More than 60 programs of study
Mission
Northwestern Michigan College provides lifelong learning opportunities to our communities.

Institutional Accreditation
Accredited by the Higher Learning Commission and a member of the North Central Association.
30 N. LaSalle, Suite 2400
Chicago, IL 60602
(800) 621-7440
www.ncahigherlearningcommission.org

Program Accreditations
• American Culinary Federation
• American Dental Association Commission on Dental Accreditation
• Bureau of Automotive Regulation–State of Michigan
• Federal Aviation Administration/Federal Aviation Regulation Part 141 approved
• International Accreditation by United States Coast Guard
• International Accreditation by the United States Maritime Administration
• Michigan Board of Nursing
• Michigan Commission on Law Enforcement Standards
• Michigan Corrections Officers Training Council

Non-Discrimination Policy
NMC does not discriminate in admission, campus activities, education, employment, housing, public accommodation, or public service on the basis of age, color, disability, handicap, height, marital status, national origin, political affiliation, race, religion, gender, sexual orientation, veteran’s status, or weight. No act of retaliation shall occur to any person making a charge, filing a complaint, testifying or participating in any discrimination investigation or proceeding.

This catalog is in effect starting Fall Semester 2011 through Summer Session 2013. The contents of this catalog are accurate at the time of printing, April 2011. For most current information, consult the website: www.nmc.edu. The NMC Board of Trustees reserves the right to make changes without notice.
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### 2011-2012 Academic Calendar

#### FALL SEMESTER 2011
- **Registration Begins**: April 13
- **Tuition Payment Due**: August 9
- **Classes Begin**: August 27
- **College Closed** (Labor Day holiday observed):
  - Sept. 3-5
- **Classes Cancelled**: October 18
- **College Closed** (Thanksgiving holiday observed):
  - Nov. 23 (after 5 p.m.) - Nov. 27
- **Classes End**: Dec. 18
- **Grades Available**: Dec. 22
- **College Closed** (combined winter holidays observed):
  - Dec. 24 - January 1

#### SPRING SEMESTER 2012
- **Registration Begins**: Nov. 9, 2011
- **Tuition Payment Due**: January 3, 2012
- **Classes Begin**: January 13
- **Spring Break** (No Classes):
  - March 26 - April 1
- **College Closed**: April 6-8
- **Honors Convocation**: May 4
- **Commencement**: May 5
- **Classes End**: May 6
- **Grades Available**: May 10

#### SUMMER SESSION 2012
- **Registration Begins**: Nov. 9, 2011
- **Tuition Payment Due**: May 8, 2012
- **Classes Begin**: May 12
- **NMC BBQ**: May 20
- **College Closed** (Memorial Day holiday observed):
  - May 26-28
- **College Closed** (Independence Day holiday observed):
  - July 4
- **Classes End**: August 8
- **Grades Available**: August 11

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- **NMC Campus Maps** ................................................ Inside back cover
Why should you attend NMC?

• More than 90 percent of NMC graduates and transfer students consistently report accomplishing their educational goal and say that NMC is a good value for the money
• Small classes, personal attention: NMC’s average class size is 20 students
• Dedicated faculty members
• More than 60 programs of study
• Online learning options
• On-campus housing options
• The NMC Foundation, thanks to local donors, offers more scholarship dollars to more students than any community college in Michigan
• The average earnings of a student with an NMC Associate Degree are more than one-third higher than a student with a high school diploma
• Fifty bachelor’s, master’s and doctoral degree programs available at NMC’s University Center, the largest higher education partnership in Michigan, with 9 universities

NMC. Find it here.

“I’m still really connected to NMC. I think I’ve taken a class every semester since 1993. I love it here.”

Kandace Chapple
Editor and Co-Publisher,
Grand Traverse Woman magazine
A.S.A., NMC - 1995
B.B.A., Davenport University at NMC’s University Center - 1997
Business, Ferris State University at NMC’s University Center - 2001
Overview

History
Northwestern Michigan College was founded in 1951 by local citizens who wanted to provide an affordable college education for area residents. Starting out in temporary headquarters at the airport terminal building in Traverse City, NMC now has a spacious 100-acre main campus located east of downtown, between the east and west arms of Grand Traverse Bay. Four additional campuses provide facilities for comprehensive programs and community services:

- **University Center** - Opened in 1995, this facility on Boardman Lake offers bachelor's completion programs and advanced degrees in partnership with nine Michigan colleges and universities.

- **Aero Park Campus** - Located at Traverse City’s Airport Industrial Park, facilities there house NMC’s aviation, workforce development and trade and technical programs, including automobile service technology and renewable energy.

- **Great Lakes Campus** - Opened in 2003 on West Bay, facilities include the Great Lakes Maritime Academy, the Great Lakes Culinary Institute, the Great Lakes Water Studies Institute and the Hagerty Center.

- **Rogers Observatory** - Opened in 1981, more than 100,000 community members have visited the Observatory south of Traverse City for regular public viewing nights as well as for special celestial events like comets and eclipses.

Location
Traverse City, Michigan is in the northwestern part of Michigan’s lower peninsula and is accessible by U.S. 31/ M-37 from the north and south and M-72 from the east and west. Traverse City is the hub of the growing five-county region, home to about 165,000 year-round residents. Traverse City is known as the Cherry Capital of the World due to the prevalence of tart cherry trees, and as a four-season resort area with a growing reputation for food and wine.

Enrollment
Approximately 5,400 students enroll in credit courses each semester. An additional 10,000 enroll in non-credit courses and workshops annually. More than half of NMC’s academic students are between 18 and 25 years old. The average student age is 27, factoring in the many adults in the region who choose to continue their education. More than 80 percent of students live in NMC’s five-county service area.

Calendar
NMC operates on a semester calendar. There are two 15-week semesters, fall and spring, plus many short-format offerings and shorter sessions during the summer.

Degrees
NMC offers Associate in Science and Arts, Associate in Applied Science, Associate in General Studies, Associate Degree in Nursing and career certificates in more than 50 programs. (Complete list available at nmc.edu/programs)

The NMC University Center offers bachelor’s completion and advanced degrees. NMC has committed to a statewide agreement that helps students transfer credits earned at NMC to participating four-year colleges and universities.

Campus Housing
NMC provides a residence hall, plus apartment buildings on main campus. See pages 42-43.

Financial Aid
More than half of NMC students receive financial aid through scholarships, loans, grants and on-campus employment. See pages 31-41.
Main Campus

1701 East Front Street, Traverse City, Michigan

APARTMENT BUILDINGS
NMC has three apartment buildings providing one and two bedroom apartments for married couples and single parents.

BECKETT BUILDING
This building was named for James J. Beckett, Chair Emeritus of the NMC Board of Trustees and longtime volunteer on behalf of the college. The building has six general purpose classrooms, three multi-media classrooms, one computer lab, and one distance learning classroom. It also has faculty offices, a conference room and several study areas.

BIEDELMAN BUILDING
This building contains general purpose classrooms, student interaction areas, one computer lab, Student Health Services, and faculty offices for Health Occupations, Science and Math. It is named for NMC founder Les Biederman, chair of the first Board of Trustees.

DENNOS MUSEUM CENTER
This major museum facility, named for donors Michael and Barbara Dennos, includes three galleries for changing exhibitions, an interactive gallery for children, and a gallery for NMC’s collection of Inuit art. It also features a classroom-size theater and sculpture court gallery. The 367-seat William and Helen Milliken Auditorium has an open stage and offers performance space for NMC music, drama, and dance departments as well as community and visiting groups.

EAST HALL
This residence hall houses about 200 students and offices for the residence life staff. It was remodeled in 2002.

FOUNDEYERS HALL
The office of Institutional Advancement, NMC Foundation, Public Relations, and two conference rooms are located here.

HEALTH AND SCIENCE BUILDING
This 54,700 square-foot building features state-of-the-art teaching laboratories for science courses such as chemistry, biology, physics, and geology; and for health courses such as dental and nursing. There are also six general purpose classrooms and many interactive spaces for students in study rooms and hallways. The spacious lobby features the NMC Welcome Center and the building is connected to the Biederman Building at its southeast corner.

OKERSTROM FINE ARTS BUILDING
This building has studios, classrooms and an 84-seat recital hall. In 2000 this building was named in honor of Shirley S. Okerstrom, former member and chair of the NMC Board of Trustees and a supporter of the arts.

OLESON CENTER FOR CONTINUING EDUCATION
This conference center, remodeled in 2006, features three meeting rooms which can be used separately or as one large room, a teaching kitchen and a multi-purpose room. The Oleson Center was named in honor of the Gerald and Frances Oleson family which has provided long-term support of the college through the annual Barbecue and other donations.
Facilities

**Main Campus** continued

*1701 East Front Street, Traverse City, Michigan*

**OSTERLIN BUILDING**
The Osterlin Building was named after Dr. Mark Osterlin and Mrs. Helen Osterlin. In this building are the Osterlin Library, the Center for Learning, Educational Media Technologies, Advising Center, classrooms and computers.

**RAJKOVICH PHYSICAL EDUCATION CENTER**
This building has a gymnasium, fitness center, dance studio, and classrooms. In 1969, it was named after Nick Rajkovich, a former faculty member who developed the NMC physical education program. In 2000, Frances Rajkovich’s name was added to the building in recognition of her generous support of NMC.

**SCHOLARS HALL**
This building contains general purpose classrooms, the photography laboratory, faculty offices for Communications and Social Sciences, Writing Center and many student study areas.

**TANIS BUILDING**
This building was named for Preston N. Tanis, the first president of NMC who directed the college from 1951-1970 and wrote its first history. In this building are the offices of Admissions and Financial aid.

**WELCOME CENTER**
This information headquarters is located in the lobby of the Health and Science Building.

**WEST HALL & STUDENT CENTER**
Remodeled in 2002, West Hall houses the college's food service, the campus bookstore as well as the office of Student Life, Personal Counseling and Student Government.

**WISE MEMORIAL CLOCK TOWER**
Located south of East Hall on the main campus, the clock tower was named for benefactors Harold and Imogene Wise and was erected with private donations from NMC founder Les Biederman, the Wise family, and NMC faculty and staff.

**Great Lakes Campus**

*715 East Front Street at Barlow Avenue, Traverse City*

This facility on the West Bay waterfront houses the Great Lakes Maritime Academy, the Great Lakes Culinary Institute, the Great Lakes Water Studies Institute, and the Hagerty Center. The two buildings are connected by a glass exhibition hall to preserve views of the bay.

**HAGERTY CENTER**
The Hagerty Center is a full-service banquet and conferencing facility located at the Great Lakes Campus, providing state-of-the-art technology and a professional staff. For more information, contact a Hagerty Center representative at (231) 995-3100.
Aero Park Campus

Aero Park Drive, Airport Industrial Park, Traverse City

PARSONS-STULEN BUILDING
2600 Aero Park Drive
This facility provides training in the areas of manufacturing, aviation, and information technology. Named after John T. Parsons and Frank L. Stulen, local innovators who created “numerical control,” this facility contains a flexible learning environment, computer labs, an interactive television classroom, conference room and faculty and staff offices. Other offerings include organizational Training and Research.

AEROPARK LABORATORIES
2525 Aero Park Drive
Aero Park Laboratories (APL) is NMC’s newest campus building. Located on the Aero Park campus, across from the Automotive Technologies building, it is home to NMC’s Construction Technology and Renewable Energy programs.

AUTOMOTIVE TECHNOLOGY BUILDING
2510 Aero Park Drive
This facility contains the Automotive Service Technology Program.

AVIATION BUILDING
2600 Aero Park Drive
This building contains the Flight Training Device (FTD) for the NMC Flight Program. An adjacent hangar provides aircraft parking space.

Observatory

1753 Birmley Road, between Garfield and Keystone roads, south of Traverse City

ROGERS OBSERVATORY
This facility is named after former science/math division director and instructor Joseph H. Rogers, who spearheaded construction. The structure contains a classroom area, dome, telescope and darkroom. It was constructed to house astronomy classes and provide an educational program for community groups. The Grand Traverse Astronomical Society conducts regular programs at the Observatory.

University Center Campus

2200 Dendrinos Drive, off Cass Road between 14th Street and South Airport Road, Traverse City

This campus is home to NMC’s nine University Center partners, who offer more than 50 bachelor’s completion and advanced degree programs in the areas of business, education and health and human services. NMC’s Extended Education division and several business offices, including human resources, are also housed here.
Community Resources

Dennos Museum Center

www.dennosmuseum.org
(231) 995-1055
Programming in the visual and performing arts for the college community and the citizens of northwestern Michigan.

