.*

## Withdrawal 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 or community needs.

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.

Attempts are made to offer courses at times which are convenient for most adult students with responsibilities of job and family.

## Grading System

Northern Maine Community College bases its grade point average (GPA) on a 4.00 grading scale. 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



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.

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 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, they should contact the department chair for the course for which the grade was submitted in order to be advised on the appeals procedure.

**Incomplete Grade:** An instructor may issue the grade of incomplete when, in the instructor's opinion, extenuating circumstances prevent a student from completing the semester's work. Please refer to the student portal forms and documents (requesting an incomplete) for information on requesting an incomplete.

## **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 their 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. The probation and dismissal policies are outlined in the following chart:

### Students in two-year (4 semester) program:

Cumulative Credit Hours Attempted	Cumulative GPAs Ranges Result In:	
	Probation	Dismissal
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) program:

Cumulative Credit Hours Attempted	Cumulative GPAs Ranges Result In:	
	Probation	Dismissal
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+) is required of all courses designated as major courses within both nursing and community paramedicine programs 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 they have failed to meet the academic standard required for any major course. A student will be given additional opportunities to retake the major course(s), provided there is space available and they are 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 above 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 above 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, the academic dean or the Student Affairs Office. The directed study application is available on the Portal under the 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 academic advisor, your program department chair, the academic dean or the Student Affairs Office.

## Second NMCC Credential

When a student enters NMCC, they choose a program with the expectation of receiving a degree or certificate in that area. As a student progresses through the program, the instructional staff may encourage the student to broaden their background by taking electives in another program. These opportunities allow the student to broaden their area of expertise without compromising or changing career goals or their primary purpose for attending NMCC.

The following apply:

1. If students want a second credential, they 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 their 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, 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](http://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 registrar’s office as well as on the college website ([www.nmcc.edu](http://www.nmcc.edu)). NMCC has partnered with Parchment, Inc. to provide our students with a secure, online method for requesting transcripts. Parchment transcript request service is simple, secure and available 24/7. The cost of an official transcript through Parchment is \$6.00.

**Confidentiality of Student Records** – NMCC believes that it is of paramount importance and in the best interest of all its members that confidentiality 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, provides the following rights for students attending NMCC:

1. The right of a student, with limitations, to inspect and review their educational records.  
The right, with exceptions, to prevent disclosure to third parties of information from their educational records.
2. 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.
3. 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.

## **Graduation and Commencement Requirements**

Candidates for graduation must submit a Request for Graduation form to the Registrar's Office no later than December 15th of the academic year they plan to complete their program requirements. A graduation fee is incurred and is non-refundable upon the student completing the Request for Graduation form. This fee is payable whether or not the candidate attends the commencement ceremony.

Students within six (6) credit hours of credential completion may participate in commencement activities but will not receive a signed diploma until the completion of the program requirements.

Students graduating with a 3.5 or greater GPA are recognized in the commencement program and will wear a gold rope during the ceremony in honor of their achievement. Honors designation for commencement will be determined based upon prior completed semesters' cumulative grade point average.

NMCC conducts one official graduation ceremony each year. NMCC will grant degrees or certificates to those matriculated students whose degree audit has verified that they have:

1. Met all conditions of acceptance;
2. Only applied courses numbered as 100 or 200 level towards graduation;
3. Passed all prescribed courses and attained a minimum cumulative GPA of 2.00

## **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

## **ARTS & 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 core instills in students the knowledge, skills, and values that define an educated person.

### **Career Studies**

The associate in applied science degree in career studies is designed to provide a highly individualized and flexible program of study for students whose educational and/or occupational goals cannot be met by the other programs of the College. Recognizing that many students come to the College with significant work and/or learning experiences, this program provides for recognition of that experience by the awarding of academic credit (after a thorough portfolio review process) in an occupational track.

### **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 childcare 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 childcare 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, 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 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 leads 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 Associate in Applied Science 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**

The Office Assistant certificate program is 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 underserved 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 ensure 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](http://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**

NMCC offers a one-year certificate in Medical Assisting that prepares students to enter the rapidly expanding field of medical assisting. Medical assistants are multi-skilled allied health professionals who perform both administrative and clinical procedures in ambulatory medical settings. The medical assisting certificate provides basic skills to students. Some of the skills taught in the certificate program include obtaining vital signs, recording a medical history, administering oral and parenteral medications, preparing the patient for examination and assisting the healthcare provider with the physical examination. Administrative skills include scheduling patient appointments, performing bookkeeping procedures, as well as entry-level medical and diagnostic coding and completion of insurance claim forms. Students also learn to perform diagnostic tests such as 12-lead EKGs, CLIA-waived laboratory tests, and collection of blood samples.

The College's two-year associate degree Medical Assisting program provides additional clinical and administrative training. In the clinical component of the program, students will have the opportunity to understand the concept of professionalism and principles of therapeutic communication; teach patients about health and wellness; and gain a more extensive understanding of anatomy, physiology, and clinical applications of pathophysiology and pharmacology. In the administrative component of the program, students will learn about medical law and ethics and how to maintain electronic health records.

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 healthcare 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 Associate degree program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://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. The curriculum 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 type of work is done in all healthcare facilities. The student gains knowledge and practice in computer software programs, such as encoders and electronic medical records systems, allowing students to have real world, hands-on application of coding practice.

Graduates are eligible for certifications as a Coding Associate (CCA) through American Health Information Management Association (AHIMA). With some experience, they become eligible for additional national certifications 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 on basic human biopsychosocial needs throughout the lifespan. Students develop the knowledge and skills necessary to provide holistic nursing care to diverse clients, families and groups with multiple healthcare needs. Legal, ethical and role responsibilities of the nurse are addressed within each level. Guided learning opportunities in local healthcare facilities, the campus lab, and the state-of-the-art simulation center provide students with valuable hands-on experiences that complement the classroom curriculum.

*Candidates who are graduates from approved practical nursing programs are provided an opportunity for advanced standing. Students with successful prior college courses may receive priority, providing all other minimum standards are met. Students may be given only one opportunity to reenter the program after having failed to complete it previously.*

Upon completion of the associate degree nursing program, graduates are eligible to take the NCLEX-RN licensure examination, administered by the National Council of State Board of Nursing (NCSBN). Graduates will find employment opportunities as an integral team member in a variety of healthcare settings.

Graduates may choose to continue their education toward a bachelor of science in nursing degree. NMCC's Nursing program has transfer agreements in place with four-year institutions for a seamless transition from RN to BSN. By completing the first two years at NMCC, students are able to graduate with less debt and are prepared to take advantage of online programs.

## **Practical Nursing**

The Practical Nursing program is designed to offer individuals the opportunity to enter the nursing profession as a practical nurse. The practical 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 practical nurse are addressed throughout both semesters. Guided learning opportunities in local healthcare facilities, the campus lab, and state-of-the-art simulation center provide students with valuable hands-on experiences that complement the classroom curriculum.

*Students with successful prior college courses may receive priority, providing all other minimum standards are met.*

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. Practical nurses are integral members of healthcare teams and will function in a variety of healthcare settings under direct or indirect supervision of an experienced registered nurse.

For graduates interested in continuing their education by pursuing an associate degree in nursing, NMCC has a career pathway in place to assist you in achieving this goal. Candidates who are graduates from approved practical nursing programs may qualify for advanced standing after a one-year minimum of working as an LPN. By completing the RN degree at NMCC, students are able to graduate with less debt and are prepared to continue you their education at a four-year degree program.

## **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 to aide in 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 include 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 ensure accountability for time and materials, second year students also utilize a 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, and vehicle wiring are integral to the program. There is also a course in motor vehicle inspection and students may take the Maine Class A, E, D, and T inspection license exams. 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 one-year certificate 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 safe use of power and hand tools, the principles of building construction, including floor framing, wall framing, roof framing, wall partition framing, exterior finish, roofing, attic venting and insulating techniques.

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 (CNC) certificate program enables students to develop skills in programming, set-up, and operation of CNC machine tools to produce precision parts and develop the required skills for entry-level employment. Students will develop additional skills in process planning, print reading, CAD/CAM, measurement and inspection, and custom work-holding design, leading to NIMS – National Institute of Metalworking Skills and/or other credentials.

The Computer Numerical Control program at NMCC is located in the College's 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.

Job opportunities for graduates include CNC mill operators, CNC lathe operators, and quality control inspectors.

The CNC certificate program is accredited by the National Institute of Metalworking Skills (NIMS).

## **Diesel Hydraulics Technology**

The Diesel Hydraulics Technology program emphasizes the skill standards required for a technician to become entry level technicians in diesel diagnostic and repair for trucks and heavy equipment. 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 and 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 service and diagnostics.

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, operation and repair of automatic and manual drive trains, axles, and bogie systems and diagnosis.

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

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

The Diesel Hydraulics Technology program is ASE accredited at the master-level.

## **Electrical Construction and Maintenance**

The Electrical Construction and Maintenance program provides a 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. Students can enroll in the Plumbing and Heating associate's degree program, the one-year Plumbing certificate, or the one-year Heating certificate. Admission to the Heating certificate only requires instructor's permission.

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. Individuals who pass the state exam may be issued a Journeyman-In-Training License.

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 EPA 608 Certificate for Refrigeration Handling.

Graduates will be qualified for many employment opportunities in the plumbing, heating and refrigeration field, including service technician, installer, and equipment 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 to 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. 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.

## **Structural Welding**

In the 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 and 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 Water 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 certificate program 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 the global energy industry.

# Curriculum

General Education Core Requirements	Description of the Discipline	Learning Outcomes	Courses (see program requirements)
<p><b>Writing &amp; Communications</b></p> <p><b>6 Hours</b></p>	<p>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.</p>	<p>Students will be able to communicate effectively, both orally and in writing.</p> <p>Students will be able to search for, access, and evaluate information from a variety of sources and use that information ethically and legally for research and personal purposes.</p>	<p>ENG 111: English Composition &amp; COM 111 Speech COM 212 Business Communications I COM 221 Technical Communications</p>
<p><b>Quantitative Literacy</b></p> <p><b>4 Hours</b></p>	<p>Mathematics is the study of numbers, quantity, shape, and space and their interrelationships using numbers and symbols and logical thinking. Arithmetic, algebra, geometry, and calculus are branches of mathematics.</p>	<p>Students will understand and be able to apply mathematical concepts to solve quantitative problems.</p>	<p>MAT 115 Business Math MAT 116 Quantitative Reasoning MAT 121 Tech Math MAT 125 College Algebra MAT 210 Statistics</p>
<p><b>Natural Science</b></p> <p><b>4 Hours w/Lab</b></p>	<p>Students will demonstrate the ability to be consumers of biological and other scientific information to better inform their daily lives.</p>	<p>Students will demonstrate the ability to be consumers of biological and other scientific information to better inform their daily lives.</p>	<p>BIO 114 Human Biology BIO 115 General Biology BIO 120 Anatomy &amp; Physiology I BIO 130 Anatomy &amp; Physiology II BIO 218 Microbiology PHY 150 Physics</p>
<p><b>Social Science</b></p> <p><b>3 Hours</b></p>	<p>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.</p>	<p>Students will be able to analyze or explain causal forces which shape social structures, institutions, or behavior through time.</p>	<p>ECO 213 Macroeconomics HIS 123 U.S. History, 1600-1865 HIS 125 U.S. History, 1865 to Present 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 &amp; Problems</p>
<p><b>Humanities</b></p> <p><b>3 Hours</b></p>	<p>Humanities are those disciplines that help us understand what it means to be human. Study in the humanities helps 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.</p>	<p>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</p>	<p>ART 201 Introduction to Film ENG 226 Introduction to Literature ENG 228 Topics in Literature ENG 239 Intro. to Creative Writing HIS 123 U.S. History, 1600-1865 HIS 125 U.S. History, 1865 to Present HIS 206 American Sports History HIS 207 Maine History PHI 121 Introduction to Philosophy PHI 201 Ethics PHI 206 World Religions</p>
<p><b>General Education Elective</b></p> <p><b>1 Hours</b></p>			<p><b>COL 103 College Success</b> SPA 101 Spanish I</p>
<p><b>21 Hour Minimum</b></p>			

# ACCOUNTING

## Associate in Applied Science Degree Program

First Semester			CR
ACC	114	Principles of Accounting I	3
BUS	117	Business Law	3
CIS	105	Introduction to PC Operating Systems	1
CIS	113	Introduction to Microcomputer Applications	3
ENG	111	English Composition	3
MAT	115	Business Mathematics (or MAT 116 Quantitative Reasoning)	3
			16

Second Semester			CR
> ACC	120	<b>Principles of Accounting II</b>	<b>3</b>
CIS	108	Spreadsheet Applications	3
COM	212	Business Communications I	3
ECO	213	Macroeconomics	3
MAT	125	College Algebra	3
			15

Third Semester			CR
> ACC	210	<b>Intermediate Accounting I</b>	<b>3</b>
> ACC	214	<b>Federal Taxation I</b>	<b>3</b>
> ACC	223	<b>Accounting for Non-profit Organizations</b>	<b>3</b>
> ACC	234	<b>Accounting Information Systems I</b>	<b>3</b>
CIS	129	Database Applications	3
COM	111	Speech	3
			18

Fourth Semester			CR
> ACC	220	<b>Intermediate Accounting II</b>	<b>3</b>
> ACC	225	<b>Federal Taxation II</b>	<b>3</b>
BUS	106	Effective Customer Service	3
		Business Elective	3
		Humanities Elective	3
			15

**Total Required** **64**

### Program Outcomes

- Comply with Generally Accepted Accounting Principles.
- Perform the steps of the accounting cycle.
- Journalize and post adjusting entries for a business entity.
- Prepare financial statements.
- Perform financial statement analysis.
- Utilize accounting information for decision making.
- Prepare a federal income tax return.
- Proficiently use technology.