Open to the public Mon.-Sat., 10 a.m. to 5 p.m., Thur. until 8 p.m., and Sun., 1 to 5 p.m. NMC students are admitted free with student ID. Museum members are admitted free.

Great Lakes Water Studies Institute

www.nmc.edu/water
(231) 995-1793
Located at NMC’s Great Lakes Campus on West Grand Traverse Bay, NMC’s Water Studies Institute is strategically positioned to engage individuals and organizations to protect, wisely use, and manage the key resource of fresh water.

Hagerty Center

www.nmc.edu/hagerty
(231) 995-3100
Located at NMC’s Great Lakes Campus, the Hagerty Center is a premier waterfront venue for lifelong learning. State-of-the-art conferencing facilities, space to seat up to 380 and an on-site chef and culinary facilities are available to meet the needs of trade shows, conferences and banquets.

Lobdell’s: A Teaching Restaurant

www.nmc.edu/culinary
Reservations: (231) 995-3120
Located at the Great Lakes Campus, Lobdell’s serves as a working laboratory for culinary students and is open to the public for lunches and dinners in fall and spring semesters.

Osterlin Library

www.nmc.edu/library
(231) 995-1060
Community members as well as students may use the library facilities, including computers, and borrow books free of charge. Photo ID is required for a library card or to use computers. The library has an extensive collection of research volumes, periodicals and government documents.

Rogers Observatory

www.nmc.edu/observatory
(231) 995-2300
Named for the Joseph H. Rogers, the late science/math division director and instructor who spearheaded the project. Located south of Traverse City to take advantage of dark skies, the Grand Traverse Astronomical Society conducts regular programs at the Observatory.

Training Services

www.nmc.edu/training
Aero Park Campus, (231) 995-2218
Customer-focused solutions, active learning model training, on and off-site delivery – this is what you can expect from NMC’s Training Services. We help you gain a clearer understanding of your own processes and create an improvement plan developed through a facilitated event at your facility. Areas of focus include:

Training and Coaching
- Advanced Manufacturing
- Lean Business Practices
- Leadership and Team Skills

WNMC Radio

www.wnmc.org
Requests: (231) 995-1090
Located at 90.7 FM, WNMC is community radio. Most of the people you hear on the air are just local people like yourself who love great music and great radio. Volunteers are always welcome.
New Student Checklist

Find out about NMC
- Explore the opportunities for study at NMC - visit www.nmc.edu or review this NMC catalog.
- Call the Welcome Center to schedule a tour, (231) 995-1135.

Complete the Application for Admission
- Find it in this catalog, Schedule of Classes, at www.nmc.edu/admissions or visit the NMC Admissions Office on the main floor of the Tanis Building.
- Submit online, mail, or deliver it, along with the $20 fee, to the NMC Admissions Office, (231) 995-1054.
- Request your high school transcript or GED scores, ACT scores, AP scores and college transcripts, where applicable, be sent to the Admissions Office.
- Tour on-campus housing and find out more about our full-service residence hall and campus apartments.

Apply for the Financial Assistance You Need
- Go to www.fafsa.ed.gov online to complete and submit your Free Application for Federal Student Aid (FAFSA). For more information, visit the Financial Aid Office on the main floor of the Tanis Building, visit www.nmc.edu/financialaid or call (231) 995-1035.
- Check with your academic office to find out more about divisional scholarships.

Complete Placement Testing
- Take NMC’s COMPASS placement exam to make sure you are placed in the right courses. You may only need to take portions of the test:
  - If you have ACT scores in reading and writing of 19 or higher, you do not need to take the reading/writing portion.
  - If you have an ACT score of 19 or higher in math, you do not need to take the math portion unless you wish to take a class higher than your placement allows.
  (High school dual-enrolled students need 21 or higher.)
- COMPASS testing is available daily through the Center for Learning in the Osterlin Building. Evening and weekend hours are available, call (231) 995-2134. Visit www.nmc.edu/compass to prepare for the test.
- Ideally COMPASS is completed before Orientation. If traveling from out of the area, placement testing may be completed on your Orientation date.

Attend Orientation
- All new students are required to attend. Choose a date and time at www.nmc.edu/orientation
- At Orientation you will get an overview of NMC and meet with an academic advisor to schedule your classes.

Register & Pay for Classes
- Register early for best selection and pay according to the dates published in the Schedule of Classes.
- Register and pay at Orientation, online at www.nmc.edu/selfservice or in the Records and Registration Office. Stop by the Bookstore in West Hall and purchase your books.
Aviation

Accelerated flight programs, first-class instruction and great career opportunities await those who enroll in NMC’s Aviation program. You’ll experience personal attention from instructors as you work toward obtaining an associate or bachelor’s degree. The program, which is well-known in the airline industry, offers Private, Instrument and Commercial certificates. NMC is one of the few community colleges to offer training in Unmanned Aerial Systems as well as an international aviation partnership that will enable you to fly worldwide in countries accepting EASA/JAR-FCL and FAA pilot licenses.

Program Highlights
• FAA 141 and VA approved
• Certificates/ratings in two years or less
• Options to complete Multi-engine, Flight Instructor and Instrument Flight Instructor Ratings
• Specialty courses including Unmanned Aerial Systems designed to increase hiring potential
• International aviation partnership that allows you to obtain both FAA and EASA/JAR-FCL licenses
• In-house FAA flight testing
• Four-season environment for quality training
• Frasca simulator with 220-degree visual display system
• Cross-country flight opportunities
• Non-credit programs available

Degrees Available
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Transfer Opportunities
NMC’s University Center offers two bachelor’s degree program options for aviation students via partners Ferris State University and Davenport University. See page 22-23. After two years at NMC, you may move to their campuses, or remain in Traverse City and continue to pursue your degree at the University Center. Aviation faculty can advise you on bachelor’s degree completion programs at other schools.
## Business

Business programs prepare you for immediate employment in today’s competitive, complex and changing business world or to transfer to a four-year school. The curriculum includes business-specific classes and liberal arts studies.

Students planning to enter the job market upon graduation generally pursue an Associate in Applied Science (AAS) degree or a Certificate of Achievement. Those who plan to transfer to four-year institutions to pursue a bachelor’s degree should refer to the requirements for the Associate in Science and Arts (ASA) degree. During your first semester at NMC, you should consult an academic advisor for guidance in scheduling courses to meet your objectives.

### Degrees Available

- **Associate in Applied Science (AAS)**
- **Associate in Science and Arts (ASA)**
- **Certificates of Achievement**

### Occupational Specialty Programs

<table>
<thead>
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<th>Credits</th>
</tr>
</thead>
<tbody>
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<td>64</td>
</tr>
<tr>
<td>Administrative Support Specialist (Certificate)</td>
<td>64</td>
</tr>
<tr>
<td>Business Administration (AAS)</td>
<td>68</td>
</tr>
<tr>
<td>with concentrations in Computer Applications, Entrepreneur, General Business, Management, and Marketing</td>
<td></td>
</tr>
<tr>
<td>Business Administration - Online (AAS)</td>
<td>69</td>
</tr>
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- **Office Applications Specialist (Certificate)** | 74 |
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- **Culinary Arts (AAS)** | 79 |
- **Culinary Arts (Certificate)** | 79 |
- **Entrepreneurship - Levels I and II (Certificates)** | 81 |
- **Legal Assistant (AAS - under discontinuance plan)** | 83 |
- **Technical Management Administration (AAS)** | 93 |
- **Web Developer - Levels I, II and III (Certificates)** | 75 |

### Transfer Options (Follow ASA Degree Requirements)

- **Accounting** | 60 |
- **Business Administration** | 60 |

### Online & Other Learning Options

- **AAS Business Administration - General Business**
- **ASA degree** - Depending on the transfer college requirements, many required courses can be taken online.
- **Computer Studies: Office Applications Specialist Certificate**

---

**Contact Information**

- www.nmc.edu/business
- James Beckett Building
- (231) 995-1169
- (231) 995-1546 fax
- [business@nmc.edu](mailto:business@nmc.edu)

**Accreditation**

- American Culinary Federation

**Transfer Guides**

- Available in the Advising Center, Osterlin, main level or [www.nmc.edu/advising](http://www.nmc.edu/advising)

**Scholarships**

- See page 35-41, Business Academic Office, or visit [www.nmc.edu/financialaid](http://www.nmc.edu/financialaid)

**Facilities**

- The James J. Beckett 204 Computer Lab provides business specific technology resources to students.

**Internships**

- **Academic**
- **International**

**Opportunities**

- **Honors courses**
Communications

You may choose Communications courses to fulfill requirements for other programs or concentrate in one of these four specific areas of study:

- **Public Speaking and Communications Studies**
- **English:**
  - Developmental Reading and Writing, including classes for English Language Learner (ELL) students
  - College Composition with class sections for ELL students
  - Literature
  - Linguistics
- **Modern Languages:** American Sign Language, French, and Spanish
- **Theater**

Students who choose a concentration are generally planning to transfer to a four-year college or university to complete a bachelor’s degree. While at NMC, these students pursue a general liberal arts curriculum, with electives chosen from their area of interest. If you plan to transfer, consult with counselors and faculty members in your field of interest during your first semester at NMC to familiarize yourself with transfer requirements. Staying in Traverse City and transferring to NMC’s University Center is another option if you wish to continue with a liberal studies curriculum.

**Degrees Available**

**Associate in Science and Arts (ASA)**

**Transfer Options** (Follow ASA Degree Requirements)

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**Online & Other Learning Options**

ASA degree - Depending on the transfer college requirements, many required courses can be taken online.
Freshwater Studies

This water focused program has an interdisciplinary approach designed to offer students flexibility and a variety of opportunities especially critical in these challenging economic times. The core program of studies includes Introduction to Freshwater Studies, Watershed Science, Geographic Information Systems (GIS), Oceanography, Meteorology and Climatology, and an Internship experience either locally or overseas.

The degree is intended both for students who plan to enter the professional arena as well as those who wish to further their studies at a four-year school.

Degrees Available
Associate in Applied Science (AAS)
Associate in Science and Arts (ASA)

Concentration Streams
Global Freshwater Policy and Sustainability......................................................... 82
Economy and Society.................................................................................................. 82
Science and Technology.............................................................................................. 82

Transfer Options
NMC has collaborated with Grand Valley State University to allow Freshwater Studies students to go on to earn a Bachelor’s degree in Liberal Studies with an Environmental Leadership emphasis at GVSU’s University Center location. All courses for both NMC Associate of Science and Arts degree and GVSU Bachelor’s degree will be offered in Traverse City.
Academic Area: Health Occupations

Health Occupations
Health Occupations programs prepare you for immediate employment or to transfer to four-year colleges and universities. Specialized occupational classes lead to a certificate. The Associate Degree programs offer a combination of specialized classes and liberal arts and science studies.

The Dental Assistant and Nursing programs have specific admissions requirements. Details appear in the program information section.

If you plan to transfer, consult with counselors and faculty members in your field of interest during your first semester at NMC to familiarize yourself with transfer requirements. Transferring to NMC’s University Center is another option.

Degrees Available
Associate Degree in Nursing (ADN)
Associate in Applied Science (AAS)
Certificate of Achievement

Occupational Specialty Programs
Allied Health
Respiratory Therapy (Partnership) .......................................................... 92
Dental Assistant
Dental Assistant (AAS) ........................................................................... 80
Dental Assistant (Certificate) ................................................................. 80
Nursing
Associate Degree in Nursing (ADN) ...................................................... 88
LPN to ADN Completion (ADN) ............................................................. 89
Practical Nursing (Certificate)............................................................... 90

Transfer Options - Nursing
Many colleges and universities offer BSN completion programs. Two University Center partners, Ferris State University and Spring Arbor University, allow you to complete your BSN while remaining in Traverse City. See page 22-23 or go to www.nmc.edu/uc for more information.

Online & Other Learning Options
• Nursing Online Option (page 89)
Academic Area: Humanities

Humanities

From graphic design, photography and writing to music, dance, history and philosophy, NMC’s Humanities academic area offers you a wide range of creative educational opportunities. You’ll also learn unique skills that will ultimately help you move on to a university or land a job in your desired field. All Humanities students have access to state-of-the-art computer labs. If it’s photography you’re pursuing, you’ll enjoy NMC’s impressive photography lab. We also provide private instrument instruction and opportunities to participate in a variety of musical ensembles and performances. You also may take advantage of our flexible learning options in computer software, history, philosophy and music courses.

Degrees Available
Associate in Applied Science (AAS)
Associate in Science and Arts (ASA)

Occupational Specialty Programs
Visual Communications (AAS) ................................................................. 93
Visual Communications - Creative Management in Art Direction (AAS) ........ 93

Transfer Opportunities
Art ........................................................................................................... 60
Dance ....................................................................................................... 62
History ..................................................................................................... 62
Music ...................................................................................................... 62
Philosophy .............................................................................................. 62
Religion .................................................................................................... 62
Visual Communications ........................................................................... 63

Online & Other Learning Options
ASA degree - Depending on the transfer college requirements, many required courses can be taken online.

Contact Information
www.nmc.edu/humanities
Fine Arts Building
(231) 995-1325
(231) 995-1696 fax
humanities@nmc.edu

Student Organizations
• White Pine Press
• NMC Magazine

Transfer Guides
Available in the Advising Center, Osterlin, main level or
www.nmc.edu/advising

Scholarships
See page 35-41, Humanities Academic Office, or visit
www.nmc.edu/financialaid

Labs
• Music Macintosh Lab
• Visual Communications Macintosh Lab
• Photography Darkroom

Equipment
• Music Instruments
• Fully-equipped Ceramic Studio

Opportunities
• Instrument, Dance and Ensemble Performance
• Concert & Jazz Band
• Chamber Singers
• Chorale
• Hands-on work experience in Visual Communications with non-profit organizations
• Student Publications
• Honors courses
Great Lakes Maritime Academy

At the Great Lakes Maritime Academy, you’ll prepare for the challenge of operating commercial ships as a deck or engineering officer.

The Academy’s unique relationship with partner institution Ferris State University allows cadets to earn maritime degree credentials and a Bachelor’s degree in Business Administration simultaneously. A core maritime curriculum for students who enter the Academy with a Bachelor’s degree is also available.

Upon completion of all requirements, you are prepared to write the U.S. Coast Guard examination for licensing as deck or engineering officers.

You’ll learn seamanship, navigation and piloting or steam and diesel engineering with up to 276 days of sea time. The training ship State of Michigan is used daily as a floating classroom, a hands-on learning environment and sets sail several times a year to reinforce skills taught shore side. Upon graduation, you’ll discover exceptional employment opportunities and salaries.

Degrees Available

- Associate in Applied Science (NMC)
- Bachelor’s of Science in Business Administration, Ferris State University/NMC University Center
- U.S. Coast Guard unlimited tonnage license for:
  - Third Mate of the Great Lakes and Oceans and 1st Class Great Lakes Pilot (Deck Program)
  - Third Assistant Engineer, Steam or Motor Vessel, unlimited horsepower (Engine Program)

Occupational Specialty Programs

- Maritime......................................................... 84-87
- Maritime Deck Officer
  (AAS-NMC; BS-Ferris State University)...................... 85
- Maritime Engineering Officer
  (AAS-NMC; BS-Ferris State University)...................... 86
- Power Plant Facilities Operator (AAS) ...................... 87
Physical Education

A wide variety of Physical Education courses allow you to pursue personal interests, improve fitness, participate in sports or recreational activities, relieve stress, or earn additional credits. Two physical education credits may be taken as electives to satisfy the total number of Group 2 credits needed to fulfill Associate in Science and Arts degree requirements. See page 52.

Physical Education courses are grouped as follows:

Health and Fitness (HF) ................................................................. 129-131
  Fitness Circuit, Yoga, Pilates, Aerobic Workout, Aerobic Dance,
  Step Aerobics, Lap Swim
Outdoor Pursuits (OUT) ............................................................ 150
  Winter Travel and Camping, Backpacking, Caving, Rock Climbing,
  Snowshoeing, Canoeing, Kayaking
Physical Education (PE) ............................................................. 151-153
  Volleyball, Basketball, Softball, Soccer, Weightlifting, Aikido, Tae Kwon Do,
  Kuntaw, Judo, Swing, Latin and Slow Dancing, Hip-Hop Dance

In addition to these credit courses, the Physical Education program offers non-credit recreational opportunities. For a fee, you may join the Health and Fitness Center, which is equipped with weight machines, exercise bikes, treadmills, stair climbers, elliptical trainers and ski machines. Intramural sports start in the fall with outdoor co-ed kickball and flag football and then move indoors in the winter with co-ed dodge ball, soccer, basketball and volleyball.

Open recreation hours allow you to join in pick-up games of basketball, volleyball, or indoor soccer. Outdoor facilities include an athletic field, softball diamonds, sand volleyball and basketball courts, and a frisbee/disc golf course.

Transfer Opportunities

Most Physical Education credits will transfer to four-year schools in Michigan. Check with the Counseling office for requirements at specific schools.
Science & Math

You’ll find courses designed to fulfill basic requirements in occupational programs at NMC. Also, most Science and Math courses are easily transferable to four-year institutions, making your path toward a bachelor’s degree a smooth one.

Degrees Available
Associate in Applied Science (AAS)
Associate in Science and Arts (ASA)

Occupational Specialty Programs
Plant Science, Applied (AAS) ................................................................. 92

Transfer Opportunities
Astronomy ..................................................................................... 60
Biology ......................................................................................... 60
Chemistry ...................................................................................... 60
Engineering ................................................................................... 61
Environmental Science ................................................................. 61
Mathematics ................................................................................ 62
Physics ......................................................................................... 63

Online & Other Learning Options
ASA degree - Depending on the transfer college requirements, many required courses can be taken online.

Contact Information
www.nmc.edu/science-math
Biederman Building 203G
(231) 995-1260
(231) 995-2120 fax
science-math@nmc.edu

Student Organizations
• Astronomy Club
• Engineering Club

Transfer Guides
Available in the Advising Center, Osterlin, main level or
www.nmc.edu/advising

Scholarships
See page 35-41, Science & Math Academic Office, or visit
www.nmc.edu/financialaid

Facilities
• Computer Lab
• Greenhouse
• Observatory
• Science Labs:
  - Anatomy & Physiology
  - General Biology
  - General Chemistry
  - Geology
  - Human Biology
  - Microbiology
  - Organic Chemistry
  - Physics

Opportunities
• Computer Lab Aid
• Office Assistant
• Science Lab Assistant
• Honors courses
Social Science

Whether you’re looking to fill a program requirement or wish to concentrate in a specific social science area that transfers to a four-year institution, you’ll find what you need here. NMC offers transfer courses in Anthropology, Child Development, Criminal Justice, Education, Economics, Geography, Political Science, Psychology, Sociology, and Social Work. Students who study the social sciences go on to work in a number of fields in business, child care, education, human service, governmental and non-profit arenas, and field research.

If your interest lies in serving the community as a police officer, the Law Enforcement program prepares students to become law enforcement officers while earning a two-year degree. Child Development is another specialty program that prepares qualified students to work in the field while earning a certificate. NMC also offers specialty courses in Nautical and Underwater Archaeology that may not be found at larger institutions. NMC works closely with our University Center partners so students may earn a bachelor’s degree in Social Work or Education.

Students looking to build their resume, Service Learning projects offer you the opportunity to explore careers and build work-related skills through hands-on learning. At the same time, you are providing important volunteer services to the community.

Degrees Available
Associate in Applied Science (AAS)
Associate in Science and Arts (ASA)
Certificate of Achievement

Occupational Specialty Programs
Child Development (Certificate) ................................................................. 70
Law Enforcement (AAS) ........................................................................ 82
Nautical Archaeology Society (Certificate) ............................................. 87

Transfer Opportunities
Anthropology .......................................................................................... 60
Child Development .................................................................................. 60
Criminal Justice ...................................................................................... 60
Economics .............................................................................................. 61
Education .................................................................................................. 61
Geography .............................................................................................. 61
Political Science ...................................................................................... 63
Psychology .............................................................................................. 63
Social Work .............................................................................................. 63
Sociology ................................................................................................. 63

Online & Other Learning Options
• ASA degree - Depending on the transfer college requirements, many required courses can be taken online.
• Criminal Justice program (ASA degree)
Technical

Technical programs prepare you for immediate entry level employment or to transfer to a four-year institution. In addition to degrees, certificates and certifications, technical programs allow those already employed to upgrade their technical skills. In all technical programs, enrollments are limited to give you access to the most current technology, industry-knowledgeable instructors, curriculum reviewed and approved by local advisory committees, and hands-on training.

Degrees Available

Associate in Applied Science (AAS)
Certificate of Achievement
Industry Certifications

Occupational Specialty Programs

Automotive
- Automotive Service Technology (AAS) .............................................................. 65
- Electrical and Drivability Specialist (Certificate) ................................................. 65
- Hybrid Technology Specialist ............................................................................ 66
- Master Automotive Technician (Certificate) ....................................................... 66
- Under Car Specialist (Certificate) ......................................................................... 66

Bridge Learning Community .................................................................................. 67

CAD/CAM
- Detailer - Advanced Manufacturing (AAS) .......................................................... 69
- Drafter - Mechanical (Certificate) ......................................................................... 70
- Trainee - Mechanical (Certificate) ........................................................................ 70

Construction Technology
- Carpentry Technology (Certificate) ..................................................................... 76
- Electrical Technology (Certificate) ....................................................................... 76
- Facilities Maintenance (Certificate) ..................................................................... 76
- HVAC/R Technology (Certificate) ....................................................................... 76
- Plumbing Technology (Certificate) ....................................................................... 77

Renewable Energy
- Electrical (AAS & Certificate) ............................................................................... 77
- HVAC (AAS & Certificate) ................................................................................... 78

Electronics Technology ............................................................................................ 81

Manufacturing Technology (AAS) .......................................................................... 83

Welding Technology (Certificate) ............................................................................ 94
Learning Opportunities

Online and Other Flexible Learning Options

Online Learning

www.nmc.edu/online
Osterlin Building, Room 134, (231) 995-1070

NMC offers many courses and five degree programs online. Courses may be delivered:

- Completely online
- Online with proctored testing
- Hybrid courses blending online and on-campus delivery (at least 50 percent online)

The online course areas are accessed using NMC’s e-Learning (Moodle) system at elearning.nmc.edu.

Visit www.nmc.edu/online to find out more details and sample syllabi. Using the searchable schedule feature located on this page, you can also determine which classes are offered online or in other delivery methods.

Degree Programs

ADN (Associate Degree in Nursing)
- Intended for full-time ADN students
- Lab and clinical courses require on-site attendance
- More information: www.nmc.edu/healthoccupations or (231) 995-1235

AAS (Associate In Applied Science Degree)
Business Administration - General Business
- More information: (231) 995-1169

ASA (Associate in Science and Arts Degree)
- Contact an NMC Adviser for more information, (231) 995-1041

AGS (Associate in General Studies)
- Contact an NMC Adviser for more information, (231) 995-1041

ASA: Criminal Justice
- A collaborative program among NMC, Delta College and West Shore Community College
- More information: (231) 995-1290

Certificate Programs

Computer Studies: Office Applications Specialist Certificate
- More information: (231) 995-1169

General Studies Certificate
- Contact an NMC Adviser for more information, (231) 995-1041

Science and Arts Certificate
- Contact an NMC Adviser for more information, (231) 995-1041

Open Learning Lab Courses
Flexible in schedule, but require coming into the Center for Learning during open lab hours for orientation, to use specified software, to meet with the instructor, take tests or to access specific course materials.

Noncredit Online Learning
See page 24, visit www.nmc.edu/ees or call (231) 995-1700 for more information.

Bridge Learning Community

www.nmc.edu/bridge
Aero Park Campus, Parsons-Stulen Building, (231) 995-1971

Designed specifically for nontraditional adult learners, Bridge is a set of communications, math and computer classes offered both days and evenings to fit various schedules. Bridge is appropriate for first-time adult college students, students who have been away from a formal education setting and students seeking to upgrade workplace skills.

Working with more than 30 regional agencies to serve individuals residing in the surrounding six-county area, more than 100 students enroll in Bridge each year. Students receive assistance with admissions, registration and financial aid as well as transportation, child care and more. The program is designed to give students foundational success, on which they can build either an academic or career path.

Students in Bridge describe the program as motivational, a confidence builder and an opportunity to succeed. The NMC Bridge is a learning community, and it operates on the premise that “we all learn better together.”

Service Learning

www.nmc.edu/servicelearning
(231) 995-1290

Service Learning offers students the opportunity to explore careers and build work-related skills through hands-on learning experiences. It also provides documentation of volunteer hours required by some schools for graduation.