*NMCC's accounting program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP). The accreditation represents the achievement of meeting the international standards established for associate degree-granting business programs.*

> Major courses; a minimum grade of "C" or 2.0 is required

Key: CR= Credit Hours

# AUTOMOTIVE COLLISION REPAIR

*(Continued on next page)*

## Associate in Applied Science Degree Program

First Semester			C	L	CR
> ACR	111	<b>Nonstructural Repairs</b>	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

Second Semester			C	L	CR
> ACR	121	<b>Structural Analysis / Plastics</b>	3	9	6
> AUT	115	<b>Automotive Electricity</b>	2	2	3
MAT	121	Technical Mathematics	4	0	4
WEI	135	I-CAR Welding	2	2	3
		Social Science Elective	3	0	3
			14	13	19

Third Semester			C	L	CR
> ACR	209	<b>Auto Collision Blueprint &amp; Estimating</b>	3	0	3
> ACR	211	<b>Painting &amp; Refinishing</b>	3	9	6
> AUT	125	<b>Automotive Electronics</b>	2	2	3
PHY	150	Physics	3	2	4
		Humanities Elective	3	0	3
			14	13	19

Fourth Semester			C	L	CR
ACR	214	Airbrushing Techniques	2	2	3
> ACR	223	<b>Structural Repairs</b>	3	9	6
AUT	216	Motor Vehicle Inspection	2	0	2
> AUT	229	<b>Automotive Heating &amp; Air Conditioning</b>	2	2	3
COM	221	Technical Communications	3	0	3
			12	13	17

**Total Required** **71**

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



*The Automotive Collision Repair program has achieved Master Level certification by the National Institute for Automotive Excellence (ASE) after a thorough evaluation.*

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

**Key: C= Class Hours, CR= Credit Hours, L= Laboratory**

## AUTOMOTIVE COLLISION REPAIR

*(Continued from previous page)*

### AUTOMOTIVE COLLISION REPAIR Certificate Program

First Semester		C	L	CR
> ACR 111	<b>Nonstructural Repairs</b>	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

Second Semester		C	L	CR
> ACR 121	<b>Structural Analysis / Plastics</b>	3	9	6
> AUT 115	<b>Automotive Electricity</b>	2	2	3
MAT 121	Technical Mathematics	4	0	4
WEI 135	I-CAR Welding	2	2	3
		11	13	16

**Total Required** **31**

### MAJOR COLLISION REPAIR & REFINISHING Certificate Program

*Must have completed the Auto Collision Repair Certificate Program or have permission from the instructor to enroll.*

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

Second Semester		C	L	CR
> ACR 223	<b>Structural Repairs</b>	3	9	6
AUT 216	Motor Vehicle Inspection	2	0	2
> AUT 229	<b>Automotive Heating &amp; Air Conditioning</b>	2	2	3
MAT 121	Technical Mathematics	4	0	4
		11	11	15

**Total Required** **30**

### Program Outcomes

- Demonstrate a safe working environment and safe use of tools and equipment in the Automotive Collision Repair Industry.
- Demonstrate how to properly repair a vehicle including estimating, repair planning, repairing, and refinishing the vehicle.
- Perform entry-level skills in metalwork, plastic repairs, refinishing and all aspects of Auto Collision Repair process.
- Understand proper technical terms, descriptions and how to communicate them with others.
- Understand the basic principles of automotive electronic components.
- Demonstrate basic skills in oxyacetylene, MIG, silicon bronze and aluminum welding.
- Be eligible for Maine State Motor Vehicle Inspection License, ASE Certifications in B2, B3, B4, B5, B6, Section 609 Certification of Federal Clean Air Act, I-Car Thin Metals Welding Certification.
- Be able to work efficiently on the repair orders, estimates and body repairs.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L= Laboratory

# AUTOMOTIVE TECHNOLOGY

*(Continued on next page)*

## Associate in Applied Science Degree Program

First Semester		C	L	CR
> AUT 109	Introduction to Automotive Technology	0.5	1.5	1
> AUT 114	Suspension & 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 Automotive Technicians	2	2	3
		11.5	14.5	17

Second Semester		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 121	Technical Mathematics	4	0	4
	Humanities Elective	3	0	3
		14	11	18

Third Semester		C	L	CR
> AUT 214	Engine Performance	3	9	6
> AUT 229	Automotive Heating & Air Conditioning	2	2	3
> AUT 231	Innovative Automotive Technologies	2	2	3
> AUT 233	Light Vehicle Diesel Systems	2	2	3
PHY 150	Physics	3	2	4
		12	17	19

Fourth Semester		C	L	CR
> ACR 223	Manual Drive Train & Axles*	1.5	4.5	3
> AUT 225	Automatic Transmissions*	1.5	4.5	3
> AUT 228	Alternative Propulsion Systems	2	2	3
COM 221	Technical Communications	3	0	3
	Social Science Elective	3	0	3
		11	11	15

**Total Required** **69**



*The Automotive Technology program has achieved Master Level certification by the National Institute for Automotive Excellence (ASE) after a thorough evaluation.*

*\* Note: AUT courses within a semester are scheduled sequentially, not concurrently*

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

**Key: C= Class Hours, CR= Credit Hours, L= Laboratory**



# AUTOMOTIVE TECHNOLOGY

*(Continued from previous page)*

## Certificate Program

First Semester			C	L	CR
> AUT	109	Introduction to Automotive Technology	0.5	1.5	1
> AUT	114	Suspension & Steering	1.5	4.5	3
> AUT	115	Automotive Electricity	2	2	3
> AUT	116	Brakes	1.5	4.5	3
ENG	111	English Composition	3	0	3
WEI	103	Welding for Automotive Technicians	2	2	3
			10.5	14.5	16

Second Semester			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	121	Technical Mathematics	4	0	4
			11	11	15

**Total Required** **31**

### Program Outcomes

- Demonstrate work area safety and the correct and safe use of tools and equipment used in the automotive repair industry.
- Understand principles of operation, demonstrate ability to diagnose and repair suspension and steering systems, including two- and four-wheel alignments.
- Know the principles of operation, diagnoses and repair of base and anti-lock braking systems.
- Perform diagnostics and repair of automotive powertrains, including engines, automatic and manual transmission, transfer cases and differentials.
- Identify the principles of engine performance including fuel delivery and emission systems and demonstrate the ability to diagnose and repair these systems using proper scan tools.
- Understand the principles of automotive electrical and electronic systems and diagnoses and proper repair of these systems.
- Be eligible for ASE certification for A1 through A9 as well as G1, L3, Maine State Motor Vehicle Inspection License and Section 609 Certification of Federal Clean Air Act.
- Comprehend the principles of hybrid/electric vehicle technology and safety requirements, advanced automotive technologies as well as diagnoses and repair.

*\* Note: AUT courses within a semester are scheduled sequentially, not concurrently*

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

*Key: C= Class Hours, CR= Credit Hours, L= Laboratory*

# BUILDING CONSTRUCTION TECHNOLOGY

## Certificate Program

First Semester			C	L	CR
>	<b>BCT 111</b>	<b>Framing Systems</b>	<b>3</b>	<b>9</b>	<b>6</b>
	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	1.5	3	3
			<u>10.5</u>	<u>14</u>	<u>16</u>

Second Semester			C	L	CR
>	<b>BCT 121</b>	<b>Interior Materials &amp; Methods</b>	<b>3</b>	<b>9</b>	<b>6</b>
>	<b>BCT 125</b>	<b>Woodworking</b>	<b>1.5</b>	<b>4.5</b>	<b>3</b>
	MAT 121	Technical Mathematics	4	0	4
	TEC 123	Building Science II	1.5	3	3
			<u>10</u>	<u>16.5</u>	<u>16</u>

**Total Required** **32**

### Program Outcomes

- Demonstrate the safe practice and use of construction tools and know the safety precautions required on the job site.
- Construct floor, wall, and roof framing systems.
- Demonstrate the ability to install windows, doors, and various trim materials.
- Understand heat loss, attic venting, and moisture control measures needed in energy efficient structures.
- Estimate construction costs using material lists prepared by the student.
- Apply good sanding, painting, staining, and clear-coating procedures on all trim and molding.
- Describe typical construction materials and methods as they relate to residential and light commercial buildings.
- Read and understand plans for residential and light commercial buildings.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L= Laboratory

# BUSINESS ADMINISTRATION

## Associate in Applied Science Degree Program

First Semester				CR
ACC	114	Principles of Accounting I		3
>	<b>BUS 101</b>	<b>Introduction to Business</b>		<b>3</b>
CIS	105	Introduction to PC Operating Systems		1
CIS	113	Introduction to Microcomputer Applications		3
ENG	111	English Composition		3
MAT	115	Business Mathematics (or MAT 116 Quantitative Reasoning)		3
				16
Second Semester				
ACC	120	Principles of Accounting II (or ACC 124 Managerial Accounting)		3
>	<b>BUS 109</b>	<b>Entrepreneurship</b>		<b>3</b>
CIS	108	Spreadsheet Applications		3
COM	212	Business Communications I		3
MAT	125	College Algebra		3
				15
Third Semester				
BUS	117	Business Law I		3
>	<b>BUS 217</b>	<b>E-Commerce</b>		<b>3</b>
>	<b>BUS 229</b>	<b>Principles of Management</b>		<b>3</b>
COM	111	Speech		3
ECO	213	Macroeconomics		3
		Business Elective		3
				18
Fourth Semester				
BUS	106	Effective Customer Service		3
>	<b>BUS 214</b>	<b>Project Management</b>		<b>3</b>
>	<b>BUS 239</b>	<b>Human Resource Management</b>		<b>3</b>
>	<b>BUS 241</b>	<b>Principles of Marketing</b>		<b>3</b>
		Humanities Elective		3
				15
<b>Total Required</b>				<b>64</b>

> Major courses; a minimum grade of "C" or 2.0 in required

### Program Outcomes

- Demonstrate knowledge of the four managerial functions: planning, organizing, leading, and controlling.
- Demonstrate knowledge and skills in the field of human resource management.
- Demonstrate knowledge of marketing research and skills necessary to create a marketing plan.
- Demonstrate knowledge and skills in the field of entrepreneurship.
- Proficiently use technology.

*NMCC's business administration program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP). The accreditation represents the achievement of meeting the international standards established for associate degree-granting business programs.*

> Major courses; a minimum grade of "C" or 2.0 is required

Key: CR= Credit Hours

## **CAREER STUDIES**

*(Continued on next page)*

### **CONCENTRATION IN ALLIED HEALTH Associate in Applied Science Degree Program**

<b>First Semester</b>			<b>CR</b>
ALH 115	Intro to Health Care Professions	3	
BIO 201	Anatomy & Physiology I with Lab	4	
COL 103	College Success	1	
ENG 111	English Composition	3	
	Elective (NUT 101, PSY 101, COM 111, or HIS 123)	3	
		<hr/>	14
<b>Second Semester</b>			
ALH 220	Medical Terminology	3	
BIO 211	Anatomy & Physiology II with Lab	4	
ENG 226	Introduction to Literature	3	
MAT 116	Quantitative Reasoning	3	
	Elective (ENG 227, SPA 101 or HIS 125)	3	
		<hr/>	16
<b>Third Semester</b>			
	Career / Technical Courses	12	
	Elective	<u>3</u>	
			15
<b>Fourth Semester</b>			
	Career / Technical Courses	12	
	Elective	<u>3</u>	
			15
<b>Total Required</b>			<b>60</b>

*Key: CR= Credit Hours*



## CAREER STUDIES - BUSINESS

Students pursuing the associate in applied science degree in career studies – business are required to complete a minimum of 60 credit hours. The course selections in designing the curriculum must be reviewed and approved by the Department Chair of Business Technology. These credits fall into three categories:

**Professional Component (Technical/Related)** – 15: A student must have a minimum of 15 credits hours for the professional component, including four courses from the selected area from within the business department curriculum to meet the total 60 credit hour requirement. See Note 1.

**Business Major (Career)** – 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). See Note 2.

**General Education** – 21: A student must have a minimum of 15 credit hours in communications, social sciences, humanities and fine arts plus a minimum of 6 credit hours in math/sciences.

### **Note 1:** Professional Component (Technical/Related)

At least 25% of the business curriculum must consist of a professional component (PC) including four of the following areas of study:

- A. Accounting
- B. Computer information applications
- C. Quantitative methods of analysis
- D. Principles of economics
- E. Business in society – the international environment, legal/political environment, and ethical business behavior
- F. Marketing
- G. Entrepreneurship/free enterprise
- H. Finance
- I. Management

### **Note 2:** Business Major (Career)

At least 25% of the associate degree or associate of applied science degree must be devoted to courses appropriate to the student’s business major beyond the professional component.

Program that lead to an associate degree in business must be able to demonstrate that the programs include appropriate courses to prepare students for transfer or employment.

## CAREER STUDIES

*(Continued from previous page)*

### Allied Healthcare Studies Certificate Program

First Semester		CR
ALH 115	Introduction to Health Care Professions	3
BIO 201	Anatomy & Physiology I with Lab	4
COL 103	College Success	1
ENG 111	English Composition	3
	Elective (NUT 101, PSY 101, COM 111, or HIS 123)	3
		14
Second Semester		
ALH 220	Medical Terminology	3
BIO 211	Anatomy & Physiology II with Lab	4
ENG 226	Introduction to Literature	3
MAT 116	Quantitative Reasoning	3
	Elective (ENG 227, SPA 101 or HIS 125)	3
		16
<b>Total Required</b>		<b>30</b>

### Program Outcomes

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).

*Key: CR= Credit Hours*

## COMMUNITY PARAMEDICINE

(Continued on next page)

### Associate in Science Degree Program

First Semester			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	Introduction to Nutrition	3	0	0	3
			14	5	0	16
Second Semester						
>	BIO 211	Anatomy & Physiology II	3	2	0	4
>>	EMS 245	Community Paramedicine Clinical	0	0	9	3
	ENG 111	English Composition	3	0	0	3
	MAT 116	Quantitative Reasoning (or MAT 125 College Algebra)	3	0	0	3
			9	2	9	13
Third Semester						
>>	EMS 247	Community Paramedicine Seminar	1	0	0	1
	PSY 101	General Psychology	3	0	0	3
		Communication Elective	3	0	0	3
		General Elective	0	0	0	10
			7	0	0	17
Fourth Semester						
>>	EMS 246	Leadership in EMS	2	0	0	2
	SOC 111	Sociology	3	0	0	3
		Diversity / Ethical Reasoning Elective	0	0	0	3
		General Elective	0	0	0	3
		Humanities Elective	0	0	0	3
			5	0	0	14
<b>Total Required</b>			<b>60</b>			

### Program Learning Outcomes

- Candidates for admission must present at least one of the following: an active paramedic license or Advanced Care Paramedic license (Canada), proof of equivalent licensure from another state, or NREMT registration at the Paramedic level.
- EMS 245 is a faculty directed course; students work with an assigned preceptor in various clinical rotations in both the hospital and community settings.
- Students must satisfactorily complete the Clinical Compliance Checklist, including immunizations prior to entering any clinical experience. Clinical facilities may prohibit students from their facilities, based on positive criminal background check.
- Applicants who have not successfully completed (73 or higher) ALH 124 within the past 12 months are required to take the course and/or demonstrate competency through work experience.
- A list of suggested courses to complete elective requirements will be provided to students.
- EMS 246 is provided entirely online.
- The clinical coordinator for EMS 245 will make every attempt to have clinical agreements within reasonable proximity of the student's home location.

> Major courses; a minimum grade of "C" or 2.0 is required

>> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required

Key: C= Class Hours, CL= Clinical Hours, CR= Credit Hours, L=Laboratory

## COMMUNITY PARAMEDICINE

*(Continued from previous page)*

### Certificate Program

First Semester				C	L	CL	CR
>	ALH 124	Health & Safety Compliance		1	0	0	1
>>	EMS 243	Community Paramedicine		7	3	0	8
	ENG 111	English Composition		3	0	0	3
				11	3	0	12
Second Semester							
>>	EMS 245	Community Paramedicine Clinical		0	0	9	3
>>	EMS 246	Leadership in EMS		2	0	0	2
>>	EMS 247	Community Paramedic Seminar		0	3	0	1
	MAT 116	Quantitative Reasoning (or MAT 125 College Algebra)		3	0	0	3
				5	3	9	9
<b>Total Required</b>							<b>21</b>

### 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.

> Major courses; a minimum grade of "C" or 2.0 is required

>> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required

**Key: C= Class Hours, CL= Clinical Hours, CR= Credit Hours, L=Laboratory**



# COMPUTER NUMERICAL CONTROL

## Certificate Program

First Semester			C	L	CR
MAT 121	Technical Mathematics		4	0	4
> PMT 100	<b>Introduction to Programming</b>		1	2	2
> PMT 101	<b>Introduction to Inspection*</b>		1	2	2
PMT 110	3D Solid Modeling		1	2	2
> PMT 111	<b>CNC Mill &amp; Lathe Operations</b>		1	9	4
PMT 113	Print Reading for Machinists		2	0	2
> PMT 115	<b>CNC Mill Setup</b>		0	3	1
> PMT 117	<b>CNC Lathe Setup</b>		0	3	1
			10	21	18

Second Semester			C	L	CR
ENG 111	English Composition		3	0	3
> PMT 112	<b>CNC Mill Programming</b>		2	0	2
> PMT 114	<b>CNC Lathe Programming</b>		2	0	2
PMT 119	Inspection		1	3	2
> PMT 121	<b>CNC Mill &amp; Lathe Programming, Setup &amp; Operations</b>		1	9	4
> PMT 215	<b>Auxiliary Devices for CNC Mills</b>		1	6	3
> PMT 217	<b>Auxiliary Devices for CNC Lathe</b>		1	3	2
			11	21	18

**Total Required** **36**

### Program Outcomes

- Eligible for NIMS CNC Lathe Operator Certification
- Eligible for NIMS CNC Mill Operator Certification
- Eligible for Sandvik Metal Cutting Technology (MCT) Certification
- Demonstrate proficiency in reading, understanding and following detailed instructions and component drawings.
- Communicate effectively, both written and verbal form, in workplace scenarios using appropriate technical information.
- Recognize safety hazards and potential safety issues and apply safe work practices and procedures in accordance with OSHA standards in the manufacturing workplace.



The Computer Numerical Control Program is accredited by the National Institute of Metalworking Skills (NIMS).

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# DIESEL HYDRAULICS TECHNOLOGY

(Continued on next page)

## Associate in Applied Science Degree Program

First Semester			C	L	CR
> AUT 115	<b>Automotive Electricity</b>		2	2	3
COL 103	College Success		1	0	1
> DIM 112	<b>Introduction to Diesel Hydraulics</b>		3	9	3
> DIM 116	<b>Engine Rebuilding</b>		3	9	3
ENG 111	English Composition		3	0	3
WEI 101	Introduction to Welding		2	2	3
			14	22	16

Second Semester			C	L	CR
> AUT 125	<b>Automotive Electronics</b>		2	2	3
> DIM 122	<b>Heavy Equipment / Electrical Systems*</b>		3	9	3
> DIM 124	<b>Brake Systems*</b>		3	9	3
MAT 121	Technical Mathematics		4	0	4
SAE 121	Industrial Safety		3	0	3
WEI 133	Electrical Welding		2	2	3
			17	22	19

Third Semester			C	L	CR
> AUT 229	<b>Automotive Heating &amp; Air Conditioning</b>		2	2	3
> DIM 211	<b>Hydraulics Technology*</b>		3	9	3
> DIM 212	<b>Engine Diagnosis</b>		3	9	3
PHY 150	Physics		3	2	4
	Social Science Elective		3	0	3
			14	22	16

Fourth Semester			C	L	CR
AUT 216	Motor Vehicle Inspection		2	0	2
COM 221	Technical Communications		3	0	3
> DIM 221	<b>Drive Train Systems*</b>		3	9	3
> DIM 224	<b>Steering &amp; Suspension Systems</b>		3	9	3
	Humanities Elective		3	0	3
	Elective		3	0	3
			17	18	17

**Total Required** **68**

*\*Note: DIM Courses within a semester are scheduled sequentially, not concurrently.*



The Computer Numerical Control Program is accredited by the National Institute of Metalworking Skills (NIMS).

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

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

**Key: C= Class Hours, CR= Credit Hours, L=Laboratory**

# DIESEL HYDRAULICS TECHNOLOGY

*(Continued from previous page)*

## Certificate Program

First Semester			C	L	CR
> AUT	115	Automotive Electricity	2	2	3
> DIM	112	Introduction to Diesel Hydraulics*	3	9	3
> DIM	116	Diesel Engine Rebuilding	3	9	3
ENG	111	English Composition	3	0	3
WEI	101	Introduction to Welding	2	2	3
			13	22	15

Second Semester			C	L	CR
> AUT	125	Automotive Electronics	2	2	3
> DIM	122	Heavy Equipment / Electrical Systems*	3	9	3
> DIM	124	Brake Systems*	3	9	3
MAT	121	Technical Mathematics	4	0	4
SAE	121	Industrial Safety	3	0	3
WEI	133	Electrical Welding	2	2	3
			17	22	19

**Total Required** **34**

*\*Note: DIM Courses within a semester are scheduled sequentially, not concurrently.*

### Program Outcomes

- Demonstrate safety in the workplace, using tools and equipment used in the repair facility.
- Identify truck/equipment routine maintenance standards such as lube, visual check over, and out-of-service procedures.
- Understand the principles of air brake systems and how to diagnose and repair systems including ABS.
- Perform engine valve/injector adjustments (engine tune up).
- Understand the principles of how engine management and exhaust aftertreatment work and how to diagnose and repair.
- Identify different hydraulic pumps and how to adjust relief pressures.
- Troubleshoot and repair electrical systems and engine controls.
- Be eligible for ASE T2-T8 certifications, Maine State Commercial Inspection Licensure and 609 Certification of Federal Clean Air Act.

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

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

**Key: C= Class Hours, CR= Credit Hours, L=Laboratory**

# EARLY CHILDHOOD EDUCATION

*(Continued on next page)*

## Associate in Applied Science Degree Program

First Semester			C	L	CR
>	ECE 101	Healthy Learning Environments	3	0	3
>	ECE 105	Advancing Intellectual & Social Development	3	0	3
>	ECE 192	Field Experience in Early Childhood Education I	0	9	3
	PSY 101	General Psychology	3	0	3
		Math Elective	3	0	3
			12	9	15

Second Semester			C	L	CR
>	ECE 120	Programmatic & Professional Development	3	0	3
>	ECE 196	Field Experience in Early Childhood Education 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

Third Semester			C	L	CR
	BIO 115	General Biology	3	2	4
	CIS 113	Introduction to Microcomputer Applications	3	0	3
	COM 111	Speech	3	0	3
>	ECE 210	Child Guidance & Discipline	3	0	3
>	ECE 230	Curriculum in Early Childhood Education (Birth - 3)	3	0	3
			15	2	16

Fourth Semester			C	L	CR
>	ECE 197	Field Experience in Early Childhood Education III	1	12	5
>	ECE 220	Education of Young Children with Special Needs	3	0	3
>	ECE 235	Curriculum in Early Childhood Education (Ages 3 - 8)	3	0	3
	ENG 226	Introduction to Literature	3	0	3
	SOC 111	Sociology	3	0	3
			13	12	17

**Total Required** **64**

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

## **EARLY CHILDHOOD EDUCATION**

*(Continued on next page)*

### **Certificate Program**

<b>First Semester</b>			<b>C</b>	<b>L</b>	<b>CR</b>
> ECE 101	Healthy Learning Environments		3	0	3
> ECE 105	Advancing Intellectual & Social Development		3	0	3
> ECE 192	Field Experience in Early Childhood Education I		0	9	3
PSY 101	General Psychology		3	0	3
	Math Elective		3	0	3
			12	9	15

<b>Second Semester</b>					
CIS 113	Introduction to Microcomputer Applications		3	0	3
> ECE 120	Programmatic & Professional Development		3	0	3
> ECE 196	Field Experience in Early Childhood Education II		1	9	4
ENG 111	English Composition		3	0	3
			10	9	13

<b>Summer Semester</b>					
> ECE 197	Field Experience in Early Childhood Education III		1	12	5

**Total Required** **33**

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

*Key: C= Class Hours, CR= Credit Hours, L=Laboratory*

## **EARLY CHILDHOOD EDUCATION**

*(Continued from previous page)*

### Program Outcomes

Graduates of the ECE program 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.
- Know about, understand, and value the importance and complex characteristics of children’s families and communities; 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.
- Know about and understand the goals, benefits and uses of assessment and 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.
- Know, understand, and use positive relationships and supportive interactions as the foundations for their work with young children.
- 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.
- Know, understand, and use a wide array of effective approaches, strategies, and tools to positively influence children’s development and learning.
- Understand the importance of each content area in young children’s learning; know the essential concepts, inquiry tools, and structure of content areas, including academic subjects, and be able to identify resources to deepen their understanding.
- 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.
- 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.

*> Major courses; a minimum grade of “C” or 2.0 is required*

**Key: C= Class Hours, CR= Credit Hours, L=Laboratory**

# ELECTRICAL CONSTRUCTION & MAINTENANCE

*(Continued on next page)*

## Associate in Applied Science Degree Program

First Semester			C	L	CR
COL	103	College Success	1	0	1
>	<b>ELE 112</b>	<b>Basic Residential Wiring</b>	<b>2</b>	<b>2</b>	<b>3</b>
>	<b>ELS 115</b>	<b>Basic Electricity / Electronics</b>	<b>3</b>	<b>0</b>	<b>3</b>
>	<b>ELS 116</b>	<b>Basic Electricity / Electronics Lab</b>	<b>0</b>	<b>6</b>	<b>2</b>
ENG	111	English Composition	3	0	3
MAT	121	Technical Mathematics	4	0	4
			<hr/>		
			13	8	16

Second Semester					
DIB	113	Introduction to Digital Systems	2	2	3
DRR	117	Blueprint Reading for Construction Trades	2	2	3
>	<b>ELS 124</b>	<b>Industrial Electronics</b>	<b>2</b>	<b>3</b>	<b>3</b>
>	<b>ELS 125</b>	<b>Motors &amp; Controls</b>	<b>2</b>	<b>3</b>	<b>3</b>
		Social Science Elective	3	0	3
			<hr/>		
			11	10	15

Third Semester					
EET	221	Control Systems & PLCs	2	3	3
>	<b>ELC 110</b>	<b>National Electric Code</b>	<b>3</b>	<b>0</b>	<b>3</b>
>	<b>ELE 210</b>	<b>Electrical Construction &amp; Maintenance I</b>	<b>3</b>	<b>0</b>	<b>3</b>
>	<b>ELE 212</b>	<b>Electrical Construction &amp; Maintenance Lab I</b>	<b>0</b>	<b>9</b>	<b>3</b>
PHY	150	Physics	3	2	4
			<hr/>		
			11	14	16

Fourth Semester					
COM	221	Technical Communications	3	0	3
>	<b>ELC 116</b>	<b>National Electric Code for Industry</b>	<b>3</b>	<b>0</b>	<b>3</b>
>	<b>ELE 222</b>	<b>Electric Construction &amp; Maintenance II</b>	<b>3</b>	<b>0</b>	<b>3</b>
>	<b>ELE 223</b>	<b>Electric Construction &amp; Maintenance II Lab</b>	<b>0</b>	<b>9</b>	<b>3</b>
		Humanities Elective	3	0	3
			<hr/>		
			12	9	15

**Total Required** **62**

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# ELECTRICAL CONSTRUCTION & MAINTENANCE

*(Continued from previous page)*

## Certificate Program

First Semester		C	L	CR
> ELC 110	National Electric Code	3	0	3
> ELE 112	Basic Residential Wiring	2	2	3
> ELS 115	Basic Electricity / Electronics	3	0	3
> ELS 116	Basic Electricity / Electronics Lab	0	6	2
MAT 121	Technical Mathematics	4	0	4
		12	8	15

Second Semester		C	L	CR
DRR 117	Blueprint Reading for Construction Trades	2	2	3
> ELC 116	National Electric 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
		12	8	15

**Total Required** **30**

### Program Outcomes

- Understand the behavior and principles that govern AC and DC electrical circuits.
- Exhibit safety practices and procedures.
- Interpret the National Electrical Code as it applies to the electrical industry.
- Troubleshoot electrical circuits and equipment using available information.
- Calculate electrical quantities.
- Interpret blueprints related to building, mechanical, and electrical systems.
- Demonstrate an understanding of the theory and skills associated with the electrical industry.
- Be eligible to take State of Maine journeyman's electrician examination and to enter employment under a master electrician.
- Qualify for employment opportunities with electrical contractors, electrical equipment suppliers, utilities and industrial maintenance companies.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory



# EMERGENCY MEDICAL SERVICES

*(Continued on next page)*

## Associate in Applied Science Degree Program

### Prerequisite: EMT Basic Certificate

First Semester			C	L	F	CL	CR
>	BIO 201	Anatomy & Physiology I with Lab	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	Fundamentals 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 License

Second Semester			C	L	F	CL	CR
>	ALH 124	Health & Safety Composition	1	0	0	0	1
>	BIO 211	Anatomy & Physiology II	3	2	0	0	4
>>	EMS 122	AEMT Clinical Externship I	0	0	0	6	2
>>	EMS 126	AEMT Clinical Externship II	0	0	6	0	2
>>	EMS 130	AEMT - Skills Seminar	0	3	0	0	1
	MAT 116	Quantitative Reasoning (or MAT 125 College Algebra)	3	0	0	0	3
			7	5	6	6	13

Third Semester			C	L	F	CL	CR
>>	EMS 213	Advanced Emergency Cardio Care (ACLS)	3	3	0	0	4
>>	EMS 214	Advanced Emergency Pharmacology	2.5	0.5	0	0	3
	PHY 101	General Psychology	3	0	0	0	3
		Communication Elective	3	0	0	0	3
			11.5	3.5	0	0	13

### Pre-requisite: EMT/AEMT Level Licensure

Fourth Semester			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 / EPC)	1.5	1.5	0	0	2
>>	EMS 222	Trauma Management (PHTLS)	1.5	2.5	0	0	3
>>	EMS 236	Paramedic Assessment Management	0	3	0	0	1
			6	7	0	15	14

> Major courses; a minimum grade of "C" or 2.0 is required

>> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required

Key: C= Class Hours, CL= Clinical Hours, CR= Credit Hours, F= Field, L=Laboratory

## EMERGENCY MEDICAL SERVICES

*(Continued from previous page)*

Fifth Semester	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 Population	1	0	0	0	1
>> EMS 232 Paramedicine Clinical Capstone	0	0	0	45	1
>> EMS 233 EMS Operations	0	3	0	0	1
Humanities Elective	3	0	0	0	3
	4	6	12	45	11

Total Required

66

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

*>> Major (EMS) courses; a minimum grade of "C+" is 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 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.



**CAAHEP**

Commission on Accreditation of Allied Health Programs  
 25400 US Highway 19 North  
 Suite 158  
 Clearwater, FL 33763  
 P:727-210-2350

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

*>> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required*

**Key: C= Class Hours, CL= Clinical Hours, CR= Credit Hours, F= Field, L=Laboratory**

## ADVANCED EMERGENCY MEDICAL TECHNICIAN

### Certificate Program

First Semester		C	L	F	CL	CR
ALH 124	Health & Safety Compliance	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	Fundamentals 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

Second Semester		C	L	F	CL	CR
>> EMS 122	AEMT Clinical Externship I	0	0	0	6	2
>> EMS 126	AEMT Clinical Externship II	0	0	6	0	2
>> EMS 130	AEMT Skills Seminar	0	3	0	0	1
MAT 116	Quantitative Reasoning (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 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.