A service-learning internship is a method of earning college credit, extra credit or honors credit for a specific class, or validation of supervised field experience. It is an opportunity for students who want to explore career or interest areas, apply classroom theory to a real situation, and gain practical experience for resume building. Internships are arranged between the student, supervising faculty, field supervisor, and service learning coordinator. Internships can be arranged in all liberal and occupational study areas for one to four hours of elective credits. A maximum of four credits will count toward associate degree requirements.
Learning Opportunities

What can I study?
The University Center partners offer programs in the areas of Business, Health and Human Services, and Education. Visit www.nmc.edu/uc or see the University Center Catalog for more information.

What degrees are available?
Bachelor's completion degrees, master's degrees, doctoral degrees, professional certificates, education endorsements and planned programs.

How do I apply?
The ideal approach for admission to a bachelor's degree program is to complete the first two years of college courses (and an associate's degree) from Northwestern Michigan College. You then apply for admission to the four-year institution of your choice. Applications are available through UC campus office representatives. Once accepted to a university, you are literally a student at that institution, with the same rights and responsibilities as other students at that college or university.

How can I get help?
Consult directly with representatives from the university to learn about their programs. Planning ahead will ensure that you complete courses or tests required for admission.

How do I register for classes?
You can register by mail, telephone, onsite, and online. Call the university representative for details.

How do I pay?
Tuition and fees are assessed by the individual partner institutions. The UC campus office representatives are the best source of information.

Is financial aid available?
Financial aid eligibility and awards are primarily determined by the student's school of choice. Visit www.nmc.edu/uc or contact the UC campus representative for more information. Some scholarship money is available from the UC. For information call (231) 995-1776.

Where are classes held?
Most classes are held at the NMC University Center Campus on Boardman Lake in Traverse City. Located at 2200 Dendrinos Drive, the UC campus is off Cass Road, north of South Airport Road.

How can I find out more?
Visit www.nmc.edu/uc to find out more about the programs and universities you're interested in. Tours of the University Center are available by calling (231) 995-1777 or stop by the Welcome Center at the UC campus.

Central Michigan University
Contact: Judith Nemitz
2200 Dendrinos Dr., Suite 101
Traverse City, MI 49684
(231) 995-1756, (231) 995-1758 fax
traverse@cmich.edu

Bachelor's Programs
• Elementary Education

Master's Programs
• Administration, with concentrations in:
  - General
  - Human Resources
  - Leadership
  - Public
• Humanities
• Reading and Literacy (K-12)
• School Principalship

Doctoral Program
• Doctor of Education (EdD)

Certificate & Endorsements
• Recertification/Endorsement
  - Early Childhood (ZA)
  - Elementary Education Endorsement (K-6)
• Driver's Education
• Specialist in Education (EdsS)

Davenport University
Contact: Katherine Baxter
2200 Dendrinos Dr., Suite 104
Traverse City, MI 49684
(231) 995-1740 or (800) 894-0883
(231) 995-1743 fax
katherine.baxter@davenport.edu

Bachelor's Programs
• Business Administration (BBA)
  - Applied Business
  - Business Prof. Studies
  - Human Resource Management
  - Management
  - Marketing

Master's Program
• Strategic Management (MBA)
Learning Opportunities

MUC Partners/Programs: Eastern Michigan University
Contact: Jacqui Frensley
2200 Dendrinos Dr., Suite 98
 Traverse City, MI 49684
(231) 995-1750 or (877) 368-8289
(231) 995-1751 fax
traverse.city@emich.edu

Graduate Certificate Program
• Historic Preservation

Ferris State University
Contact: Dr. Nancy Reddy
2200 Dendrinos Dr., Suite 100
Traverse City, MI 49684
(231) 995-1734 or (866) 857-1954
(231) 995-1736 fax
FerrisNorth@ferris.edu

Bachelor’s Programs
• Accountancy
• Business Administration
  - Aviation
  - Management
  - Maritime
  - Professional Track
• Computer Information Systems
• Computer Information Technology
• Hotel Management
• Information Security and Intelligence
• Nursing
• Secondary Teacher Education
• Social Work

Post-Bachelor’s Programs
• 18-Hour Planned Programs
• Endorsement: Secondary
• Endorsement: Special Education
• Post-B.A. Teacher Certification, Secondary

Master’s Programs
• Career and Technical Education
• Education-Curriculum and Instruction
• Special Education, LD
• Subject Area

Certificate Programs
• Homeland Security: Digital Security and Forensics
• Human Resource Management
• International Business
• Marketing

Grand Valley State University
Contact: Dr. Marty Litherland
2200 Dendrinos Dr., Suite 102
Traverse City, MI 49684
(231) 995-1785 or (231) 995-1786
(231) 995-1787 fax
nminfo@gvsu.edu

Bachelor’s Programs
• Language Arts/Elementary Education
• Liberal Studies
• Secondary Education
• Social Studies/Elementary Education

Master’s Programs
• Education
  - Early Childhood Education (ZA)
  - Elementary Education
  - Special Education (ECDD)
  - Special Education (CI)
• Occupational Therapy (online)
• Social Work

Certificates, Endorsements & Planned Programs
• Early Childhood Developmental Delay (ECDD)
• Early Childhood (ZA)
• Elementary Education
• Environmental Studies (Minor)
• 18-Hour Planned Programs
• Special Education Dual Endorsement Options (CI/ECDD)
• Special Education: Cognitively Impaired (CI)
• Post-Baccalaureate Teacher Certification, Elementary
• Post-Baccalaureate Teacher Certification, Secondary

Michigan State University
Contact: L. Andrew Norman
2200 Dendrinos Dr., Suite 203
Traverse City, MI 49684
(231) 995-1719 (231) 995-2183 fax
normanl@msu.edu

Program / Certificate
• Applied Plant Science (NMC AAS/ASA Degree and MSU Certificate)
  - Commercial Horticulture Operations
  - Commercial Turfgrass Operations
  - Landscape Horticulture
  - Viticulture

Spring Arbor University
Contact: Jill Niemi
2200 Dendrinos Dr., Suite 200
Traverse City, MI 49684
(231) 995-1761 or (800) 648-5843
(231) 995-1763 fax
jniemi@arbor.edu

Bachelor’s Programs
• Family Life Education
• Organizational Management
• Nursing

Master’s Program
• Management

Western Michigan University
Contact: Mary Swartz
2200 Dendrinos Dr., Suite 201
Traverse City, MI 49684
(231) 995-1788, (231) 995-1789 fax
mary.swartz@wmich.edu

Master’s Program
• Counselor Education
  (Clinical Mental Health & School)

Graduate Certificate Programs
• Alcohol and Drug Abuse (SPADA)
• Holistic Health Care

Lawrence Technological University
Contact: Program Administrator
2200 Dendrinos Dr., Suite 99
Traverse City, MI 49684
(231) 995-1725 or (877) LTU-8866
(231) 995-1723 fax

Master’s Program
• Business Administration (MBA)

Graduate Certificate
• Nonprofit Management and Leadership
Extended Educational Services - Community & Continuing Education

LIFE Academy - Learning Is Forever
The LIFE Academy is a program of learning opportunities created with and for adults age 50+ consisting of mostly daytime, short-term courses. Learners choose from more than 40 options each term across a broad spectrum of interests. Special events include monthly LIFE Lunch Forums and Campus Days in the spring and fall.

Adults age 62+ who live or own property in Grand Traverse County are eligible for a 20% reduction in tuition for both continuing education and academic credit courses. EES also offers professional development in the field of aging.

Online Courses
Over 200 noncredit online courses are offered each term. Courses include instruction on web page design, computer software programs, test preparation, business topics, writing skills, and enrichment topics.

Certificate Programs
Continuing Education Certificate programs include:
- Computer Skills
- Small Business/Entrepreneur
- Naturalist Program
- Residential Energy Assessment

Complete descriptions are available.

Scholarships
A variety of partial scholarships are available.

Special Events
- Campus Days (Spring and Fall)
- Festival of Foods
- Film Production Assistant Boot Camp
- International Affairs Forums
- Monthly LIFE Lunch Forums
- Conferences
- Workshops/Seminars
- Writers Conference

Extended Educational Services

www.nmc.edu/ees
(NMC University Center off Cass Road)
2200 Dendrinos Drive - Suite 108,
Traverse City, MI 49684
(231) 995-1700
(231) 995-1708 fax
ees@nmc.edu
Non-credit courses are held at various campus locations.

EES is the professional development, community and continuing education arm of NMC providing a broad array of learning options. No application is necessary. Each quarterly Learn for Life schedule highlights more than 200 courses that cover topics of interest for anyone age 4-100, including:

- Certificate Programs
- College for Kids
- Computer Skills
- Creative Arts
- Culinary
- Fitness and Recreation
- Language and Writing
- LIFE Academy
- Personal Enrichment
- Personal Growth and Wellness
- Renewable Energy
- Small Business/Entrepreneur
- Professional Development

Complete Learn for Life course schedules are published four times a year and posted online. Sign up for courses online or by phone, fax, mail or in person.

Professional Development
EES offers a variety of professional development courses including the latest in computer software training, small business development, customer service, real estate, human resources, grant writing, and managerial topics. Continuing Education Units (CEUs) can be awarded for many courses meeting requirements for professional development.

College For Kids
Enrichment courses for preschool through high school students are offered year round. An extensive summer program provides a wide range of learning options including art, music, drama, science, the environment, technology, outdoor adventure, aviation, cooking, and writing. Week-long classes are offered throughout the summer. Partial scholarships are available based on financial need.
Admissions

www.nmc.edu/admissions
Tanis Building, (231) 995-1054

Northwestern Michigan College is an open door comprehensive community college, which means we admit most students who have graduated from high school or successfully completed the GED with potential to succeed in higher education.

Once a student is admitted to NMC, he/she must complete an assessment of writing, reading and math skills to determine his/her ability to benefit from courses that NMC offers. If it is determined that NMC does not offer courses appropriate for the student, a referral to an agency or other alternative will be made with the assistance of a counselor or advisor.

Students interested in completing a GED may do so through the Traverse Bay Area Intermediate School District. To register or obtain more detailed information on how to get started, contact Michigan Works Adult Education at (231) 922-7826.

Types of Admission

• REGULAR ADMISSION
  - Degree or Certificate Admission- For applicants who intend to complete an associate degree, to transfer or to complete a certificate program in an occupational specialty.
  - Non-Degree Admission- For applicants who intend to pursue course work in an area of interest to gain skills or for enjoyment.

• HOME SCHOOL
  Included under regular admission. See page 27 for details.

• PROVISIONAL ADMISSION
  If you have below a 2.0 average on your high school transcript, you may be admitted to NMC on a provisional basis. To help you meet your educational goals, you must seek academic advising and enrolled in a reduced credit load.

• DUAL-ENROLLED ADMISSION
  For applicants who are enrolled in classes at NMC while still in high school. See page 27 for more details.

• SPECIAL ENROLLMENT OPTION
  For qualified high school students enrolled in joint programs offered by NMC and the TBA/Career Tech Center. See page 27 for more details.

• GUEST ADMISSION
  Applicants currently attending another Michigan college/university may apply as a guest student at NMC. Guest students must submit a completed Michigan Uniform Undergraduate Guest Application. This application must be submitted for each semester a student plans to attend for a maximum of two semesters. After two semesters, a student must complete an NMC application for admission if they wish to continue to be enrolled at NMC.

Application Assistance

Need help applying? Find it at both the Admissions office (contact information above or e-mail admissions@nmc.edu) and the Welcome Center in the lobby of the Health & Science Building (231) 995-1135.

HIGH SCHOOL AND/OR COLLEGE TRANSCRIPT REQUIREMENTS

If you are a Degree/Certificate or a Non-Degree/Certificate applicant, send your transcripts according to these guidelines:

• If you are under 21 and have not attended a college or technical school since high school, request that an “official” transcript be forwarded to NMC’s Office of Admissions from your high school.

• If you are under 21 and have earned fewer than 20 college* level credits, request “official” transcripts be forwarded to NMC’s Office of Admissions from both your high school and the college or technical schools you have attended.

How to Apply

When you decide to apply for admission at NMC, your first step is to file an Application for Admission. Application forms are available from the NMC Office of Admissions, at high schools, inside the back cover of this catalog, or online at www.nmc.edu/admissions. Application fee is $20.

While American College Test (ACT) or Scholastic Aptitude Test (SAT) scores are not required for admission to NMC, you may send your ACT scores for reviewing your academic achievements and educational plans. In addition, if your ACT score is 19 or above in reading and 19 or above in English, you qualify for ENG 111 English Composition and are not required to take those portions of the basic skills assessment test (COMPASS) before starting at NMC. If you have a 19* or higher on the ACT math test, you may be enrolled in MTH 111/11. (*High school dual enrolled students need a 24 or higher on their ACT math test to enroll in NMC math courses or may take the COMPASS math test.) An ACT math score of 24 or higher will place a student in MTH 106, MTH 121 or MTH 131. If you completed AP tests, please have the scores sent to NMC.

Types of Admission

• REGULAR ADMISSION
  - Degree or Certificate Admission- For applicants who intend to complete an associate degree, to transfer or to complete a certificate program in an occupational specialty.
  - Non-Degree Admission- For applicants who intend to pursue course work in an area of interest to gain skills or for enjoyment.

• HOME SCHOOL
  Included under regular admission. See page 27 for details.

• PROVISIONAL ADMISSION
  If you have below a 2.0 average on your high school transcript, you may be admitted to NMC on a provisional basis. To help you meet your educational goals, you must seek academic advising and enrolled in a reduced credit load.

• DUAL-ENROLLED ADMISSION
  For applicants who are enrolled in classes at NMC while still in high school. See page 27 for more details.

• SPECIAL ENROLLMENT OPTION
  For qualified high school students enrolled in joint programs offered by NMC and the TBA/Career Tech Center. See page 27 for more details.

• GUEST ADMISSION
  Applicants currently attending another Michigan college/university may apply as a guest student at NMC. Guest students must submit a completed Michigan Uniform Undergraduate Guest Application. This application must be submitted for each semester a student plans to attend for a maximum of two semesters. After two semesters, a student must complete an NMC application for admission if they wish to continue to be enrolled at NMC.

Application Assistance

Need help applying? Find it at both the Admissions office (contact information above or e-mail admissions@nmc.edu) and the Welcome Center in the lobby of the Health & Science Building (231) 995-1135.

HIGH SCHOOL AND/OR COLLEGE TRANSCRIPT REQUIREMENTS

If you are a Degree/Certificate or a Non-Degree/Certificate applicant, send your transcripts according to these guidelines:

• If you are under 21 and have not attended a college or technical school since high school, request that an “official” transcript be forwarded to NMC’s Office of Admissions from your high school.

• If you are under 21 and have earned fewer than 20 college* level credits, request “official” transcripts be forwarded to NMC’s Office of Admissions from both your high school and the college or technical schools you have attended.
**If you are over 21**, you do not need to submit a high school transcript unless you are seeking admission to a limited enrollment program such as Health Occupations or the Maritime Academy.

**If you are over 21 and have attended a college or technical school**, you do not need to submit a high school transcript. An official transcript of accredited college work is only required if you are:
- Seeking admission to a limited enrollment program such as Health Occupations or the Maritime Academy
- Wishing to have previous college work evaluated for credit at NMC
- Applying for college financial aid or
- Applying for Veterans Benefits.

**TRANSFERRING CREDITS FROM OTHER COLLEGES**
If you have credits from another college or university, request the registrar of that school send an official transcript to the NMC Admissions Office. Your credits will be evaluated and the transfer credit evaluation mailed to your permanent address. You will receive credit from institutions recognized by Regional Institutional Accrediting Organizations for those college-level courses in which you received a 2.0/C or higher grade and which are similar to courses at NMC. The total number of credits will be recorded on your transcript. In certain circumstances, when applying to specific occupational programs, only the classes that apply to those programs may be evaluated. Only credits transfer, grades do not.

If you have attended a foreign institution, your transcript must be evaluated by an evaluation service for comparison to regionally accredited institutions in the United States. Accrediting services recommended by NMC are Educational Credential Evaluators, Inc. (www.ece.org) or World Education Services (www.wes.org)

**HOME-SCHOoled APPLICANTS**
NMC welcomes home school and non-traditional school applications. Home school graduates will be admitted under Regular Admission. NMC requires home school transcripts. Home school students who have not graduated will be admitted as a dual-enrolled admission and must reapply each semester until completion of high school graduation. Written consent from the student’s parent/guardian and approval from the home school provider is required for current home school students.

**DUAL ENROLLED APPLICANTS**
Dual enrollment at NMC is selective. High school students must qualify for dual enrollment and admission to NMC. To be considered for academic classes (i.e. Government, history, English, math, science, psychology, business, geography etc.) prospective dual enrolled students must either:

1. Submit ACT reading and writing scores of 19 or higher to NMC's Admissions Office for review, or
2. If you also want to take a college class that requires proficiency in math, you will need an ACT score of at least 21 or better on the math placement test. This may qualify you for Intermediate Algebra or higher. All other math courses require COMPASS testing.

**3. Take NMC's COMPASS Placement Test.** For information on testing, please call (231) 995-2134. After test scores are on file, students will receive an eligibility letter from NMC’s Admissions Office showing what classes they may be able to take and outlining additional steps in the dual enrollment process.

**Eligible dual enrolled students who would like to take academic classes must do the following:**

1. Complete the dual enrollment application with your high school counselor and obtain all required signatures.
2. Send or bring the application to NMC’s Admissions Office with the non-refundable application fee.
3. Attend orientation. At this time students will register for classes. (First time dual enrollment students must attend an orientation.)
4. Pay for your classes or present paperwork from your school if they are covering the tuition.

There are no eligibility or test score requirement for students taking aviation, studio art, studio music, physical education, or technical courses approved by the instructor. These students simply fill out and submit the dual enrollment application with all signatures and the non-refundable application fee to NMC’s Admissions Office. Once the application has been processed, students may register.

**SPECIAL ENROLLMENT OPTION**
- **Program Offerings:** Visual Communications, Welding, Education
- Classes are held at the Traverse Bay Area Intermediate School District Career Tech Center (TBA/ISD/CTC).
- The student must apply during the first week of their TBA/CTC course by submitting the Special Enrollment Application to the NMC Admissions Office each semester and pay a special enrollment fee.
- To receive NMC credit, the student must satisfy NMC standards for assignments, quizzes, tests, exams, and grading procedures.

**ADMISSION TO LIMITED ENROLLMENT PROGRAMS**
Health Occupations have special admissions requirements as outlined under the specific program in this catalog.

The Great Lakes Maritime Academy (GLMA) also has special admission requirements. GLMA application packets are available online at www.nmc.edu/maritime, or from the Office of Admissions at the Academy, Great Lakes Campus, 715 E. Front Street, (231) 995-1200.

**RIGHT TO APPEAL**
In the event you are denied admission to an occupational program that has special admission requirements, you may appeal such matters to the Director of Admissions and subsequently to an admissions review committee for consideration.
ADMISSION OF OUT-OF-STATE STUDENTS
Northwestern Michigan College welcomes out-of-state student admission applications. If you plan on visiting the Traverse City area please phone our Welcome Center at (231) 995-1135 for information regarding a campus tour.

ADMISSION OF INTERNATIONAL STUDENTS
Northwestern Michigan College is authorized under federal law to enroll non-immigrant students. We welcome applicants from around the world. Potential students will be asked to demonstrate English language proficiency either through testing or other indicators. A minimum score of 550 (paper) or 213 (computer) or 79 (internet based) on the TOEFL test is required. You will also need the equivalent of a U.S. high school education with an approximate grade point average of 2.5. Since the college does not have financial aid available for international students, you must clearly demonstrate your ability to finance your education in the U.S. by completing a financial statement. All international students are required to carry an approved medical insurance program to cover major medical expenses. If you are not covered by medical insurance, you will be required to enroll in the student insurance program available through Northwestern Michigan College, at a cost of approximately $750 per year. Deadline for Fall admission is July 15; deadline for Spring admission is November 15. Complete details online at www.nmc.edu/admissions or call (231) 995-1034.

INTERNATIONAL STUDENT SERVICES
NMC has two International Student Advisors who can be reached through the Admissions Office at (231) 935-1054. International students are encouraged to use these services to support their academic and social success. The following services are provided:

- With advance notice, an NMC representative will arrange for pick up from the Cherry Capital Airport for students arriving for the first time.
- Approval for on-campus employment
- Community and cultural orientation
- International Club activities
- Liaison to other college support services
- Liaison to community groups

NMC recognizes the importance of global awareness and currently offers study-abroad opportunities for NMC students in Germany. For more information, call (231) 995-1170.

Residency
Your tuition rate is determined by your residency during the admissions process. There are four classifications:

1. **In-District**: Legal resident of Grand Traverse County
2. **In-State**: Legal resident of Michigan outside of Grand Traverse County
3. **Out-of-State**: Legal resident of a state other than Michigan
4. **International**: Legal resident of a country other than the U.S.

Grand Traverse County property owners and their dependents are considered in-district and pay lower tuition because they also pay county property taxes which support NMC. (Exception: Maritime classes are based on credit hours only.) To change your residency, you must obtain a petition online or from the Records Office. In-state or Grand Traverse County **property owners** must provide a copy of the current property tax receipt. **Non-property owners** must reside at a permanent address in Michigan/Grand Traverse County for a minimum of six consecutive months taking 5 or fewer credits. In addition to the petition, the student must submit copies of the supporting documentation to the Records Office at least one week prior to the start of the main session. An authorized change in residency status for tuition assessment is not retroactive to any previous semester of enrollment at NMC.

Students under 25 years of age, whether or not they are claimed as dependents on their parents’ previous year income tax return, should check for additional special requirements. Completing an “Information Change Form” will not change your residency unless you are leaving Grand Traverse County. If you have questions, contact the Records Office (231) 995-1049.

Legal residence for students is verified on a continuing basis. NMC sends letters to enrolled students each semester (Fall, Spring, and Summer) with a “Forward and Address Correction Requested” label on the envelope. When discrepancies are found, a change is made in the student’s address. Each semester all addresses and residency codes are compared/verified for accuracy and updated where appropriate.

**Advising Center**

www.nmc.edu/advising
Osterlin Building, (231) 995-1040

Confused about your academic and career direction? The Advising Center staff can help you clarify your academic and career path and help you develop your pathway to success.

**Academic Advising**

Academic advising at NMC is a shared responsibility between students and advisors. The Advising Center staff offers a full complement of advising services for students. First-year students will meet with an advisor during orientation, and are also required to meet with an academic advisor again during their first semester to review career options, transfer possibilities, and course selections. Students are encouraged to stay connected to an advisor throughout their enrollment at NMC to ensure they are on the right track.

**Career Advising**

Consider one or more of these tools, available in the Advising Center, as you make academic and career decisions:

- Career Coach: An online program providing employment data, trends and projections for Michigan.
- Myers-Briggs Type Indicator to determine which careers most suit your personality.
• Strong Interest Inventory allows you to compare your interests to people already working in different careers.
• Skills and values card sorts which allows you to identify what you like to do and what’s important to you.
• Enroll in Career Exploration and Planning (PSY 100), a one-credit elective course, that includes all of the above and more.

Transfer Advising
An extensive collection of online transfer guides is available to students planning to transfer to four-year universities in Michigan. Students who follow transfer guides and team up with one of our advisors throughout their stay at NMC will have good information for a smooth transfer. If a transfer guide doesn’t exist for a specific school or program, advising staff will assist in selecting appropriate courses. NMC also recommends that students personally contact the transfer institution they are considering for additional information.

Student Employment
Students seeking on-campus employment may apply through the Advising Center in the Osterlin Building. Any student who is enrolled for a minimum of six NMC credits per semester or three credits in the summer is eligible for on-campus employment.

Employability Skills
NMC’s Advising Center can help you gain necessary job-search skills for locating part- or full-time work. We have resources to assist you in writing your resume and cover letters, opportunities to practice for an interview and acquire skills on how to conduct your employment search. Advice and assistance on these important skills may be obtained through workshops, seminars, individual appointments, and printed materials. If you are looking for employment as a student or when you graduate, you may be interested utilizing our services.

Bookstore
www.nmc.edu/bookstore
West Hall, lower level (231) 995-1285
New and used textbooks, study aids, art/drafting supplies, uniforms for special programs, computer software, NMC clothing and logo gifts, and snacks and beverages.

Refund Policy: Refunds will be given through the second week of the semester only. You are entitled to a full refund if you drop a class or withdraw from the college or your class has been cancelled. To receive a refund, you must provide the original cash register/financial aid receipt.

Cashier Services
www.nmc.edu/cashier
Tanis Building, (231) 995-1570
Pay tuition and fees, get parking permits. See Tuition, Billing and Fees.

Center for Learning
www.nmc.edu/centerforlearning
Osterlin Building, (231) 995-2134
The Center for Learning provides a variety of academic support services using current technology and a professional staff available 70 hours per week.

ACADEMIC SKILLS IMPROVEMENT
• PLATO skill-building in reading, writing, math, and other academic areas
• Textbook software support
• Personal skill development, including study skills and time management

COMPUTER APPLICATIONS
• Specialty software such as MS Office Applications, Photoshop, nutrition analysis, dental assisting
• Multiple word processing programs
• Career and scholarship exploration software

TEST PROCTORING
• Many faculty offer quizzes and exams here. Please bring photo ID.