*> Major courses; a minimum grade of "C" or 2.0 is required*  
*>> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required*  
**Key: C= Class Hours, CL= Clinical Hours, CR= Credit Hours, F= Field, L=Laboratory**

## PARAMEDICINE

### Certificate Program

First Semester				C	L	F	CL	CR
>	BIO	201	Anatomy & Physiology I	3	2	0	0	4
>>	EMS	213	Advanced Emergency Cardio Care (ACLS)	3	3	0	0	4
>>	EMS	214	Advanced Emergency Pharmacology	2.5	0.5	0	0	3
				8.5	5.5	0	0	11

Second Semester				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 Assessment Management	0	3	0	0	1
				9	9	0	15	18

Third Semester				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	Paramedic Clinical Capstone	0	0	0	45	1
>>	EMS	233	EMS Operations	1	0	0	0	1
				2	3	12	45	8

**Total Required** **37**

### 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.

> Major courses; a minimum grade of "C" or 2.0 is required

>> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required

Key: C= Class Hours, CL= Clinical Hours, CR= Credit Hours, F= Field, L=Laboratory

# ENTREPRENEURSHIP

## Certificate Program

<b>First Semester</b>			<b>CR</b>
ACC	110	College Accounting (or ACC 114 Principles of Accounting I)	3
>	<b>BUS 101</b>	<b>Introduction to Business</b>	<b>3</b>
CIS	105	Introduction to PC Operating Systems	1
>	<b>CIS 113</b>	<b>Introduction to Microcomputer Applications</b>	<b>3</b>
ENG	111	English Composition	3
MAT	115	Business Math (or MAT 116 Quantitative Reasoning)	3
			16
<b>Second Semester</b>			
>	<b>ACC 112</b>	<b>Computerized Accounting</b>	<b>3</b>
ACC	113	Payroll Accounting	3
>	<b>BUS 109</b>	<b>Entrepreneurship</b>	<b>3</b>
>	<b>BUS 241</b>	<b>Principles of Marketing</b>	<b>3</b>
CIS	108	Spreadsheet Applications	3
			15
<b>Total Required</b>			<b>31</b>

## Program Outcomes

- Perform financial statement analysis.
- Utilize accounting information for decision making.
- Demonstrate knowledge of marketing research and skills necessary to create a marketing plan.
- Demonstrate knowledge and skills in the field of entrepreneurship.
- Proficiently use technology.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: CR= Credit Hours

## **LIBERAL STUDIES**

*(Continued on next page)*

### **Associate in Arts Degree Program**

<b>First Semester</b>			<b>CR</b>
COL 103	College Success		1
> ENG 111	English Composition		3
> MAT 116	Quantitative Reasoning (or Higher Level Math)		3
>	Diversity Elective (PHI 206 or HIS 206)		3
>	Humanities Elective		3
>	Social Science Elective		3
			<hr/> 15-16
<b>Second Semester</b>			
> ENG 226	Introduction to Literature		3
>	Creative Arts Elective (ART 201 or ENG 239)		3
>	Science Elective		4
>	Writing Elective (ENG 227 Recommended)		3
	Elective		3
			<hr/> 16
<b>Third Semester</b>			
>	Social Science Elective		3
	Electives		12
			<hr/> 15
<b>Fourth Semester</b>			
>	Ethical Reasoning Elective (PHI 201 Recommended)		3
	Electives		12
			<hr/> 15
<b>Minimum Required</b>			<b>60</b>

> Major courses; a minimum grade of "C" or 2.0 is required

Key: CR= Credit Hours

## LIBERAL STUDIES

(Continued from previous page)

### Transfer Certificate Program

First Semester				CR
	COL 103	College Success		1
>	ENG 111	English Composition		3
>	MAT 116	Quantitative Reasoning (or Higher Level Math)		3
>		Diversity Elective (PHI 206 or HIS 206)		3
>		Social Science Elective		3
>		Humanities Elective		3
>		Diversity Elective (PHI 206 or HIS 206)		3
				15-16
Second Semester				
>	ENG 226	Introduction to Literature		3
>		Creative Arts Elective (ART 201 or ENG 239)		3
>		Science Elective		4
>		Writing Elective (ENG 227 Recommended)		3
Elective				3
				16
<b>Minimum Required</b>				<b>31-32</b>

### Program Outcomes

Graduates of the Liberal Studies program will:

- Be able to communicate effectively, both orally and in writing.
- 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.
- Understand mathematical concepts and be able to perform mathematical operations to solve practical problems.
- Demonstrate the ability to be consumers of biological and other scientific information to better inform their daily lives.
- Be able to analyze or explain causal forces which shape social structures, institutions, or behavior through time.
- 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.
- Develop knowledge and appreciation of the aesthetic dimensions of humankind.
- Demonstrate knowledge of cultural differences.
- 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.
- Develop the basic academic skills and traits necessary to complete a college degree.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: CR= Credit Hours

# MEDICAL ASSISTING

*(Continued on next page)*

## Associate in Applied Science Degree Program

First Semester			C	L	CR
> ALH	220	Medical Terminology	3	0	3
> BIO	201	Anatomy & Physiology with Lab I	3	4	4
> MDA	110	Medical Assisting Office Procedures	3	0	3
> MDA	112	Medical Assisting Procedures with Lab I	3	2	4
			12	4	14

Second Semester			C	L	CR
> BIO	211	Anatomy & Physiology with Lab II	3	2	4
ENG	111	English Composition	3	0	3
MAT	116	Quantitative Reasoning (or MAT 125)	3	0	3
> MDA	125	Medical Insurance & Coding	3	0	3
> MDA	213	Medical Assisting Procedures with Lab II	3	2	4
			14	4	17

Summer Semester			C	L	CR
> MDA	223	Medical Assisting Externship	1	12	5

Third Semester			C	L	CR
COM	212	Business Communications	3	0	3
> MDA	224	Electronic Health Records	3	0	3
PSY	101	General Psychology	3	0	3
		Humanities Elective	3	0	3
			12	0	12

Fourth Semester			C	L	CR
> HIT	111	Medical Law & Ethics	3	0	3
> HIT	115	Clinical Applications Pathophysiology & Pharmacology	3	0	3
PSY	207	Developmental Psychology	3	0	3
		Elective	3	0	3
			12	0	12

**Total Required** **60**

> Major courses; a minimum grade of "C" or 2.0 is required

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory



## MEDICAL ASSISTING

*(Continued from previous page)*

### Certificate Program

First Semester			C	L	CR
> ALH	220	Medical Terminology	3	0	3
> BIO	201	Anatomy & Physiology with Lab I	3	2	4
> MDA	110	Medical Assisting Office Procedures	3	0	3
> MDA	112	Medical Assisting Procedures with Lab I	3	2	4
			12	4	14
Second Semester					
> BIO	211	Anatomy & Physiology with Lab II	3	2	4
ENG	111	English Composition	3	0	3
MAT	116	Quantitative Reasoning (or Mat 125)	3	0	3
> MDA	125	Medical Insurance & Coding	3	0	3
> MDA	213	Medical Assisting Procedures with Lab II	3	2	4
			14	4	17
Summer Semester					
> MDA	223	Medical Assisting Externship	1	12	5
<b>Total Required</b>			<b>36</b>		

### Program Outcomes

- 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.



*The Medical Assisting Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Medical Assisting Education Review Board.*

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

## MEDICAL CODING

### Certificate Program

First Semester		C	L	CR
> ALH 220	Medical Terminology	3	0	3
> BIO 114	Human Biology with Lab	3	2	4
ENG 111	English Composition	3	0	3
> HIT 114	Clinical Classification Systems with Lab I	2	2	3
> HIT 116	Clinical Classification Systems with Lab II	2	2	3
		13	6	16

Second Semester		C	L	CR
> HIT 112	Medical Law, Reimbursement & Delivery Systems	3	0	3
> HIT 115	Pathophysiology & Pharmacology	3	0	3
> HIT 214	ICD-10-CM/PCS Coding Part II	3	0	3
> HIT 216	CPT Coding Part II	3	0	3
MAT 116	Quantitative Reasoning (or MAT 125)	3	0	3
		15	0	15

Second Semester		C	L	CR
> HIT 219	Medical Coding Internship/Professional Practical Experience	0	60	2

**Total Required** **33**

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

### Program Outcomes

- 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 the 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 is required*

**Key: C= Class Hours, CR= Credit Hours, L=Laboratory**

# NETWORK ADMINISTRATION & CYBERSECURITY

*(Continued on next page)*

## Associate in Applied Science Degree Program

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

Second Semester			C	L	CR
> COE 125	<b>Computer Network Hardware</b>		2	2	3
> COE 128	<b>Advanced Operating Systems</b>		2	2	3
> COE 217	<b>Installing &amp; Configuring Servers</b>		2	4	4
COM 212	Business Communications		3	0	3
MAT 125	College Algebra		3	0	3
			12	8	16

Third Semester			C	L	CR
COE 112	Introduction to Linux		2	2	3
> COE 218	<b>Network Administration</b>		2	4	4
> COE 219	<b>Electronics for Computer Technicians</b>		2	3	3
> COE 228	<b>Security+ Certification</b>		2	2	3
ECO 213	Macroeconomics		3	0	3
			11	11	16

Fourth Semester			C	L	CR
> COE 220	<b>Introduction to Computer Forensics</b>		2	2	3
> COE 227	<b>Configuring Advanced Windows Server</b>		2	4	4
> COE 229	<b>Ethical Hacking</b>		2	2	3
	Humanities Elective		3	0	3
	General Elective		3	0	3
			12	8	16

**Total Required** **64**

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

*Key: C= Class Hours, CR= Credit Hours, L=Laboratory*

# NETWORK ADMINISTRATION & CYBERSECURITY

*(Continued from previous page)*

## Certificate Program

First Semester			C	L	CR
> COE 113	<b>Operating Systems</b>		2	2	3
> COE 116	<b>A+ Certification Prep</b>		3	0	3
> COE 118	<b>A+ Certification Prep Lab</b>		0	9	3
ENG 111	English Composition		3	0	3
MAT 115	Business Math (or MAT 116 Quantitative Reasoning)		3	0	3
			11	11	15
Second Semester					
COE 112	Introduction to Linux		2	2	3
> COE 125	<b>Computer Network Hardware</b>		2	2	3
> COE 128	<b>Advanced Operating Systems</b>		2	2	3
> COE 217	<b>Installing &amp; Configuring Servers</b>		2	4	4
COM 212	Business Communications (or MAT 125 College Algebra)		3	0	3
			11	10	16
<b>Total Required</b>			<b>31</b>		

## Program Outcomes

- Demonstrate the skills required to gain and maintain entry-level employment in the information technology industry.
- Explore different areas of expertise and analyze career opportunities.
- Install, troubleshoot, and monitor a secure network to maintain integrity, confidentiality, and availability of data and service.
- Understand the computer forensics profession and investigations.
- Explain digital forensics analysis and validation.
- Describe the role of an ethical hacker.
- Identify desktop and server operating systems vulnerabilities and explain ways to fix them.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# NURSING

(Continued on next page)

## Associate in Science Degree Program

Pre-requisites			C	L	CR
>	<b>BIO 201</b>	<b>Anatomy &amp; Physiology I with Lab</b>	<b>3</b>	<b>2</b>	<b>4</b>
	ENG 111	English Composition	3	0	3
	MAT 116	Quantitative Reasoning (or MAT 125 College Algebra)	3	0	3
			9	2	10

First Semester					
>	<b>ALH 124</b>	<b>Health &amp; Safety Compliance*</b>	<b>1</b>	<b>0</b>	<b>1</b>
>	<b>BIO 211</b>	<b>Anatomy &amp; Physiology II with Lab</b>	<b>3</b>	<b>2</b>	<b>4</b>
	NUR 100	Nursing Program Success	1	0	1
>>	<b>NUR 117</b>	<b>Nutrition**</b>	<b>3</b>	<b>0</b>	<b>3</b>
>>	<b>NUR 128</b>	<b>Foundations of Nursing</b>	<b>4</b>	<b>0</b>	<b>4</b>
>>	<b>NUR 129</b>	<b>Clinical Practicum I Geriatric Population</b>	<b>0</b>	<b>9</b>	<b>3</b>
			12	11	16

Winter Session					
	NUR 124	Role Transition (Only required for LPNs entering second semester)	1	0	1

Second Semester					
>>	<b>NUR 115</b>	<b>Pharmacology for Nurses***</b>	<b>3</b>	<b>0</b>	<b>3</b>
>>	<b>NUR 130</b>	<b>Nursing Across the Lifespan I</b>	<b>4</b>	<b>0</b>	<b>4</b>
>>	<b>NUR 131</b>	<b>Clinical Practicum II Across the Lifespan</b>	<b>0</b>	<b>9</b>	<b>3</b>
	PSY 101	General Psychology	3	0	3
			10	9	13

Third Semester					
>>	<b>BIO 218</b>	<b>Microbiology Lecture with Lab</b>	<b>3</b>	<b>2</b>	<b>4</b>
>>	<b>NUR 225</b>	<b>Nursing Across the Lifespan II</b>	<b>5</b>	<b>0</b>	<b>5</b>
>>	<b>NUR 228</b>	<b>Clinical Practicum III Across the Lifespan</b>	<b>0</b>	<b>12</b>	<b>4</b>
	PSY 207	Developmental Psychology	3	0	3
			11	14	16

Fourth Semester					
	COM 111	Speech	3	0	3
>>	<b>NUR 230</b>	<b>Nursing Across the Lifespan III</b>	<b>5</b>	<b>0</b>	<b>5</b>
>>	<b>NUR 231</b>	<b>Clinical Practicum IV Across the Lifespan</b>	<b>0</b>	<b>12</b>	<b>4</b>
		Humanities Elective	3	0	3
			11	12	15

**Total Required** **60 / 61**

*\*ALH 124 must be passed within 12 months of enrollment into NUR 128 & 129, \*\*NUR 117 is a co-requisite to NUR 128 & 129, \*\*\*NUR 115 is a co-requisite to NUR 130 & 131*

> Major courses; a minimum grade of "C" or 2.0 is required  
 >> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required  
 Key: C= Class Hours, CR= Credit Hours, L=Laboratory

## **NURSING**

*(Continued from previous page)*

### **Program Outcomes**

- 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.

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

*BIO 201 Anatomy & Physiology I w/ Lab*

*ENG 111 English Composition*

*MAT 116 Quantitative Reasoning  
(or MAT 125 College Algebra)*

*The associate nursing program at NMCC is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 and is approved by the Maine State Board of Nursing.*

*The most recent accreditation decision made by the ACEN Board of Commissioners for the associate nursing program is Continuing Accreditation.*

*The Maine State Board of Nursing may refuse to grant a license on the basis of the criminal history record information relating to convictions denominated in Title V Chapter 341 Section 5301 Subsection II of the Maine Revised Statutes Annotated.*

## OFFICE ASSISTANT

### Certificate Program

First Semester			CR
ACC 110	College Accounting (or ACC 114 Principles of Accounting I)	3	
> <b>BUS 101</b>	<b>Introduction to Business</b>	<b>3</b>	
CIS 105	Introduction to PC Operating Systems	1	
> <b>CIS 113</b>	<b>Introduction to Microcomputer Applications</b>	<b>3</b>	
ENG 111	English Composition	3	
MAT 115	Business Math (or MAT 116 Quantitative Reasoning)	3	
			16
Second Semester			
> <b>ACC 112</b>	<b>Computerized Accounting</b>	<b>3</b>	
ACC 113	Payroll Accounting	3	
CIS 108	Spreadsheet Applications	3	
> <b>SES 129</b>	<b>Office Procedures</b>	<b>3</b>	
	Elective	3	
			15
<b>Total Required</b>			<b>31</b>

### Program Outcomes

- Perform the steps of the accounting cycle.
- Demonstrate the ability to use computerized accounting software.
- Prepare professional formatted documents to current business and discipline preferences.
- Demonstrate knowledge and skills in the field of business.
- Proficiently use technology.

> Major courses; a minimum grade of "C" or 2.0 is required

CR= Credit Hours

# PLUMBING & HEATING TECHNOLOGY

*(Continued on next page)*

## 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	<b>Plumbing Technology</b>		<b>3</b>	<b>0</b>	<b>3</b>
> PLH 109	<b>Plumbing Lab I</b>		<b>0</b>	<b>9</b>	<b>3</b>
> PLH 113	<b>Pipefitting Calculations</b>		<b>3</b>	<b>0</b>	<b>3</b>
SAE 117	Occupational Safety		1	0	1
			<u>11</u>	<u>9</u>	<u>14</u>

Second Semester			C	L	CR
DRR 117	Blueprint Reading for Construction Trades		2	2	3
MAT 121	Technical Mathematics		4	0	4
> PLH 122	<b>Plumbing Code Review</b>		<b>3</b>	<b>0</b>	<b>3</b>
> PLH 123	<b>Plumbing Lab II</b>		<b>0</b>	<b>9</b>	<b>3</b>
> PLH 126	<b>Water Pumps &amp; Treatment</b>		<b>1</b>	<b>2</b>	<b>2</b>
			<u>10</u>	<u>13</u>	<u>15</u>

Third Semester			C	L	CR
PHY 150	Physics		3	2	4
> PLH 209	<b>HVAC Controls</b>		<b>1</b>	<b>2</b>	<b>2</b>
> PLH 214	<b>Heating Technology I</b>		<b>3</b>	<b>0</b>	<b>3</b>
> PLH 216	<b>Propane &amp; Natural Gas I</b>		<b>2</b>	<b>2</b>	<b>3</b>
> PLH 218	<b>Heating Lab I</b>		<b>0</b>	<b>9</b>	<b>3</b>
	Humanities Elective		3	0	3
			<u>12</u>	<u>15</u>	<u>18</u>

Fourth Semester			C	L	CR
COM 221	Technical Communications		3	0	3
> PLH 219	<b>Propane &amp; Natural Gas II</b>		<b>2</b>	<b>2</b>	<b>3</b>
> PLH 223	<b>Heating Lab II</b>		<b>2</b>	<b>9</b>	<b>5</b>
> PLH 227	<b>Maine Oil / Solid Fuel Code I</b>		<b>1</b>	<b>0</b>	<b>1</b>
> PLH 226	<b>Refrigeration &amp; Air Conditioning</b>		<b>1</b>	<b>2</b>	<b>2</b>
	Social Science Elective		3	0	3
			<u>12</u>	<u>13</u>	<u>17</u>

**Total Required** **64**

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory



# PLUMBING & HEATING TECHNOLOGY

(Continued from previous page)

## **PLUMBING Certificate Program**

<b>First Semester</b>		<b>C</b>	<b>L</b>	<b>CR</b>
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

<b>Second Semester</b>				
DRR 117	Blueprint Reading for Construction Trades	2	2	3
MAT 121	Technical Mathematics	4	0	4
> PLH 122	Plumbing Code Review	3	0	3
> PLH 123	Plumbing Lab II	0	9	3
> PLH 126	Water Pumps & Treatment	1	2	2
		10	13	15

**Total Required** **28**

*Must have completed the Plumbing Certificate Program or permission of the instructor to enroll in this certificate program*

## **HEATING Certificate Program**

<b>First Semester</b>				
ENG 111	English Composition	3	0	3
> PLH 209	HVAC Controls	1	2	2
> PLH 214	Heating Technology I	3	0	3
> PLH 216	Propane & Natural Gas I	2	2	3
> PLH 218	Heating I Lab	0	9	3
		9	13	14

<b>Second Semester</b>				
121	Technical Mathematics	4	0	4
> PLH 219	Propane & Natural Gas II	2	2	3
> PLH 223	Heating Lab II	0	9	3
> PLH 227	Maine Oil / Solid Fuel Code I	3	0	3
> PLH 226	Refrigeration & Air Conditioning	1	2	2
		10	13	15

**Total Required** **29**

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# **PLUMBING & HEATING TECHNOLOGY**

*(Continued from previous page)*

## **Program Outcomes**

- Install Oil, Gas, Water Distribution, Hydronic Distribution and Drainage Waste & Vent piping and fitting using threading, soldering, grooving, compression, expansion and solvent welding systems.
- Correctly size and design distribution systems associated with the Plumbing and Heating trade water distribution, gas distribution and DWV systems.
- Demonstrate correct and safe installation, service and troubleshooting methods of plumbing, hydronic, and refrigeration and Air Conditioning systems.
- Demonstrate correct and safe installation and troubleshooting methods for the Wiring and Controls needed for the Plumbing, Heating, and Refrigeration and AC industry as well as be able to read and understand basic ladder and schematic diagrams.
- Understand State and Federal Codes governing the installation and service requirements needed for the Plumbing & Heating trades as well as be able to read and interpret trade blueprints.
- Be eligible for the following licenses and certifications:
  - a. Maine State Journeyman Heating License
  - b. Maine State Journeyman in Training Plumbing License
  - c. Maine State Propane & Natural Gas Technician License
  - d. Certified Employees Training Program (CETP) Certificates for Basic Principles and Practices, 4.2, 4.3, 4.4, 4.5, and 4.6 Books.
  - e. EPA 608 Universal Refrigeration Certification

# PRACTICAL NURSING

*(Continued on next page)*

## Certificate Program

Pre-requisites				C	L	CR
>	ALH 124	Health & Safety Compliance		1	0	1
First Semester						
>	BIO 201	Anatomy & Physiology I with Lab		3	2	4
	ENG 111	English Composition		3	0	3
>>	NUR 101	Fundamentals of Practical Nursing		8	0	8
>>	NUR 106	Clinical Practicum I Adult / Geriatric		0	9	3
				14	11	18
Second Semester						
>	BIO 211	Anatomy & Physiology II with Lab		3	2	4
>>	NUR 105	Pharmacology for Practical Nursing		3	0	3
>>	NUR 107	Practical Nursing Across the Lifespan		8	0	8
>>	NUR 109	Clinical Practicum II Special Populations		0	9	3
				14	11	18
<b>Total Required</b>				<b>36</b>		

\*ALH 124: Health and Safety Compliance must be successfully completed within twelve months or immediately prior to enrollment into NUR 106: 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.

*Effective July 7, 2022, this nursing program is a candidate for initial accreditation by the Accreditation Commission for Education in Nursing. This candidacy status expires on July 7, 2024. Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400 Atlanta, GA 30326 (404) 975-5000 <http://www.acenursing.com/candidates/candidacy.as>*

> Major courses; a minimum grade of "C" or 2.0 is required  
 >> Major courses; a minimum grade of "C+" or a minimum grade of 77 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# **PRACTICAL NURSING**

*(Continued from previous page)*

## **Program Outcomes**

- Demonstrate therapeutic culturally competent nursing care to clients throughout the lifespan.
- Integrate the nursing process, critical thinking skills, and best-practice standards to provide safe and effective nursing care.
- Assume legal and ethical responsibility and accountability consistent with the role of practical nurse in Maine State Nurse Practice Act.
- Utilize therapeutic and professional communication within the role of the practical nurse.
- Deliver high quality client care within the changing healthcare system.
- Demonstrate efficiency in prioritization and delegation when collaborating with members of the interdisciplinary interprofessional healthcare teams.

# STRUCTURAL WELDING

## Certificate Program

First Semester			C	L	CR
DRR	109	Print Reading for Welders	2	2	3
MAT	121	Technical Mathematics	4	0	4
> WEI	<b>101</b>	<b>Introduction to Welding* (4 Weeks)</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WEI	<b>133</b>	<b>Electric Welding* (4 Weeks)</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WEI	<b>137</b>	<b>Structural Welding* (7 Weeks)</b>	<b>1.5</b>	<b>4.5</b>	<b>3</b>
			11.5	10.5	16

Second Semester			C	L	CR
ENG	111	English Composition	3	0	3
SAE	121	Industrial Safety	3	0	3
> WEI	<b>136</b>	<b>Introduction to GMAW &amp; GTAW</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WEI	<b>138</b>	<b>Structural Welding II* (7.5 Weeks)</b>	<b>1.5</b>	<b>4.5</b>	<b>3</b>
> WEI	<b>139</b>	<b>Open Root Welding* (7.5 Weeks)</b>	<b>1.5</b>	<b>4.5</b>	<b>3</b>
WEI	140	Plasma Table Operations	1	2	2
			12	13	17

**Total Required** **33**

### Program Outcomes

- 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.
- Be eligible for the American Welding Society (AWS) structural certification.

*\*Note: WEI courses within a semester are scheduled sequentially, not concurrently*

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# WATER TREATMENT TECHNOLOGY

*(Continued on next page)*

## Associate in Applied Science Degree Program

First Semester			C	L	CR
DRR	117	Blueprint Reading for Construction Trades	2	2	3
ENG	111	English Composition	3	0	3
> WTT	<b>103</b>	<b>Introduction to Water Treatment Technology</b>	<b>3</b>	<b>0</b>	<b>3</b>
> WTT	<b>111</b>	<b>Water Treatment I</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WTT	<b>113</b>	<b>Water Plant Operation</b>	<b>2</b>	<b>2</b>	<b>3</b>
			<u>13 6 15</u>		

Second Semester			C	L	CR
> CHM	<b>201</b>	<b>Applied Sciences</b>	<b>2</b>	<b>2</b>	<b>3</b>
MAT	121	Technical Mathematics	4	0	4
> WTT	<b>120</b>	<b>Treatment Plant Safety</b>	<b>3</b>	<b>0</b>	<b>3</b>
> WTT	<b>201</b>	<b>Water Distribution Systems</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WTT	<b>211</b>	<b>Water Treatment II</b>	<b>3</b>	<b>2</b>	<b>4</b>
			<u>14 6 17</u>		

Third Semester			C	L	CR
> ELS	<b>119</b>	<b>Introduction to Electronic Systems</b>	<b>1</b>	<b>2</b>	<b>2</b>
BIO	115	General Biology	3	2	4
> WTT	<b>121</b>	<b>Wastewater Treatment I</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WTT	<b>205</b>	<b>Wastewater Collection Systems</b>	<b>2</b>	<b>2</b>	<b>3</b>
		Social Science Elective	<u>3</u>	<u>0</u>	<u>3</u>
			<u>11 8 15</u>		

Fourth Semester			C	L	CR
COM	221	Technical Communications	3	0	3
> INS	<b>110</b>	<b>Instrumentation &amp; Process Controls</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WTT	<b>124</b>	<b>Wastewater Plant Operation</b>	<b>3</b>	<b>0</b>	<b>3</b>
> WTT	<b>221</b>	<b>Wastewater Treatment II</b>	<b>3</b>	<b>2</b>	<b>4</b>
		Humanities Elective	<u>3</u>	<u>0</u>	<u>3</u>
			<u>14 4 16</u>		

**Total Required** **63**

## Program Outcomes

- Describe the various processes used within the water treatment and wastewater treatment industry.
- Perform wastewater collection system and water distribution systems inspections.
- Utilize and maintain process documentation in the operation of water and wastewater systems.
- Understand the water treatment unit processes including coagulation and flocculation, sedimentation, filtration, and disinfection.
- Understand the wastewater treatment unit processes including preliminary, primary, secondary and tertiary treatment.
- Gain fundamental knowledge of various pumps, valves, flow meters and process analyzers used in the water and wastewater industry.
- Perform various laboratory analyses in the water and wastewater facilities.
- Become eligible for the water treatment, water distribution, wastewater treatment, and collection systems operator certification exams.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# WATER TREATMENT TECHNOLOGY

*(Continued from previous page)*

## DRINKING WATER Certificate Program

First Semester			C	L	CR
DRR	117	Blueprint Reading for Construction Trades	2	2	3
ENG	111	English Composition	3	0	3
> WTT	103	<b>Introduction to Water Treatment Technology</b>	<b>3</b>	<b>0</b>	<b>3</b>
> WTT	111	<b>Water Treatment I</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WTT	113	<b>Water Plant Operation</b>	<b>2</b>	<b>0</b>	<b>3</b>
			12 4 15		

Second Semester			C	L	CR
MAT	121	Technical Mathematics	4	0	4
> WTT	120	<b>Treatment Plant Safety</b>	<b>3</b>	<b>0</b>	<b>3</b>
> WTT	201	<b>Water Distribution Systems</b>	<b>2</b>	<b>2</b>	<b>3</b>
> WTT	211	<b>Water Treatment II</b>	<b>3</b>	<b>2</b>	<b>4</b>
			12 4 14		

**Total Required** **29**

## WASTEWATER Certificate Program

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

Second Semester			C	L	CR
> INS	110	<b>Instrumentation &amp; Process Controls</b>	<b>2</b>	<b>2</b>	<b>3</b>
MAT	121	Technical Mathematics	4	0	4
> WTT	120	<b>Treatment Plant Safety</b>	<b>3</b>	<b>0</b>	<b>3</b>
> WTT	124	<b>Wastewater Plant Operation</b>	<b>3</b>	<b>0</b>	<b>3</b>
> WTT	221	<b>Wastewater Treatment II</b>	<b>3</b>	<b>2</b>	<b>4</b>
			15 4 17		

**Total Required** **31**

### Program Outcomes

- Describe the various processes used within the water treatment.
- Perform water distribution systems inspections.
- Utilize and maintain process documentation in the operation of water systems.
- Understand the water treatment unit processes including coagulation and flocculation, sedimentation, filtration, and disinfection.
- Gain fundamental knowledge of various pumps, valves, flow meters and process analyzers used in the water industry.
- Perform various laboratory analyses in the water facilities.
- Become eligible for the water treatment and water distribution exams.

> Major courses; a minimum grade of "C" or 2.0 is required

Key: C= Class Hours, CR= Credit Hours, L=Laboratory

# WIND POWER TECHNOLOGY

## Certificate Program

First Semester			C	L	CR
>	ELS 115	Basic Electricity / Electronics	3	0	3
>	ELS 116	Basic Electricity / Electronics Lab	0	6	2
	MAT 121	Technical Mathematics	4	0	4
>	WPT 110	Safety Fundamentals for Wind Technicians	2	3	3
>	WPT 114	Introduction to Wind Power Industry	2	3	3
>	WPT 119	Wind Turbine Drive Systems	2	3	3
			13	15	18

Second Semester			C	L	CR
>	ELS 124	Industrial Electronics	2	3	3
>	ELS 125	Motors and Controls	2	3	3
	ENG 111	English Composition	3	0	3
>	WPT 213	Wind Power Control Systems	2	3	3
>	WPT 214	Wind Power Delivery Systems	2	3	3
>	WPT 215	Troubleshooting Automated Systems	2	3	3
			13	15	18

**Total Required** **36**

### Program Outcomes

- Function successfully as technicians on wind farms and/or in other power production settings.
- Demonstrate a basic understanding of wind energy systems and terminology used within the power industry.
- Demonstrate an understanding of how power generation equipment functions.
- Demonstrate an understanding of troubleshooting techniques utilizing resources available with technical materials and site system information.
- Demonstrate the skills necessary to troubleshoot and repair equipment utilized on a wind farm or other industrial setting.
- Demonstrate skills necessary to use manual and power tools utilized in an industrial setting.
- Demonstrate skills necessary to select and safely use diagnostic test equipment.
- Demonstrate safety concepts used with electrical generation systems, high angle work areas, and rescue with respect to federal regulations and national standards.

> Major courses; a minimum grade of "C" or 2.0 is required  
 Key: C= Class Hours, CR= Credit Hours, L=Laboratory



# 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 112****Computerized Accounting  
3 credits / 3 class hrs**

This online course covers small business accounting using a 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. Practical application will be implemented using a computerized homework system and a comprehensive problem. Prerequisite: ACC 110, ACC 114; or permission of instructor.

**ACC 113****Payroll Accounting  
3 credits / 3 class hrs**

This online 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 intended 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. Practical application will be implemented using a computerized homework system and a comprehensive problem. Prerequisite: ACC 110, ACC 114 or permission of instructor.

**ACC 114****Principles of Accounting I  
3 credits / 3 class hrs**

This introductory course covers the fundamental principles of accounting as related to a service and/or merchandising sole proprietorship. Emphasis is on developing technical procedures of the accounting cycle including journalizing, posting, adjusting entries, closing books and preparing financial statements. This course exposes the student to specific areas of deferrals and accruals, inventories, payrolls, receivables, payables, and accounting systems. Practical application will be implemented using a computerized homework system and a comprehensive problem.