OTHER
• Open Learning classes, self-paced, often computer-based
• Scanner and digital camera access
• Testing
Class Cancellations/College Closure

Daily Class Cancellations
Posted online at www.nmc.edu/class-cancellations and on campus video monitors, Monday-Friday. For weekend class cancellations, students should call their instructor’s voice mail.

Delayed Openings or Closures
College-wide delayed openings or closures will be reported to area radio and television stations, via email to all students, faculty and staff, and via text message to those who are subscribed to receive alerts on their cell phones. It will also be posted online at www.nmc.edu and recorded: (231) 995-1100.

COMPASS Placement Testing

www.nmc.edu/compass
Osterlin Building, (231) 995-2134

Placement assessment is required of new students and will be used to place you into appropriate courses. COMPASS is the computerized test NMC uses to determine placement into your first classes.

The test has three sections: reading for comprehension, writing skills and math. It is not timed, and takes the average student about two hours to complete. ACT scores of 19 or higher in reading, English and math may be used for course placement.

Why COMPASS?
Your success matters to us. You’ll be more successful at NMC and beyond when you start in the right classes. Your COMPASS test score will determine where you start in math and English at NMC. More than 85 percent of new NMC students start in a preparatory math or English class.

COMPASS testing is available daily at the Center for Learning in the Osterlin Building. You will need to bring photo identification, your NMC ID, and a calculator. Visit www.act.org/compass for sample questions.

A COMPASS resource manual is available for check-out in the Osterlin Building. In addition to the sample questions listed at the site above, the website www.testprepreview.com is suggested for review. Select COMPASS test on this site.

Computer Labs

Equipment and Locations
Dell computers running Microsoft Windows 7 and the Microsoft Office Suite:
- Beckett Building, Rm. 204, (231) 995-1068
- Center for Learning, Osterlin Building, (231) 995-2134
- Library Research Area, Osterlin Building, (231) 995-1540
- Parsons-Stulen M-TEC, Rm. 206, (231) 995-2000
- Zonta Library, University Center, (231) 995-1749

Apple Macintosh computers running MAC OS X and the Microsoft Office Suite:
- Center for Learning, Osterlin Building, (231) 995-2134
- Beckett Building, Room 214, (231) 995-1564

Technology Support Services
Computer Services, Information, and Support
Lower Level Tanis Building, Area 51

Help Desk: (231) 995-3020
Enter a helpdesk ticket online at helpdesk.nmc.edu

Disability Support Services

Osterlin building, (231) 995-1929
Support Services are available to students with documented disabilities and include classroom accommodations such as note-takers, books on CD, adaptive equipment and testing modifications (extended time and quiet space).

In addition, NMC offers a support group for students with disabilities. For additional information, please call (231) 995-1929, 995-1139, 995-1038 (TTY).
Financial Aid

www.nmc.edu/financialaid
Tanis Building, Room 142 (231) 995-1035

The following information is subject to change at anytime, without notice, due to changes in federal or state regulations or institutional policies. Please visit www.nmc.edu/financialaid for the most up-to-date information.

Financial Aid Philosophy
Paying for college is a shared responsibility among the student, the family, and NMC’s Financial Aid office. Scholarships, grants, employment, and loans are available. Any or all of these may be combined in a “financial aid package” to help with educational costs. Northwestern Michigan College is committed to working with students to acquire the maximum financial aid for which they are eligible.

Financial Aid Consideration
To be considered for the maximum amount of aid possible, all students should:

1. Complete an NMC Application for Admission, and
2. Submit high school, General Education Development (GED) and college transcripts.
3. Complete the FAFSA (Free Application for Federal Student Aid) as soon as possible after January 1 of the year in which you are seeking aid. Applications received by April 1 will receive priority consideration.

Available aid includes:

**FEDERAL (TITLE IV)**
1. Pell Grants
2. Supplemental Educational Opportunity Grants (FSEOG)
3. Work Study Program (FWS)
4. Direct Loan (DL) [www.studentloans.gov](http://www.studentloans.gov)
   - Subsidized and Unsubsidized
   - Parent Loan (PLUS)
5. Iraq and Afghanistan Service Grant (IASG)

For more information about Title IV financial aid programs visit [www.studentaid.ed.gov](http://www.studentaid.ed.gov)

**STATE**
1. Michigan Competitive Scholarship
2. Michigan Tuition Incentive Program (TIP)
3. Children of Veterans Tuition Grant

For more information about state of Michigan student aid, visit [www.michigan.gov/osg](http://www.michigan.gov/osg)

**INSTITUTIONAL/FOUNDATION**
1. Scholarships

**OTHER**
1. Alternative Loans

General Eligibility Requirements for Federal Aid
To be eligible to receive federal student aid, a student must:

- Be a U.S. citizen or eligible non-citizen
- Have a valid Social Security number
- Comply with Selective Service registration, if required (see [www.sss.gov](http://www.sss.gov) for more information)
- Have a high school diploma or a General Education Development (GED) certificate or pass an exam approved by the U.S. Department of Education
- Be enrolled or accepted for enrollment as a regular student working toward a degree or certificate in an eligible program
- Not owe a refund on a federal grant or be in default on a federal student loan
- Have financial need (except for unsubsidized Direct Loan and Parent PLUS Loans)
- Not have a drug conviction for an offense that occurred while you were receiving federal student aid
- Be making satisfactory academic progress

Applying for Federal Aid
Individuals who plan to apply for federal aid must complete the Free Application for Federal Student Aid (FAFSA) and are encouraged to apply online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). It is advisable to submit the FAFSA as soon as possible after January 1 of each year to be eligible for NMC’s priority consideration on April 1.

The Financial Aid office will review the FAFSA results received directly from the federal processor and follow federal regulations in determining eligibility and awarding federal aid. Your assistance in forwarding all requested information in a timely manner will enable financial aid staff to give you priority consideration for financial aid.

Students will be advised in writing concerning eligibility for federal aid. (If your financial situation or your family’s financial situation has recently changed for the worse because of death, separation or divorce, or loss of job or benefits, you should contact the Financial Aid office.) Average aid processing time is six weeks (may be longer at the start of the semester).

Students need to access their NMC Self-Service account ([www.nmc.edu/selfservice](http://www.nmc.edu/selfservice)) to accept their financial aid. This includes answering the Title IV Authorization question. Federal financial aid will not disburse without accessing Self Service or completing the required forms in the Financial Aid office.

Northwestern Michigan College does not participate in the federal Perkins loan program or the Teacher Education Assistance for College and Higher Education (TEACH) grant.

Applying for Institutional/Foundation Aid
Northwestern Michigan College provides a large number of scholarships for students. A list beginning on page 35 summarizes the requirements. Students are encouraged to go online for the most updated information.

Individuals who wish to apply must meet all deadlines and requirements including satisfactory academic progress as defined in the NMC Satisfactory Academic Progress Policies for Financial Aid.

Institutional grants and scholarships have a priority date of April 1. Completed applications received after April 1 will be considered on a “first-come, first-served” basis.

Note: As most NMC scholarships are need-based, students are encouraged to complete the FAFSA.

NMC scholarship and grant eligibility criteria are primarily determined by the donor and/or NMC scholarship committee and based on financial need, scholastic ability, and/or other specific stipulations. You will be notified only if you have been awarded a scholarship.

How Aid is Paid
Students receiving any type of financial assistance (federal or institutional) will have their student accounts credited for one-half of the award at the beginning of each semester for which they are eligible, unless otherwise specified by the donor. Grant and scholarship funds from all sources credit first to tuition and fees, unless the specific aid is targeted to other educational costs.

Generally, financial aid funds will be credited to a student’s account based on the number of credit hours in which the student is enrolled on the census (freeze aid) date. After the census date, credit balances are paid within 14 days after the credit balance occurs. Please be aware that your financial aid award could change based on credit hour load at the time aid is paid. Students unsure of whether their change in credit hours will affect their financial aid should check with the Financial Aid office prior to dropping classes.

Federal Work-Study/Institutional Employment payments are paid bi-weekly directly to the student.

Enrollment Status
With the exception of Pell grants, a student must enroll for six (6) or more credit hours per semester to receive federal financial assistance.

Change Of Majors
Credit hours accumulated under a previous major(s) at NMC or other postsecondary institution(s) shall be counted in the maximum number of hours allowed for aid eligibility for the currently-sought degree or certificate. Extension of financial aid eligibility may be approved by the NMC Financial Aid committee if the student submits a NMC Petition for Extension to the committee regarding a change in major. Students will be allowed 3 changes in their major prior to filing a Petition for Extension unless they are nearing the 150 percent completion timeframe. (See Satisfactory Academic Progress policy for further information on the 150 percent rule.)

Work Study
It is a policy at NMC that a student employee on Federal Work-Study is a part-time employee who is enrolled (6 credits minimum) and regularly attending classes at NMC. The student’s primary purpose for being at NMC must be to further his or her education. Student employees are eligible to work 20 hours per week during the semester and 40 hours per week during break. Student employees must be enrolled at least half-time (6 credits Fall/Spring and 3 credits Summer) each semester and be making satisfactory academic progress. Any student employee who is no longer enrolled at NMC must be terminated from employment.

Students wishing employment on campus should file for financial aid using the Free Application for Federal Student Aid (FAFSA) and should register with the Advising Center in the Osterlin Library, (231) 995-1041.

Transfer Students
Students who transfer to NMC from other postsecondary institutions shall be eligible for federal aid in accordance with established NMC guidelines. Hours transferred from any prior institution(s) will be counted in the maximum number of hours allowed for aid eligibility for the currently-sought degree or certificate. Prior student loan accumulation may affect a student’s overall loan eligibility at NMC.

Special Note:
If you are transferring to NMC between the fall and spring semesters, please be aware that financial aid does not automatically transfer from one school to another. Contact the Financial Aid office as soon as you have made the decision to transfer so we can assist you with the transfer process.
Satisfactory Academic Progress Requirements

INTRODUCTION
The Education Amendments of 1987 require that a student must be making “satisfactory progress” in his/her course of study to be eligible for aid. In order to satisfy this requirement and prevent abuse of the intentions of the federal aid programs, satisfactory progress guidelines must be adhered to by students who receive any type of Title IV federal aid (Pell, FSEOG, FWS, Direct Stafford Loan, Direct Parent (PLUS) Loan, IASG).

To be eligible for federally-funded financial aid programs and most institutional awards at NMC, all students must meet the following qualitative and quantitative requirements for satisfactory academic progress (SAP).

These standards are for all students applying for assistance for any federal financial aid program administered by the NMC Financial Aid Office. Academic progress requirements for scholarships are defined by the respective donors and maintained in the NMC Financial Aid or NMC Institutional Advancement Office.

FREQUENCY AND INTERVAL OF REVIEW
Satisfactory academic progress will be reviewed prior to the awarding of any federal financial aid. It will also be reviewed and monitored at the end of fall, spring and summer semesters, and prior to the disbursement of aid for the following semester.

ESTABLISHING INITIAL ELIGIBILITY
A student’s past academic transcripts will be reviewed according to the following guidelines:

a. Students who have never attended NMC will be considered in good standing with regard to minimum semester credits completed and minimum GPA requirements.

b. Students who have previously attended NMC will have their past academic transcripts reviewed regardless of whether financial aid was received for previous attendance.

c. Transfer credits from other institutions that apply to your current degree program will be considered in determining eligibility under the maximum time frame criteria.

MAINTAINING QUALITATIVE AND QUANTITATIVE ELIGIBILITY
• Minimum grade point average (GPA) requirements (Qualitative): All financial aid students must have a minimum 2.0 semester GPA to be eligible for financial aid for the following semester; and

• Minimum completion factor required (Quantitative): All financial aid students must complete a minimum of 67% of the credits for which they are registered on the census (freeze aid) date. When calculating completion the following designations will be considered as non completion of the class: Incompletes (I), audits (AU), withdrawals (WP/ WF), failures-to-attend (FA), unsatisfactory (U), not-qualified (NQ), in-progress (IP), zeros (0.0) and repeats;

MAXIMUM QUANTITATIVE MEASURE
Only those courses that apply to the program will be considered in the quantitative measure. Once a student has obtained the total hours required for their program, and prior to reaching the 150% maximum of credit hours, students will be required to complete a NMC Petition for Extension. These forms are available on www.nmc.edu/financialaid and in the financial aid office.