**ACC 120****Principles of Accounting II  
3 credits / 3 class hrs**

The first part of the course continues to address topics in financial accounting that began in ACC 114 including the use of GAAP (Generally Accepted Accounting Principles). The remaining

emphasis is on the corporate form of ownership. Topics include accounting for bonds, investments in stocks and bonds, business combinations and the statement of cash flows. Practical application will be implemented using a computerized homework system and a comprehensive problem.

Prerequisite: ACC 114

**ACC 124****Managerial Accounting  
3 credits / 3 class hrs**

This course 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. Practical application will be implemented using a computerized homework system. Prerequisite: ACC 114

**ACC 210****Intermediate Accounting I  
3 credits / 3 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 preparation of the balance sheet, income statement, and statement of cash flows; inventory costing; accounts and notes receivables; the allowance method of accounting for bad debts; plant and equipment; investments; and other issues. Practical application will be implemented using a computerized homework system and case studies. Prerequisite: ACC 120

**ACC 214****Federal Taxation I  
3 credits / 3 class hrs**

A study of the basic theory of the federal income tax law as it affects individuals and businesses. Among the topics examined are the computation of gross income, exclusions, capital gains, and losses, property transactions, and various business and personal deductions. Prerequisite: ACC 120 or ACC 124

**ACC 220****Intermediate Accounting II  
3 credits / 3 class hrs**

Continuation of ACC 210. This is the second semester of a two-semester course designed to give the student an in-depth overview of Generally Accepted Accounting Principles and financial reporting of corporate structured businesses. Emphasis is placed on special problems which may include debt and equity financing, leases, investments, capitalizing interest, and employee compensation. Other dimensions of financial reporting, such as earnings per share, accounting changes and error corrections, are also covered. Practical application will be implemented using a computerized homework system and case studies. Prerequisite: ACC 210



**ALH 220****Medical Terminology  
3 credits / 3 class hrs**

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.

**ART 201****Introduction to Film  
3 credits / 3 class hrs**

This course is an introduction to the study and analysis of film as an art form. Students will view, discuss, and interpret movies from a variety of historical and cultural contexts.

**AUT 109****Introduction to Auto Technology  
1 credit / .5 class hrs / 1.5 lab hrs**

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 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 & 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. Prerequisite: AUT 109 or instructor's permission

**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. Prerequisite: AUT 114 or instructor's permission

**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. Prerequisite: AUT 116 or instructor's 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. Prerequisite: AUT 124 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 are also discussed. The course develops diagnostic skills in checking vehicles for safety inspection under Maine motor vehicle safety inspection requirements. Students will be eligible to take the state motor vehicle inspection exams and achieve certification.

**AUT 223** **Manual Drive Train & 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. Prerequisite: AUT 214 or instructor's permission

**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 converter, 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. Corequisite: AUT 223 or instructor's permission. 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 enhance 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 of how alternative propulsion technologies operate and the safety procedures involved with these systems. Prerequisite: AUT 125 or instructor's permission

**AUT 229** **Automotive Heating & Air Conditioning**  
**3 credits / 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 courses will help students when troubleshooting HVAC electrical/electronic circuit faults. Students 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. Prerequisite: AUT 125 or instructor's permission

**AUT 231** **Innovative Automotive Technologies**  
**3 credits / 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 cybersecurity. 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 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. Prerequisite: 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 requisites: AUT 124 and 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 & 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. Prerequisite: BCT 111

**BCT 125** **Woodworking**  
**3 credits / 1.5 class hrs / 4.5 lab hrs**

Students will learn woodworking skills through lecture, demonstration and practical application. A series of projects of increasing complexity and detail will be completed. The techniques required to cut and process panels and solid stock, produce accurate joinery, assemble finished projects, and the skills required to do so in an efficient and cost-effective manner will be covered. Projects will be on an individual team basis. Prerequisite: BCT111 or instructor's permission

**BIO 114** **Human Biology with 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 115** **General Biology**  
**4 credits / 3 lecture / 2 lab hrs**

This course explores the core concepts of biological science including cellular structure and function, energy production, genetics, evolution, nutrition, and ecology. We will also explore key concepts of the physical sciences (physics and chemistry) and how they impact biological processes. The laboratory portion of the course is tied closely to the lecture and will use analytical techniques to explore questions from the perspective biologists.

**BIO 201** **Anatomy & Physiology I with Lab**  
**4 credits / 3 class hrs / 2 lab hrs**

This course is designed for first year students preparing for a career in the medical field. The sequence of topics in the first semester will be as follows: 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. Labs are designed to supplement the lecture portion of Anatomy and Physiology. The concepts covered in the lecture course are explored in greater detail using a variety of aids.

**BIO 211** **Anatomy & Physiology II with Lab**  
**4 credits / 3 class hrs / 2 lab hrs**

This course is designed for first year students preparing for a career in the medical field. The sequence of topics in the second semester will be as follows: Sensory, Circulatory, Urinary, Lymphatic, Digestive, Endocrine, Reproduction Systems, and Fluids, Electrolytes and Acid-Base Control. 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. Labs are designed to supplement the lecture course. They will be performed online using simulation software. The general format of the course will follow the lecture. Prerequisite: BIO 201

**BIO 218** **Microbiology Lecture with Lab**  
**4 credits / 3 class hrs / 2 lab hrs**

This course is a basic introduction to the science of microbiology. The student should develop a broad understanding of both theoretical and laboratory aspects of the science. Specific

topics to be covered include general characteristics of bacteria, viruses, protozoa, and fungi; disease transmission; immunology; epidemiology; and microbial control. The student will have the opportunity to practice techniques for specimen collection, culturing, staining, and microscopic observation of representative species. Prerequisite: 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 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 to 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 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 to 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 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 to process paperwork.

**BUS 101** **Introduction to Business**  
**3 credits / 3 class hrs**

Introduces students to the environment in which business is transacted by presenting an overview of functional areas of business and the basic concepts of the business world.

**BUS 106** **Effective Customer Service**  
**3 credits / 3 class hrs**

A loyal customer base is one of an organization's most important assets. This course covers the concepts and skills needed for success in business careers. Emphasis is given to dealing with customer service problems and how to handle conflicts and stress.

**BUS 109** **Entrepreneurship**  
**3 credits / 3 class hrs**

Covers the essentials of how to start and operate a small business. Students create customized business plan content while examining entrepreneurial opportunities, financing, marketing, selling and customer service, cash flow, managing employees, and growing a business. Recommended for all students who aspire to business ownership and management.

**BUS 113** **Sales Fundamentals**  
**3 credits / 3 class hrs**

Assists students in analyzing the importance of personal preparation for selling effectively, by understanding of self, the product or service, and the customer.

**BUS 114** **Personal Finance**  
**3 credits / 3 class hrs**

Designed to help individuals analyze and direct their own financial affairs. Students will practice and apply skills to begin a lifelong journey of personal financial planning. This course will provide strategies for managing personal financial resources, buying decisions, insurance, investing, and retirement planning. Open to all students.

**BUS 117** **Business Law I**  
**3 credits / 3 class hrs**

Provides a background in the sources of American law and the global legal environment. Provides a basic knowledge of courts and procedures, ethics, torts and crimes, contracts, property and its protection, and debtor-creditor relationship.

**BUS 119** **Legal Environment of Business**  
**3 credits / 3 class hrs**

A survey of the law applicable to business and its environment. The course will help students gain a greater understanding of the standards and methods of reasoning that are used to answer questions about the legal environment in which businesses function. It also covers the legal issues that commonly confront businesses and the way in which our legal system is organized and operates.

**BUS 150** **Special Topics in Business Technology**  
**3 credits / 3 class hrs**

This survey 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. Topics and content will vary from semester to semester. This course will increase the awareness of current issues and technology surrounding the student.

**BUS 201** **Leadership**  
**3 credits / 3 class hrs**

Designed to expose senior level students to areas of competence and knowledge that are fundamental to the practice of leadership in a variety of business and life settings. Students will examine the

prominent leadership theories, acquire skills common to successful leaders, and listen to opinions of leaders of our own community from business, government, and social service organizations. Course requires significant written and oral communication, project management and critical thinking skills.

**BUS 210** **Principles of Insurance**  
**3 credits / 3 class hrs**

Covers basic ideas, problems and principles found in all types of modern insurance and other methods of handling risk. Personal and business risk management will be included.

**BUS 214** **Project Management**  
**3 credits / 3 class hrs**

Topics include project management life cycle and process; identifying and selecting projects; developing a project proposal; techniques for planning, scheduling, resource assignment, budgeting and controlling project performance; project risks; project manager responsibilities and skills; project team development and effectiveness; project communication and documentation; and project management organizational structures. The concepts in the course support the project management knowledge areas of the Project Management Institute's A Guide to the Project Management Body of Knowledge (PMBOK@Guide)

**BUS 215** **Business Ethics**  
**3 credits / 3 class hrs**

Introduces contemporary and controversial ethical issues that face the business community. Case studies are utilized to study the competing values and interests involved in ethical situations. Upon completion, students should be able to demonstrate an understanding of their moral responsibilities and obligations as members of the workforce and society.

**BUS 217** **E-Commerce**  
**3 credits / 3 class hrs**

This course explores the opportunities and challenges associated with electronic commerce and the internet. Students will learn the key business strategies and technological elements of electronic commerce essential to succeeding in today's internet-based economy.

**BUS 229** **Principles of Management**  
**3 credits / 3 class hrs**

Enlivens management principles through its emphasis of real-world management practices. The experiences of people 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 Resource 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. Prerequisite: permission from the instructor.

**CHM 201** **Applied Sciences**  
**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, healthcare





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 Preparation**  
**3 credits / 3 class 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. Corequisite: COE118.

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

This course is the laboratory component of COE 116 A+ Cert Prep. Corequisite: 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.

**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 are 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.

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

This course gives in-depth coverage of the 70-740 certification exam objectives and focuses on the skills needed to install and configure

Windows Server 2016. Upon completion of this course, students will 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 / 3 lab hrs**

Provides in-depth coverage of the 70-741 certification exam objectives and focuses on the skills needed to configure networking with Windows Server 2016. Upon completion of this course, students 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 / 3 lab hrs**

This 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 Advanced 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 identity 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.

**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. Prerequisites: 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, students 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**

This is an oral communication course that offers 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**  
**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. Prerequisite: ENG 111

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

Designed to strengthen students' oral and written communication skills by focusing on elements of technical writing and business correspondence. Emphasis is given to utilizing visual aids effectively, writing several types of job-related reports, and giving oral presentations. Prerequisite: ENG 111

**DIB 113** **Introduction 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. Prerequisites: ELS 115 and ELS 116

**DIM 112** **Introduction to Diesel Hydraulics Technology**  
**3 credits / 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



**ECE 105**                    **Advancing Intellectual & Social Development  
in Young Children**  
**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 & Professional Development  
in Child Care Field**  
**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 and 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. Prerequisite: 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. Prerequisite: 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. Explores 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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: ECO 111 Principles 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. Pre-requisites: DIB 113, ELS 124, and ELS 125

**ELC 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.

**ELC 116**                      **National Electrical Code for Industry**  
**3 credits / 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. Prerequisite: ELC 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 & Maintenance I**  
**3 credits / 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. Prerequisites: ELE 112, ELS 124 and ELS 125; Corequisite: ELE 212







**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 Externship II**  
**4 credits / 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. Prerequisite: 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 simulate 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. Corequisite: 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 for 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. Corequisite: 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; and 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. Corequisite: 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. Corequisite: 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. Corequisite: ALH 124, EMS 244

**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. Students will develop a comprehensive understanding of public relations, education, medical direction and their roles in the advancement of a stronger EMS system. Prerequisite: Current EMS licensure.

**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 the opportunity to 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. Prerequisite: 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 three years). Prerequisites: 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**

This course is designed to help students improve their reading, vocabulary, and writing skills, (including paragraph and essay development), comprehension, study and test-taking abilities. The class will cover critical reading and writing skills, main ideas, vocabulary development, supporting details, organizational patterns, study skills and strategies, and inference. We will use a wide variety of resources such as the textbook, a collection of essays, newspapers, magazines, internet websites, blogs, and books to help the student strengthen and build reading and writing basic skills. 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. Prerequisite: ENG 111

**ENG 227****Advanced Composition  
3 credits / 3 class hrs**

Students will review the writing process and the strategies for drafting, revising and editing covered in English Composition. Students will continue to work on developing the ability to critically read and analytically write papers that clearly express their ideas. Emphasis will be on primary and secondary research skills and the use of MLA and APA style documentation. Students will learn and practice the writing conventions used within their major area of study. The course will prepare students for upper level course work in their majors, research in the workplace, and/or transfer to four-year programs. Prerequisite: ENG 111

**ENG 228****Topics in Literature  
3 credits / 3 class hrs**

Close reading of texts related by topic, theme, or historical period. May be repeated for credit. Prerequisite: ENG 111

**ENG 231****Women in Literature  
3 credits / 3 class hrs**

Examines and explores the role of literary expression in defining, understanding and communicating the experience of being alive and female, as it has been expressed in texts written in the English language. This course analyzes how women have used literature to claim a voice, defining and writing themselves and their experiences into existence. This course will consider the ways that race, class, ethnicity, sexuality, age, region and physical ability inform women's struggle for understanding, self-determination and power in a world dominated by patriarchal privilege. Students will read a variety of women's perspectives that will address these issues and develop their own skills and voice in understanding, speaking and writing about women's literature. Prerequisite: ENG 111

**ENG 239****Introduction to Creative Writing  
3 credits / 3 class hrs**

This course is portfolio based and will cover three genres: fiction, poetry, and nonfiction. In each genre, students will read a great deal, up to three short works or several works by multiple poets each week. Class time will be used to write and discuss exercises, workshop, and analyze texts. Prerequisite: ENG 111

**HIS 123** **U.S. History, 1500-1865**  
**3 credits / 3 class hrs**

A survey of the political, social, economic and cultural forces that shaped American history from the beginnings of European exploration to the end of the Civil War.

**HIS 125** **U.S. History, 1865 to Present**  
**3 credits / 3 class hrs**

A survey of the political, social, economic, and cultural forces that shaped American history from the end of the Civil War until the present.

**HIS 206** **American Sports History**  
**3 credits / 3 class hrs**

This course is a survey of American sports history from the colonial era to the present. An emphasis will be placed on the role of sports in American life and how broad social and cultural changes in American society have been reflected in and by sports.

**HIS 207** **Maine History**  
**3 credits / 3 class hrs**

A survey of Maine history from the age of discovery to the present.

**HIT 111** **Medical Law & Ethics**  
**3 credits / 3 class hrs**

Provides the student with a study of law and legal concepts as they apply to the practice of health information management. Emphasis is on HIPAA Privacy/Security Rule regarding privacy and confidentiality; health record documentation management and release of information practices; and use and disclosure of patient information. Other topics will include state and federal statutory regulations for legal health records, medical staff appointments, healthcare provider credentialing, healthcare risk management, physician liability, and the expanding role of medical record information and subsequent impact due to the advance of electronic health records. Issues that occur in biomedical ethics will also be presented. It will provide the language and framework for understanding more about ethics within the context of dealing with complex health information issues as well as the process that HIM professionals can use to make appropriate ethical choices and to analyze what is and is not justified from an ethical perspective. Corequisite: HIT 115, HIT 214 and BIO 211.