Credit hours accumulated under a previous major(s) at NMC or other postsecondary institution(s) shall be counted in the maximum number of hours allowed for aid eligibility if they apply to the currently sought degree or certificate. All of these credit hours are counted regardless if the student did or did not receive financial aid.

Extension of financial aid eligibility may be approved by the NMC Financial Aid Committee if the student submits a NMC Petition for Extension to the Financial Aid Committee regarding a change in major. Students will be allowed 3 changes in their major prior to filing a Petition for Extension unless they are nearing the 150% completion timeframe.

If a student has already received a degree or certificate, or is changing majors, she/he will need to file a Petition for Extension of Federal Financial Aid. Only those courses that apply to the new program will be considered in the quantitative measure.

Students are allowed a maximum of one appeal for extension of time per major/program.

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Total Credit Hours Required</th>
<th>Maximum Attempted Hours Allowed for Aid Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate in Applied Science (AAS)</td>
<td>64</td>
<td>96</td>
</tr>
<tr>
<td>Associate Degree in Nursing (ADN)</td>
<td>72</td>
<td>108</td>
</tr>
<tr>
<td>Associate in General Studies (AGS)</td>
<td>64</td>
<td>96</td>
</tr>
<tr>
<td>Associate in Science and Arts (ASA)</td>
<td>64</td>
<td>96</td>
</tr>
<tr>
<td>Certificate of Achievement Programs</td>
<td>16-63</td>
<td>24-95</td>
</tr>
</tbody>
</table>

OTHER FACTORS
a. Audits
Classes taken for audit will not be considered when determining semester award amounts or minimum semester credits completed. Classes taken for audit will not be considered as attempted credits toward the maximum time frame for completion.

b. Remedial/Developmental Courses
After a student has attempted 30 hours of remedial/developmental credit hours, he/she cannot receive financial aid for remedial/developmental credit hours. From that point on, remedial/developmental credit hours will count in his/her attempted hours but not in enrollment status or cost of attendance for financial aid purposes.

WARNING AND SUSPENSION
Financial aid warning and suspension apply only to a student’s status for purposes of financial aid eligibility at NMC. This does not become part of the student’s permanent record and
is not transferable to other institutions. Please be aware, your financial aid status may differ from your academic status.

a. Warning
Students who do not complete the minimum number of credits or who do not possess a satisfactory grade point average will be placed on a warning status for their next semester or term of enrollment. A student remains eligible to receive financial aid while on a warning status. If both the minimum number of credits and GPA requirement are met at the end of the warning, the student will be removed from warning status.

b. Suspension
If a student does not meet the requirements for maintaining eligibility at the end of the warning semester, eligibility for federal financial aid programs will be suspended. Students who have reached or exceed the maximum timeframe for completion will be placed on immediate financial aid suspension.

REINSTATING AID ELIGIBILITY
An appeals process is available to students who lose financial aid eligibility based on failure to meet minimum GPA requirements or exceeding the 150 percent timeframe.

If the appeal is approved the student will be notified in writing and reinstated on probationary status.

A student may also regain eligibility for federal student aid if they successfully complete 6 credits at NMC in one semester with at least 2.0 semester GPA at their own expense.

It is the student’s responsibility to request that the Financial Aid Office re-evaluate their academic record to determine if aid eligibility has been re-established once suspended from federal financial aid.

WITHDRAWALS AND RETURN OF TITLE IV AID
According to federal regulations, colleges must determine the amount of federal student financial assistance (SFA) a student earns if he or she completely withdraws, either officially or unofficially, from all classes. The date of a student’s withdrawal from NMC will generally be the date the student officially withdraws from all their classes.

However, the College may use an earlier last documented date of attendance at an academically related activity if this date more accurately reflects the student’s withdrawal date than the date the student begins the school’s withdrawal process or notified the school of his or her intent to withdraw. When a student fails to officially withdraw from NMC, the withdrawal date will be assumed to be the mid-point of the semester or the last date of documented activity.

The amount of assistance that the student earned is determined on a prorated basis. That is, if the student completed 30 percent of the payment period, the student earned 30 percent of the assistance he/she was originally scheduled to receive. Once the student has completed more than 61 percent of the payment period, he/she is considered to have earned 100% of his/her federal assistance.

If NMC is required to repay any portion of a federal education loan, the student or parent borrower is responsible for repaying the funds to NMC. The student or parent borrower is responsible for the remainder of the loan in accordance with the terms of the Master Promissory Note.

If the student is responsible for returning grant funds, the student must make arrangements with NMC or the Department of Education to return the funds. Any amount that the student has to return is considered a grant overpayment.

A student withdraws, receives all 0.00 or a combination of both in any semester, the Financial Aid Office is required to determine a last date of attendance and a refund calculation may apply.

The last date of attendance for that semester will be reported to the Department of Education and subsequent disbursements may be cancelled. Written examples of return of funds calculations and additional information are available in the Financial Aid Office upon request.

Loans
Students must have a FAFSA on file in order to receive any type of educational loan.

SHORT-TERM LOANS
Consortium Students - NMC may provide a short-term loan to students who have completed a consortium agreement with certain colleges. The short-term loan can help cover a portion of their on-campus expenses (tuition, fees, and required books/supplies) provided they have remaining funding from their home institution. This loan is interest free provided it is repaid by the due date (usually within 30-60 days).

LONG-TERM LOANS
Students must be enrolled in at least six credits per semester for Federal Loan eligibility.

Federal Direct Stafford Loan Program
www.studentloans.gov
- Subsidized
- Unsubsidized

Federal Direct Parent Loan for Undergraduate Students (PLUS)
www.studentloans.gov
Parent(s) of a dependent student (who has filed a FAFSA) may borrow under this program for their child’s educational expenses.

Alternative loans
Alternative loans are credit score-based. Students should use any Federal Direct Loan funds they are offered before applying for an alternative loan. Students should research many lenders to find out interest rates, payment and enrollment requirements before choosing a lender. NMC cannot recommend the best lender for students to select. Students MUST notify the NMC Financial Aid Office that they have applied for an Alternative Loan and the lender’s identity.
Scholarships & Grants
Pages 35-41 summarize the types of scholarships and grants available at NMC, including government-sponsored, institutional, and privately donated. The first step to a scholarship is filing the Free Application for Federal Student Aid, available at www.fafsa.ed.gov or in the Financial Aid Office (Tanis 142). The FAFSA is used to determine financial need. Many NMC scholarships require no additional applications.

Since criteria and availability of funds are subject to change, visit www.nmc.edu/financialaid for the most updated Scholarship and Grant information.

GOVERNMENT SPONSORED

Federal Pell Grant - Unlike a loan, Pell Grants do not have to be repaid. Pell grants are awarded usually only to undergraduate students who have not earned a bachelor’s or a professional degree. (In some cases, however, a student enrolled in a post-baccalaureate teacher certification program might receive a Pell grant.) Pell grants are considered a foundation of federal financial aid, to which aid from other federal and nonfederal sources might be added.

If you received a Pell grant for the first time on or after July 1, 2008, you can only receive the Pell grant for up to 18 semesters or the equivalent. Requires FAFSA.

Federal Supplemental Educational Opportunity Grant - For undergraduates with exceptional financial need. Pell grant recipients with the lowest EFCs will be the first to get FSEOGs. Like Pell grants, FSEOGs don’t have to be paid back. Requires FAFSA.

U.S. Maritime Administration Student Incentive Payments of $4,000 per year for four years are available to a select number of qualifying cadets in each entering class at the Great Lakes Maritime Academy. Details on the program are available through the GLMA Department of Naval Science.

Michigan Competitive Scholarship - Provides scholarships up to $1,300 per year based on ACT scores and financial need. This award is tuition/fee restricted. Requires FAFSA.

Michigan Native American Tuition Waiver - May cover tuition for certified North American Indians (1/4 blood) who enroll in a public college or university and are a MI resident. Contact your tribal association for additional information. Requires FAFSA.

Tuition Incentive Program (TIP) - Student eligibility is determined before high school graduation. This program will pay up to 24 semester credits (will not cover contact hours) per academic year of current in-district resident tuition rates up to a maximum of 80 semester credits or upon completion of an Associate degree, whichever comes first. Students must initiate benefits for enrollment within four years of high school graduation or GED completion.

INSTITUTIONAL SCHOLARSHIPS

Academic Area Scholarships - Provide up to $2,000 per academic year to second-year students. Application and selection are made through each academic area during Spring Semester for an award for the next academic year. If a Divisional scholar is eligible for other tuition-restricted awards (i.e. TIP, Michigan Competitive Scholarship, Native American Tuition Waiver, etc.) those awards will be applied first. Any remaining balance due for tuition and fees or required books and supplies may be covered by the Divisional Scholarship funds. Details of the application process and eligibility requirements are available in each academic area office.

Adopt-a-Student Grants - Awarded to students enrolled for six or more credit hours who are residents of Antrim, Benzie, Grand Traverse, Kalkaska, Leelanau, or Wexford County. The amounts of the grants vary. Adopt-a-Student Grants are awarded based on financial need and require a cumulative minimum 2.5 grade point average. If a recipient is eligible for other restricted awards (TIP, Michigan Competitive Scholarship, Native American Tuition Waiver, etc.), those awards will be applied first. Scholarship funds may be used for remaining tuition, fees, required books and supplies.

Commitment Scholarships - Awarded to students from school districts in NMC’s service area selected in eighth grade by their principals and counselors. These academically promising students with financial need are encouraged to complete high school and attend NMC with scholarship support. Recipients must commit to satisfactory academic progress, effort and citizenship. Upon high school graduation, students who have met all requirements receive scholarships. In order to receive this scholarship the student must apply for financial aid using the FAFSA. If a Commitment award student is eligible for other gift aid, those awards will be applied first toward the student’s tuition and fees. Commitment scholarships are for tuition and fees only.

Great Lakes Maritime Revolving Loan Fund - Cadets who are officially enrolled in the Academy can borrow funds to cover a portion of tuition/fees, books and required supplies, on/off-campus room/board or transportation costs. A written recommendation is required from a member of the GLMA Scholarship Committee and repayment is required within 90 days or the end of that respective semester, whichever is first.

Honors Scholarships - Awarded by the Honors Scholarship Committee. Eight scholarships of $2,000 each are awarded to full-time students (minimum of 12 credit hours) and four scholarships of $1,000 each are awarded to part-time students (minimum of six credit hours). Candidates must have earned a minimum 20 semester credit hours at NMC with at least a 3.5 grade point average and three credit hours in the Honors Program. Details of the application process and additional eligibility requirements are available at www.nmc.edu/honors or call Honors Program advisor at (231) 995-1041.

Occupational Programs Grants - A limited number of awards for students enrolled in approved occupational programs and who demonstrate financial need. It may be
used toward the cost of tuition, fees, required books/supplies, transportation and/or daycare.

**Presidential Scholarships** - Awarded each spring to academically superior seniors from the NMC service area high schools. A 3.75 GPA is required, along with a recommendation from the school’s principal or counselor. The number of scholarships and the funding may vary each year. If a Presidential scholar is eligible for other tuition-restricted awards (i.e. TIP, Michigan Competitive Scholarship, Native American Tuition Waiver, etc.), those awards will be applied first. Presidential scholarship funds may be used for any remaining balance due at NMC for tuition, fees, or required books and supplies. At NMC, Presidential scholars must maintain a 3.25 grade point average as a full-time student (12 or more credits) to remain eligible. Recipients are also required to perform community volunteer service each semester. For applications and more information, contact NMC's Admissions Office.

SGA Child Care Grant - The NMC Student Government Association provides funding to assist with the cost of child care while students are attending class. Apply using separate application available in Financial Aid Office.

**NMC Scholarships**

You are encouraged to file the Free Application for Federal Student Aid, available at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or in the Financial Aid Office (Tanis 142). The FAFSA is used to determine financial need. Many NMC scholarships require no additional applications.

The chart below summarizes scholarship eligibility criteria. New scholarships are added continuously. Both criteria and availability of funds are subject to change. Visit [www.nmc.edu/financialaid](http://www.nmc.edu/financialaid) for the most detailed and updated criteria for all scholarships.