**HIT 112** **Medical Law, Reimbursement and Delivery Systems**  
**3 credits / 3 class hrs**

This course emphasizes three areas of health information: (1) the uses of coded data and health information in reimbursement and payment systems appropriate to healthcare settings and managed care; (2) basic health data structure, content, and standards; healthcare delivery systems and information technology systems; and (3) relevant legal compliance and ethical issues faced by clinical coders in the workplace setting. Special emphasis is placed on HIPAA compliance issues and ensuring that coders have the critical thinking skills to appropriately meet ethical and privacy issues in their workplace. Corequisite(s): HIT 114 and HIT 116

**HIT 114** **Clinical Classification System I with Lab**  
**3 credits / 2 class hrs / 2 lab hrs**

Emphasizes the principles and conventions of clinical classification systems used in today's healthcare settings. Emphasis is placed on ICD-10-CM and ICD-10-PCS. A history of nomenclatures and classifications systems is covered, as well as the relationship between coding and healthcare reimbursement. 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, quality assessment and improvement, work and legal standards related to reimbursement, and retrieval of information. Concepts covered in the class are explored in greater detail in the coding lab. Corequisite(s): ALH 220 and BIO 114.

**HIT 115** **Clinical Applications of Pathophysiology & Pharmacology**  
**3 credits / 3 class hrs**

Designed to educate Allied Health students on the study of pathophysiology and general health management of disease and injuries across the human lifespan. The course will examine the fundamentals of pathophysiology as it is manifested within each body system. It will include pathogenesis etiology, clinical manifestations, current diagnostics, and pharmacological and other treatment modalities. Emphasis will be on disease terminology and 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. Prerequisite(s): BIO 114

**HIT 116** **Clinical Classification System II with Lab**  
**3 credits / 3 class hrs / 2 lab hrs**

Emphasizes the principles and conventions of the HCPCS/CPT clinical classification systems used in today's healthcare settings. Other topics in the course 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. Concepts covered in the class are explored in greater detail in the coding lab. Corequisite(s): ALH 220 and BIO 114

**HIT 214** **ICD-10-CM/PCS Coding Part II**  
**3 credits / 3 class hrs**

Integrates and builds on knowledge and skills gained in HIT114, enhancing the skill level by coding complex clinical case studies. Reimbursement topics include coding compliance, case mix analysis,

severity of illness systems, coding quality monitors, coding auditing strategies, and official coding guidelines. Emphasis is placed on accurate code selection and correct sequencing of principle and secondary diagnosis as well as ICD-10-PCS procedure coding for medical documentation and reimbursement. Student learning is reinforced on diagnostic and procedure based prospective payment systems including MS-DRGs, APR- DRGs. Also reinforced are diagnostic coding systems including ICD-O, and DSM-5, Systemized Nomenclature of Medicine (SNOMED) and its role as a basis for the electronic health record. Prerequisite(s): HIT 114 and HIT 116; Corequisite(s): HIT 115 and HIT 216

**HIT 216** **CPT Coding Part II**  
**3 credits / 3 class hrs**

Integrates and builds on knowledge and skills gained in HIT116, enhancing the skill level by coding complex clinical case studies in the outpatient setting utilizing complex CPT code assignments. Special emphasis is placed on outpatient reimbursement issues including RUGs, PACs, RBRVs, and E/M Coding. Concepts covered in the course will be reinforced in greater detail in the coding lab. Prerequisite(s): HIT 114 and HIT 116; Corequisite(s): HIT 115 and HIT 214

**HIT 219** **Professional Practical Experience**  
**2 credits / 3 class hrs**

This course is a supervised work experience that provides students with exposure to coding practices in a hospital, physician's office, clinic or other healthcare setting with directed projects common to the typical coding tasks of a clinical coding specialist. Students are introduced to the health information process and coding procedures through observation, study and work. This experience will be a hands-on experience coding authentic patient records, whether through a field-based or virtual professional practice experience. Student must be available to complete a 60-hour internship during the semester to include actual coding time, recorded presentations and other resources made available to the student. HIT 219 cannot be taken until all other program requirements have been successfully completed.

**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.

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

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

**MAT 121** **Technical 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**

This course covers variables and symbols; scientific notation; formulas and literal equations; slope, intercepts, and equations of lines; graphs of linear and quadratic functions; graphs of linear inequalities; solving systems of linear equations; polynomials, products and factors; roots, rational exponents, and complex numbers; rational expressions; solving linear, quadratic, and higher order equations; solving linear inequalities; an introduction to exponential and logarithmic functions, and applied problem solving.

**MAT 210** **Statistics**  
**3 credits/3 class hrs**

This course is designed to develop techniques for organizing, evaluating and analyzing data. This includes frequency distributions, measures of central tendency, variation, probability, the normal and binomial distributions, and hypothesis testing.





**NUR 128****Foundations of Nursing  
4 credits / 4 class 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, the aging process, and the role of the nurse which addresses ethical and legal responsibilities. Prerequisite(s): BIO 201, ENG 111 and MAT 116 (\*unless admitted directly from HS, then HS biology and chemistry with lab (completed within the past 10 years or BIO114; and HS level algebra); Corequisite(s): NUR 100, NUR 117, NUR 129 and BIO 211

**NUR 129****Clinical Practicum I / Geriatric Population  
3 credits / 9 lab hrs**

This course allows students to apply concepts covered in NUR128 that form the foundation for the practice of nursing. Clinical experience is focused on the basic human needs of individuals presented within the framework of the nursing process. Clinical learning experiences provide an opportunity for students to develop, practice and refine basic nursing skills safely in lab, simulation and clinical settings, with a focus on older adults. Prerequisite(s): Current American Heart Association BLS (Health Care Provider) certification; Corequisite(s): ALH 124, NUR 100, NUR 117 and NUR 128

**NUR 130****Nursing Across the Lifespan I  
4 credits / 4 class hrs**

Provides students with continuing opportunity to assess the bio-psychosocial aspects of individuals throughout the lifespan. Included is an introduction to the bio-psychosocial aspects of the childbearing/childrearing family through a family-centered approach. The course includes exploration of the normal prenatal period and addresses development needs of persons of all age groups. Through the use of the nursing process, students develop the necessary knowledge and skills to provide nursing care to the childbearing/childrearing family and to individuals throughout the lifespan experiencing alterations in meeting basic human needs. Prerequisite(s): NUR 100, NUR 117, NUR 128, NUR 129, and NUR 124 (\*if LPN); Corequisite(s): NUR 115, NUR 131 and PSY 101

**NUR 131****Clinical Practicum II / Across the Lifespan  
3 credits / 9 lab hrs**

The clinical, lab, and simulation course for second semester nursing students allows further development and application of intermediate nursing skills needed to deliver safe client care to individuals across the lifespan with a focus on childbearing families. Clinical learning experiences occur in structured health care settings and are correlated with NUR130 classroom instruction. Prerequisite(s): NUR 128, NUR 129, NUR 117, BIO 201 and NUR 124 (\*if LPN), current American Heart Association BLS (Health Care Provider) certification; Corequisite(s): NUR 130, NUR 115 and PSY 101

**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 129 and NUR 131. 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 healthcare settings. Prerequisites: NUR 115, NUR 130, BIO 211 and PSY 101

**NUR 225****Nursing Across the Lifespan II  
5 credits / 5 class hrs**

Emphasis is placed on a holistic approach to the provision of nursing care to diverse individuals throughout the lifespan experiencing common, well-defined health problems. Through the uses of the nursing process as the mechanism for the delivery of nursing care, emphasis is given to the restoration and maintenance of an individual's bio-psychosocial needs. Prerequisite(s): NUR 130, NUR 131, NUR 115, BIO 211 and PSY101; Corequisite(s): NUR 228, BIO 218 and PSY 207

**NUR 228****Clinical Practicum III / Across the Lifespan  
4 credits / 12 lab hrs**

Clinical learning experiences in this course allow for advanced skills in practice in lab and simulation and provision of holistic, evidence-based nursing care to diverse clients across the lifespan in a variety of settings. Clinical experiences are correlated with NUR 225 classroom instruction and promote the development of critical thinking and priority-setting while providing compassionate, age and culturally appropriate nursing care. Prerequisite(s): NUR 130, NUR 131, NUR 115, BIO 211 and PSY 101; Corequisite(s): NUR 225, BIO 218 and PSY 207

**NUR 230****Nursing Across the Lifespan III  
5 credits / 5 class hrs**

Focuses on a holistic approach to the care of the diverse individuals or groups of individuals throughout the lifespan 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. Prerequisite(s): NUR 225, NUR 228, BIO 218 and PSY 207; Corequisite(s): NUR 231, COM 111 and humanities elective

**NUR 231****Clinical Practicum IV / Across the Lifespan  
4 credits / 12 clinical hrs**

This clinical practicum is correlated with NUR 230 classroom instruction and builds on the concepts and knowledge gained from previous nursing courses, allowing for the application of theories and concepts associated with nursing leadership, nursing research, and

management of care. This practicum includes a clinical preceptorship which enables students to enhance their clinical reasoning skills and collaborate with the interprofessional healthcare team to manage and coordinate safe, quality care for clients, families, and groups. Prerequisite(s): NUR 225, NUR 228, BIO 218 and PSY 207; Corequisite(s): NUR 230, COM 111 and humanities elective

**NUT 101** **Introduction 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 hours

Physics is the foundation of all sciences and technologies. This algebra/trigonometry-based physics course is designed to serve Associate of Applied Science students in trade and technical

occupations. Its purpose is to acquaint the student with basic physical concepts relating to measurement, the interaction forces, work and energy, properties of fluids, thermodynamics, and power. Students gain a broad understanding through the use of unifying principles across multiple energy systems. There is an emphasis on standard units of measurement, formulae, and written and spoken language associated with these basic physical concepts. Laboratory activities add to course content and reinforce course objectives. Prerequisite(s): Any 100-level math course.

**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 are covered.

**PLH 109** **Plumbing Lab I**  
**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 the 'rough in' practices of plumbing drainage and water supplies, faucet and fixture installations and service along with basic plumbing systems. Corequisite: 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 journeyman 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. Prerequisites: PLH 101, and PLH 109; Corequisite: PLH 122

**PLH 126** **Water Pumps & 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 209** **HVAC Controls**  
**2 credits / 1 class hr / 2 lab hrs**

This course will introduce students to fundamental working concepts for comfort heating such as: oil burner parts, warm air heating installations, basic duct work, furnace and boiler controls and wiring, combustion analysis, heating mediums with a major concentration in hot water (hydronic) heat and radiant heat installations. The topics will be: hydronic (hot water) heating sources and emitters, hydronic piping arrangements, and electrical component wiring and control devices.

**PLH 214** **Heating Technology I**  
**3 credits / 3 class hrs**

This course will introduce students to fundamental concepts for comfort heating such as: oil burner basics, warm air heating, fundamentals of heat, heat loss through the building envelope, calculating heat loss, combustion, heating mediums with a major concentration in hot water (hydronic) heat and radiant heat methods. The topics that will be included will be: oil burners, Hydronic heating systems design and sizing, heat transfer fundamentals, heating load estimates, hydronic (hot water) heating sources and emitters, hydronic piping arrangements, and electrical component wiring and control devices. Prerequisites: PLH122, PLH 123 or instructor's permission.

**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 consists of a combination of lectures, demonstrations, homework and tests.

**PLH 218** **Heating Lab I**  
**3 credits / 9 lab hrs**

This course will introduce students to fundamental working concepts for comfort heating such as: oil burner parts, warm air heating installations, basic duct work, furnace and boiler controls and wiring, combustion analysis, heating mediums with a major concentration in hot water (hydronic) heat and radiant heat installations. The topics included will be: hydronic (hot water) heating sources and emitters, hydronic piping arrangements, and electrical component wiring and control devices. Prerequisite(s): PLH122, PLH 123 or instructor's permission; Corequisite(s): PLH214

**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. Prerequisite: PLH 216

**PLH 222** **Heating Technology II**  
**3 credits / 9 lab hrs**

A continuation of PLH 214, 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. Prerequisite: PLH 214 and PLH 218; Corequisite: PLH 225

**PLH 226** **Refrigeration & Air Conditioning**  
**2 credit hrs / 1 class hr / 2 lab hrs**

This 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 hermetic systems. Considerable time will be spent on the refrigerant evacuation and re-fill and line testing.

**PLH 227** **Maine Oil & Solid Fuel Code**  
**3 credit / 3 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.

**PMT 110** **3D Solid Modeling**  
**2 credits / 1 class hr / 2 lab hrs**

An introductory course in designing parts 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 learn to understand dimensioning, orthographic projection and isometric drawing. Students will use computer software to develop manufacturing parts and drawings, and a 3D printer to print parts.

**PMT 111** **CNC Mill & Lathe Operations**  
**4 credits / 1 class hr / 9 lab hrs**

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 Programming**  
**2 credits / 2 class hrs**

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 113** **Print Reading for Machinists**  
**2 credits / 2 class hrs**

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.

**PMT 114** **CNC Lathe Programming**  
**2 credits / 2 class hrs**

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, and tool nose compensation.

**PMT 115** **CNC Mill Setup**  
**1 credit / 3 lab hrs**

An introductory course in the setup 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 the first piece and inspect their own work, adjusting offsets as necessary to produce a part within customer specification.

**PMT 117** **CNC Lathe Setup**  
**1 credit / 3 lab hrs**

An introductory course in the setup 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 and 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.

**PMT 119** **Inspection**  
**2 credits / 1 class hr / 3 lab hrs**

Provides the student with training in geometric dimensioning & tolerancing (GD&T) interpretation and inspection, per the ASME Y14.5-2009 standard. This course also reinforces dimensional metrology practices and introduces new methods such as Coordinate Measuring Machine (CMM) and FARO Arm inspection. With the use of precise inspection equipment, students will verify part quality and document results for quality control. 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 blueprints 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. Prerequisite: PMT 113 or instructor's permission.

**PMT 121** **CNC Mill & Lathe Programming Setup & Operations**  
**4 credits / 1 class hr / 9 lab hrs**

An intermediate course in operating Computer Numerical Control (CNC) mills and lathes to produce a variety of machined components in work-like conditions. This course will further develop skills required to program, setup, and operate CNC mills and lathes. This course will utilize "live" work projects to provide student exposure to real-world machining applications and introduce multi-axis applications such as thread milling, 4th-axis indexing, 5th-axis indexing, external threading, and boring. Prerequisites: PMT 111, PMT 112, and PMT 114, or instructor's permission

**PMT 124** **Basic CAM for Milling**  
**2 credits / 1 class hr / 3 lab hrs**

An entry level course in CNC program and toolpath generation for milling machine applications using CAM software. By utilizing a graphical software package to generate part programs for a CNC mill, students will learn how to create toolpath using solid models. The emphasis on the course is placed on learning to use the CAM software to select tools, manipulate part geometry, and convert screen graphics into a CNC program. This course will focus on basic 2-1/2-axis milling applications. Prerequisite: PMT 112 or instructor's permission

<p><b>PMT 126</b></p> <p>An entry level course in CNC program and toolpath generation for turning center applications using CAM software. By utilizing a graphical software package to generate part programs for a CNC mill, students will learn how to create toolpath using solid models. The emphasis of the course is placed on learning to use the CAM software to select tools, manipulate part geometry, and convert screen graphics into a CNC program. This course will focus on basic 2-axis turning applications. Prerequisite: PMT 114 or instructor's permission</p>	<p><b>Basic CAM for Turning</b>  <b>2 credits / 1 class hr / 3 lab hrs</b></p>	<p><b>PSY 209</b></p> <p>Students will demonstrate mastery of past and current theoretical perspectives of abnormal behavior. The course will evaluate issues relating to classification, etiology, and treatment of basic abnormal behaviors identified in the diagnostic and statistical manual. Case studies will be examined as they relate to various disorders. Prerequisite: PSY 101</p>	<p><b>Abnormal Psychology</b>  <b>3 credits / 3 class hrs</b></p>
<p><b>PMT 215</b></p> <p>An intermediate course with a focus on setting up 4th-axis indexers, 5th-axis indexers, spindle probes, and table probes. Prerequisites: PMT 111 and 112, or instructor's permission</p>	<p><b>Auxiliary Devices for CNC Mills</b>  <b>3 credits / 1 class hr / 6 lab hrs</b></p>	<p><b>SAE 117</b></p> <p>This course is intended to provide a variety of training on OSHA 1910 General Industry safety and health standards to entry level workers. The class is designed to emphasize hazard identification, avoidance, control and prevention to students. Students successfully completing all of the requirements will be eligible for the 10-hour OSHA certification.</p>	<p><b>Occupational Safety</b>  <b>1 credit / 1 class hr</b></p>
<p><b>PMT 217</b></p> <p>An intermediate course with a focus on setting up a probe arm, tailstock, bar puller, and parts catcher. Prerequisites: PMT 111 and 114 or instructor's permission</p>	<p><b>Auxiliary Devices for CNC Lathe</b>  <b>2 credits / 1 class hr / 3 lab hrs</b></p>	<p><b>SAE 121</b></p> <p>Designed as a course to review 1910 standards, the causes of industrial and occupational accidents, and preventive measures. This includes governmental codes and regulations, ways to develop company safety and related procedures in areas such as lockout/tagout, machine guarding, hazard communications, personal protective equipment and recordkeeping. Students successfully completing all of the requirements will be eligible for the 30-hour Outreach Program Certification card.</p>	<p><b>Industrial Safety</b>  <b>3 credits / 3 class hrs</b></p>
<p><b>POL 101</b></p> <p>Introduces the origins and development of the American system of government. Special consideration will be given to the United States Constitution, the powers and limitations of the executive, legislative and judicial branches of government, the political process and the policy-making process.</p>	<p><b>American Government</b>  <b>3 credits / 3 class hrs</b></p>	<p><b>SES 129</b></p> <p>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. Prerequisite: CIS 113</p>	<p><b>Office Procedures</b>  <b>3 credits / 3 class hrs</b></p>
<p><b>PSY 101</b></p> <p>Introduces the field of psychology as a study of human behavior. Through lecture and discussion in such areas as learning, human growth and development, an introduction of motivation, sensation/perception, personality, emotions, behavior disorders and self and society are presented.</p>	<p><b>General Psychology</b>  <b>3 credits / 3 class hrs</b></p>	<p><b>SOC 111</b>  <b>Sociology</b></p> <p>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.</p>	<p><b>3 credits / 3 class hrs</b></p>
<p><b>PSY 207</b></p> <p>The development of the individual is an exciting process, beginning at birth and continuing through the intricate changes of growth and aging. The study of the lifespan is also intriguing because each of us, and everyone we care about, is constantly developing. This course therefore includes the biosocial, cognitive and psychosocial domains of human development. Pre-requisite: PSY 101</p>	<p><b>Developmental Psychology</b>  <b>3 credits / 3 class hrs</b></p>	<p><b>SOC 215</b></p> <p>An introduction to the 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 the environment, economics, politics, healthcare, and inequality.</p>	<p><b>Social Issues &amp; Problems</b>  <b>3 credits / 3 class hrs</b></p>

**SPA 101****Elementary Spanish I**  
**3 credits / 3 class hrs**

By using the five aspects of language learning: (cultural awareness/appreciation, speaking, listening, reading, and writing), the student will begin to attain an understanding of and ability to use the Spanish language in a culturally appropriate manner.

**SPA 102****Elementary Spanish II**  
**3 credits / 3 class hrs**

By using the five aspects of language learning (cultural awareness/appreciation, speaking, listening, reading, and writing), the student will begin to attain an understanding of and ability to use the Spanish language in a culturally appropriate manner. Prerequisite: SPA 101 or instructor's permission

**TEC 112****Building Science I**  
**3 credits / 1.5 class hrs / 3 lab hrs**

Introduces students to appropriate materials and methods as found in 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.

**TEC 123****Building Science II**  
**3 credits / 1.5 class hrs / 3 lab hrs**

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. Prerequisite: TEC 112

**TTE 251****Trade 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, students must meet with the course instructor to determine internship site and process paperwork.

**TTE 252****Trade 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, students must meet with the course instructor to determine internship site and process paperwork.

**TTE 253****Trade 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, students must meet with the course instructor to determine internship site and process paperwork.

**WEI 101****Introduction to Welding**  
**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 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 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 Technology**  
**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, including 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 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. Prerequisite: WEI 101, or instructor's permission

**WEI 135** **I-CAR Welding**  
**3 credits / 1.5 class hrs / 4.5 lab hrs**

This course helps the student develop the basic knowledge and skills necessary to the understanding of welding through a primary focus on the I-CAR weld training. Discussion focuses on developing an understanding of the different gas metal arc welding techniques, associated types of equipment and welding materials, and the appropriate selections of welding parameters as dictated by the materials being joined. Lab activities provide practice in developing the skills needed to successfully complete the I-CAR steel G.M.A.W. certification test WCSO3. Safe handling of equipment and supplies and overall shop safety are strongly emphasized. Prerequisite: WEI 113

**WEI 136** **Gas Metal Arc Welding & 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 GTAW 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. Prerequisite: WEI 133, or instructor's permission

**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. Prerequisite: 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 their 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. Prerequisite: WEI 137

**WEI 139** **Open Root Welding**  
**3credits / 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 are strongly emphasized. Prerequisite: WEI 138

**WEI 140** **Plasma Table Operation**  
**2 credits / 1 class hr / 2 lab hrs**

Utilizes CAD-CAM tools to lay out and generate code for efficient cutting material using a CNC plasma table. Includes design, tool set-up, tool maintenance, code editing, and safe operation to create a variety of general fabrication and maintenance related components.

**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.



bloodborne pathogens, and safe work practices for water and wastewater plant operators. This course will prepare students for the State of Maine DHHS Class I & II Water Treatment Operator License Exam and the Maine DEP Wastewater Treatment Plant Grade I & II Operator License Exam.

**WTT 121** **Wastewater Treatment I**  
**3 credits / 2 class hrs / 2 lab hrs**

This course will provide an introduction to the operation of wastewater treatment plants. The course will begin with a look at different aspects of wastewater treatment to include: wastewater characteristics, preliminary treatment, primary treatment, biological treatment, wastewater treatment ponds, fixed film treatment, activated sludge, nutrient removal, and disinfection. This course will prepare students for the State of Maine DEP Grade I & II Wastewater Treatment Plant Operator License Exam.

**WTT 124** **Wastewater 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 wastewater treatment plants. The course will cover the following topics: laboratory procedures, computers for plant O&M, records and report writing, plant administration, review of plant O&M manuals, review of plant budgets, review of plant discharge license, and review of QA/QC testing requirements. This course will prepare students for the State of Maine DEP Grade I & II Wastewater Treatment Plant Operator License Exam.

**WTT 201** **Water Distribution Systems**  
**3 credits / 2 class hrs / 2 lab hrs**

This course will focus on municipal water distribution systems. The course will cover the following topics: water storage facilities, distribution system facilities, operation and maintenance, disinfection, safety, and management of distribution systems. This course will prepare students for the State of Maine DHHS Class I & II Water Distribution Operator License Exam. Prerequisite: WTT 111.

**WTT 205** **Wastewater Collection Systems**  
**3 credits / 2 class hrs / 2 lab hrs**

This course will cover wastewater collection systems for operators and managers. The topics covered will include: introduction to wastewater collection, safe procedures, inspecting and testing collection systems, pipeline cleaning methods, and underground repair and construction. This course will prepare students for the NEWEA Grade I & II Collection System Exam.

**WTT 211** **Water Treatment II**  
**4 credits / 3 class hrs / 2 lab hrs**

This course is designed to reinforce the student's understanding of the regulatory requirements and day-to-day operational processes used in water treatment facilities. The topics covered will include: specialized treatment processes, membrane treatment processes, maintenance, and drinking water regulations. The students will perform laboratory testing, analyze testing results, as well as review documentation and record keeping methods. This course will prepare students for the State of Maine DHHS Water Treatment Plant Operator License Exam. Prerequisite: WTT 111.

**WTT 221**

**Wastewater Treatment II**  
**4 credits / 3 class hrs / 2 lab hrs**

This course is designed to reinforce the student's understanding of the regulatory requirements and day-to-day operational processes used in wastewater treatment plants. The topics covered will include sludge digestion and solids handling, effluent discharge, reclamation and reuse, plant safety, maintenance, and administration. The students will review documentary and record keeping procedures. This course will prepare students for the State of Maine DEP Grade I & II Wastewater Treatment Plant Operators License Exam. Prerequisite: WTT 121.

# Faculty & Staff



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# Professional Governance

## GOVERNANCE

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**Joyce Maker**  
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Calais  
Washington County Community College (Retired)

**Peter DelGreco**  
(Vice Chair)  
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President & CEO  
Maine & Company

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(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**

**(207) 287-1070**



# Academic Calendar

## Northern Maine Community College Academic Calendar 2022 - 2023

### Fall 2022

August	24 & 25 29	Faculty Administrative Days (No Classes) First Day of Classes
September	5 6 23	Labor Day (No Classes, Offices Closed) End of Add/Drop Grades Due for Spring 2021 Incomplete Courses
October	10 & 11 14 21	Indigenous Day (No Classes, Offices Closed Oct 10) Open House Mid-Semester
November	11 18 23 - 25	Veterans' Day Observed (No Classes, Offices Closed) Last day to drop classes without academic penalty Thanksgiving Break (No classes, Offices Closed Nov. 24 & 25)
December	16 20	Last Day of Classes (End at Noon) Grades Due by Noon

### Spring 2023

January	12 16 17 25	Faculty Administrative Days (No Classes) Martin Luther King Holiday First Day of Classes End of Add/Drop*
February	3 20 21 – 25	Grades Due for Fall 2021 Incomplete Courses President's Day (No Classes, Offices Closed) Winter Break (No Classes)
March	10	Mid-Semester
April	3 – 7 14 17	Spring Break (No Classes) Last day to drop classes without academic penalty Patriot's Day (No Classes, Offices Closed)
May	10 12 13	Last Day of Classes (End at Noon) Grades due by Noon Graduation

*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.*

*If you have questions please see your academic advisor.*

## Northern Maine Community College Academic Calendar 2023 - 2024

### Fall 2023

August	23 & 24 28	Faculty Administrative Days (No Classes) First Day of Classes
September	4 5 22	Labor Day (No Classes, Offices Closed) End of Add/Drop Grades Due for Spring 2022 Incomplete Courses
October	9 & 10 13 20	Indigenous Day (No Classes, Offices Closed Oct 9) Open House Mid-Semester
November	10 17 22 - 24	Veterans' Day Observed (No Classes, Offices Closed) Last day to drop classes without academic penalty Thanksgiving Break (No classes, Offices Closed Nov. 23 & 24)
December	15 19	Last Day of Classes (End at Noon) Grades Due by Noon

### Spring 2024

January	11 15 16 23	Faculty Administrative Days (No Classes) Martin Luther King Holiday First Day of Classes End of Add/Drop*
February	2 19 20 – 24	Grades Due for Fall 2021 Incomplete Courses President's Day (No Classes, Offices Closed) Winter Break (No Classes)
March	8	Mid-Semester
April	1 – 5 12 15	Spring Break (No Classes) Last day to drop classes without academic penalty Patriot's Day (No Classes, Offices Closed)
May	8 10 11	Last Day of Classes (End at Noon) Grades due by Noon Graduation

*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.  
If you have questions please see your academic advisor.*

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# Campus Directory

## **Academic Affairs**

Academic Dean	Angela Buck	768-1128
Senior Administrative Specialist	Abby Clark	768-2812
Registrar	Shannon Cook	768-2791
Administrative Specialist	Katherine (Bri) Gordon	768-2787

## **Academic Success Center**

Coordinator	J.R. Kierstead	768-2761
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## **Admissions**

Director	Sarah Stackhouse	768-2782
Assistant Director	Jacqueline Martin	768-2771
Counselor	Raegyn Chavez	768-2789
Admissions Specialist	Nicole Poulin	768-2785
On-Course for College	Jennifer Donohue	768-2782

## **Arts & Sciences**

Department Chair	David Raymond	768-2773
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## **Barnes & Noble Bookstore**

Manager	Kimberly Filiatreault	768-2835
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## **Business & Industry**

Coordinator		768-2766
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## **Business Office**

Dean of Finance	Michael Williams	768-2712
Manager	Wendy Caverhill	768-2708

## **Business Technology**

Department Chair	Dwight Clayton	768-2738
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## **Food Services**

Director	Victor Hartley	768-2716
College Store		768-2824

## **Continuing Education**

Assistant Dean of Continuing Education	Leah Buck	768-2768
Administrative Assistant	Holly Grant	768-2845

## **Counseling Office**

Director	Tammy Nelson	768-2747
Student Navigator	Ashley Hall	768-2786
Counselor	Johna Lovely	768-2829
Career Specialist	Cassie Ouellette	768-2793
Administrative Specialist	Teila Pimental	768-2839

## **Development & College Relations**

Dean of Development & Public Affairs	Griffin Goins	768-2809
Director of Marketing & Communications	Nicole Cote	768-2806
Administrative Specialist	Kelly Dooner	768-2810

## **Emergency Medical Services**

Department Chair	Andrew Gagnon	768-2753
Administrative Specialist		768-2754

<b><u>Events</u></b>		
Coordinator	Angela Wardwell	760-1125
<b><u>Facilities</u></b>		
Manager	Lee Griffin	768-2702
<b><u>Financial Aid</u></b>		
Director	Brian Hall	768-2707
Assistant Director	Cheryl Lamoreau	768-2790
<b><u>Houlton Higher Education Center</u></b>		
Director	Joe Fagnant	521-3100 (ext. 3150)
Advisor	Ken Ervin	521-3100 (ext. 3152)
Administrative Assistant	Patti Sloat	521-3100 (ext. 5)
<b><u>Human Resources / Payroll</u></b>		
Human Resources and Benefits Manager	Lindsay LeBlanc	768-2739
Payroll Coordinator	Carol McCleary	768-2898
<b><u>Library</u></b>		
Assistant Dean of Learning Resources Circulation Desk	Ann Spinney	768-2734 768-2718
<b><u>Nursing &amp; Allied Health</u></b>		
Department Chair	Eileen McDougal	768-2750
Administrative Specialist	Malerie Buck	768-2754
<b><u>President's Office</u></b>		
President	Timothy Crowley	768-2811
<b><u>Residential Life</u></b>		
Director	Matt Bartlett	768-2795
<b><u>Security</u></b>		
Manager	Peter Goheen	540-5719
Officer	George Brigham	551-5765
Officer	Patrick Michaud	760-1108
<b><u>Student Services</u></b>		
Dean of Students	Matthew Grillo	768-2792
<b><u>Technology</u></b>		
Dean of Technology & Facilities	Barry Ingraham	768-2706
Manager of Energy & Information Systems	Robert Smith	768-2851
Information Specialist	Jarrod Flanders	768-2857
Information Specialist	Chris Perry	768-2722
Sr. Program Analyst	David Wyman	768-2705
Senior Administrative Coordinator	Julie Edgecomb Clark	768-2760
<b><u>Testing Center</u></b>		
Coordinator	Angela Wardwell	760-1125
<b><u>Trade &amp; Technology Occupations</u></b>		
Department Chair	Pam Buck	768-2763
Administrative Specialist	Malerie Buck	760-1123

*For a more complete listing of employee phone numbers, including faculty,  
please see your Student Handbook or visit nmcc.edu*

# Campus Map

- 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
- Mallman 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