<table>
<thead>
<tr>
<th>NMC Scholarship Name</th>
<th>Need Based</th>
<th>Min GPA</th>
<th>Min Term Credits</th>
<th>Residency (District = Grand Traverse County &amp; Service Area = GT, Antrim, Benzie, Kalkaska, Leelanau, &amp; Wexford Counties)</th>
<th>Other Criteria Online</th>
<th>Award</th>
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<tr>
<td><strong>General Scholarships</strong></td>
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## General Scholarships

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<tr>
<th>Scholarship Name</th>
<th>Need Based</th>
<th>Min GPA</th>
<th>Min Term Credits</th>
<th>Residency (District = Grand Traverse County &amp; Service Area = GT, Antrim, Benzie, Kalkaska, Leelanau, &amp; Wexford Counties)</th>
<th>Other Criteria Online</th>
<th>Award</th>
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<td>Hook-Jay &amp; Joan</td>
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<td>Jensen-Lena C</td>
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<td>Kiker-William</td>
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### Science & Math Scholarships

<table>
<thead>
<tr>
<th>Scholarship Name</th>
<th>Need Based</th>
<th>Min GPA</th>
<th>Min Term Credits</th>
<th>Residency</th>
<th>Other Criteria</th>
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2011 - 2013 NMC CATALOG
### Science & Math Scholarships continued

<table>
<thead>
<tr>
<th>NMC Scholarship Name</th>
<th>Need Based</th>
<th>Min GPA</th>
<th>Min Term Credits</th>
<th>Residency (District = Grand Traverse County &amp; Service Area = GT, Antrim, Benzie, Kalkaska, Leelanau, &amp; Wexford Counties)</th>
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<td>Sorensen-F W &amp; Annette</td>
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### Social Science Scholarships

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<td>Blough-Erich</td>
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<td>Karczewski-Amy</td>
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<td>Benzie County</td>
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<td>Schroth Family</td>
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<th>Min GPA</th>
<th>Min Term Credits</th>
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<td>Anderson-Dale</td>
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<td>Stulen-Frank &amp; Dorothy MTEC</td>
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Visit [www.nmc.edu/financialaid](http://www.nmc.edu/financialaid) for the most detailed and updated criteria for all scholarships.
Grading

Applying for Graduation
Graduation from NMC signifies that you have achieved the educational objectives of the curriculum. You must complete all degree requirements and achieve an overall grade point average of 2.0. One semester before you anticipate completing the requirements for your degree or certificate program, fill out an Application for Degree or Certificate online. You may also pick up a form at the Records and Registration Office. Those participating in the graduation commencement ceremony in May need to contact the NMC Bookstore, in the lower level of West Hall, to order caps and gowns.

Graduation with Honors

Graduation with Honors
Students who have completed all the requirements for their degree, plus at least 16 semester credits in designated honors courses and achieved an overall grade point average of at least 3.5 graduate with honors. The following categories are recognized:

- 3.50 - 3.75 = With Honor
- 3.76 - 3.90 = With High Honor
- 3.91 - 4.00 = With Highest Honor

Students who have completed all the requirements for their certificate and have achieved an overall grade point average of between 3.5 and 4.0 graduate with outstanding performance.

Honors Convocation
At the close of the academic year, NMC holds its annual Honors Convocation to recognize outstanding students. This ceremony for exemplary students and their families is sponsored by the NMC Honors Office and NMC faculty and provides the opportunity to present many scholarships and awards.

Health Services

Health Services
Biederman Bldg, room 106, (231) 995-1255
A family nurse practitioner is on duty Monday through Friday, 9 a.m. to 4 p.m., during the fall and spring semesters. Doctors are available by appointment. Referrals to campus and community resources are made if appropriate. Services include but are not limited to:

- Treatment of illness and injuries
- Academic/sports/job physicals
- Sexually Transmitted Infection testing and treatment
- Allergy injections
- Immunizations
- Gynecological exams & contraception
- Tuberculosis testing
- Health information and counseling

- Laboratory testing onsite
- Nutrition advice
- Limited pharmacy

The health fee paid by all students includes the services of the nurse practitioner and doctor, some medications and a reduced fee for some lab tests. In case of illness or injury requiring hospitalization, the use of outpatient facilities, or private physicians’ visits, students are responsible for payment through personal insurance coverage or direct payment. All medical records are strictly confidential and are kept for ten years from date of last visit.

Health & Accident Insurance
All students are eligible to enroll in a low-cost health insurance policy specifically for college students. Information and claim forms are available fall and spring semesters. International students are required to have medical insurance to attend NMC. This insurance fulfills this requirement.

Housing

Residence halls
East Hall, (231) 995-1400

Close, convenient, affordable... fun! NMC’s East Hall offers more than 200 students an opportunity to live in a supportive, alcohol- and drug-free community. More than just a place to eat and sleep, East Hall provides educational and social activities to promote your personal development, meet people and make new friends.

ROOMS
Rooms are in suite arrangements - two rooms connected by a bathroom to accommodate four students. Each room has two beds, two desks with chairs and closets with drawer space. Basic cable service, local phone and Internet service is available free in each room. Each wing is equipped with a laundry room with washers and dryers. You have the option of living on a same-gender floor, or a coed floor.

MEALS
The NMC Food Court in neighboring West Hall offers hot breakfasts, lunches and dinners plus a soup, salad and deli bar. The Northwest Grind coffee shop and convenience store offers a menu of ready-made sandwiches, wraps, snacks and drinks.

A range of pre-paid meal plans allow you to choose what works for you. Meal plans are available to all faculty, staff and students, not only residence hall students. For more information visit www.nmcdining.com, or call (231) 995-1678.

ACTIVITIES
The Residence Hall Council and Resident Assistant staff plan a variety of events for residents. If you like to make things happen, get involved with the Residence Hall Council.
TERMS AND CONDITIONS OF OCCUPANCY
The NMC Residence Life Contract contains guidelines for residence hall living and is available to answer all your questions about occupancy, room assignments, and payment.

RESIDENCE HALL HANDBOOK
Complete information about living in the residence hall is contained in the Residence Hall Handbook and Residence Life Contract, including such topics as:
• Room assignments, guests, changes, repairs and occupancy during breaks
• Deposit, charge periods, refund schedule and financial penalty
• Food service, meal options, furniture, electrical appliances, pets
• Rules and regulations, dismissals and contract appeals
• Safety procedures, fire/emergency evacuations
• Fire alarms, firearms/weapons
• Alcohol/Drug policy

RESIDENCE HALL ALCOHOL & DRUG POLICY
The manufacture, use or sale of alcohol, inhalants, and other drugs are prohibited in the residence hall and adjacent areas, including the athletic fields and parking lots. Alcohol containers and drug paraphernalia are also prohibited. These items will be confiscated by the Residence Life staff when found.

The residence hall is not a haven from the law. If a local, state or federal law has been violated, a law enforcement agency will be called. Similar guidelines apply for all campus buildings and grounds. A violation of the Alcohol and Drug policy may result in immediate dismissal from the residence hall, suspension and/or expulsion from Northwestern Michigan College. This may occur on the first infraction of the Alcohol and Drug policy.

The complete policy and procedures are available in the Residence Life Contract, Residence Hall Code of Conduct within the Student Rights & Responsibilities handbook (see page 162) or online at www.nmc.edu/policies.

Campus Apartments
West Hall, (231) 995-1119

NMC has two-bedroom and one-bedroom on-campus apartments that are ideal for students 21 years of age and older. All apartments are non-smoking and pet-free. We are happy to rent to students with families.

Our apartments equipped with major kitchen appliances but otherwise unfurnished. Basic utilities are included in the rent. There are laundry facilities in the basement of each of the three apartment buildings, all located on the east end of campus. Assigned parking is available for tenants and guests.

Intramural Sports/Recreation
Rajkovich Physical Education Bldg, (231) 995-1198

Intramural sports are a series of leagues formed to provide fun competition between NMC students. Fall traditionally means co-ed kickball, co-ed softball and flag-football games. During the winter, leagues move inside for floor hockey, co-ed dodgeball, co-ed indoor soccer and co-ed basketball. After spring break is co-ed volleyball.

Open Recreation hours are scheduled throughout the year in the gymnasium for pick-up games of basketball, volleyball, dodgeball, and indoor soccer. Outdoor courts are available for basketball and sand volleyball. A frisbee/disc golf course surrounds East Hall, Fine Arts, and Physical Education Buildings.

Health & Fitness Center
NMC’s Health and Fitness Center offers fitness circuit conditioning to students and community members, promoting cardiovascular fitness, strength, flexibility, and weight control. The Center features Universal weight machines, exercise bicycles, variable speed escalator treadmills, Nordic Track, elliptical trainers, and stair climber machines. To use the Fitness Center, you can either register for the fitness circuit course or purchase a membership and attend the orientation session for training guidelines. (231) 995-1379

Library
www.nmc.edu/library
Osterlin Building, (231) 995-1060

Find the quality information you need to succeed in college. Osterlin Library offers the resources and services you will need to complete your assignments: printed books and magazines, online databases, 50,000+ ebooks available from anywhere, study space, computers, copy machine. Friendly, professional librarians are available to help.

Reference ............................................. (231) 995-1540
Service ................................................ (231) 995-1060
Email ........................................... library@mail.nmc.edu
Orientation for New Students

www.nmc.edu/orientation
Office of Student Life, West Hall, (231) 995-1118

When you receive your acceptance letter to NMC, you also receive information about the Orientation and Registration program designed to acquaint new students with campus and to plan for the best schedule of classes to ensure success at NMC. Orientation and registration for new students is a convenient one-stop process. You will have an opportunity to discuss your COMPASS placement test scores one-on-one with an advisor, transfer possibilities, and other pertinent course information. After selecting the best individual schedule, students then register for classes.

Parking

www.nmc.edu/parking
Campus Safety Office, West Hall, (231) 995-2351

All NMC students, faculty and staff must display a valid parking permit to park in main campus lots during fall and spring semesters. No NMC permit is required on week-ends or summer semester. Enforcement of parking rules and regulations will be by the City of Traverse City and Northwestern Michigan College Campus Security.

Permits and a copy of the NMC Parking Policy are available at the Cashier’s Office and the NMC Welcome Center. Guest permits are available at the Cashier’s Office, the Admissions Office, or the NMC Welcome Center.

Personal Counseling

www.nmc.edu/counseling
Office of Student Life, West Hall, (231) 995-1118

Professional counseling services meet a full spectrum of personal needs. No fees are charged for counseling services. Our staff of licensed professional counselors can assist with crisis intervention and mental health referrals when necessary. All personal counseling is on a short-term basis with continuing support available from area agencies. Our services are designed to help students resolve personal difficulties and acquire the skills, attitudes, and abilities that will enable them to take full advantage of their college experience.

Phi Theta Kappa

Phi Theta Kappa is the internationally recognized honor society for two-year institutions of higher education. Admission is by invitation and is based on completion of 12 semester credit hours toward a degree with at least a 3.5 GPA. The hallmarks of the society are scholarship, leadership, service and fellowship. Phi Theta Kappans are involved in many activities centered around these hallmarks and their work culminates in an Honors in Action project designed by the chapter members and officers. There are opportunities for travel both in the state to three regional conferences and the annual conference held each spring.

Alpha Rho Pi, NMC’s chapter of Phi Theta Kappa, was recognized as the Most Distinguished Chapter in the Michigan region for the 2003-2005 academic years and first runner-up in five of the past six years. The officers and members welcome your involvement.

Phi Theta Kappa members wear a gold stole and tassel with their cap and gown at commencement in recognition of their academic achievement. For information on Phi Theta Kappa, call (231) 995-1041.

Records & Registration

www.nmc.edu/records
Tanis Building, (231) 995-1049

The Records and Registration Office assists students with registration, transcripts, grades, enrollment verification, residency information, address changes, Veterans Affairs information, degree audits, graduation and prior credit opportunities.

Registration

Registration begins several months before classes start and continues on a daily basis until the end of the session’s add period. There are many sessions: early sessions, 15-week sessions (the main session), late sessions. The dates for the main session will be published in the Schedule of Classes. All session dates are available online at www.nmc.edu/records under Important Dates.

The first days of registration will be online only. Registration start times will be assigned based on the student’s number of earned credit hours. Once the Schedule of Classes is available online, students will be able to view their assigned registration time. After the initial assigned registration period has ended, all students may register online or in the Records & Registration office.

Registration after the start of any session may take place only if special permission is obtained from the department and the class is not full.
Earning a Second Associate Degree
Students may earn additional degrees at NMC. A minimum of 15 earned hours (credits) shall be earned from NMC in addition to the required credits for the previous degree.

Students seeking an additional associate degree shall be governed by the following stipulations:

- Students may earn only one Associate in Science and Arts degree
- Students may earn the Associate in General Studies degree only as their first associate degree
- Program requirements for the additional degree will be based on the catalog that is in effect when the student officially switches to the new program
- Previous credits will be evaluated by the Records Office for transfer to the additional degree as applicable
- This policy does not apply to certificates

Catalog of Record
When you enroll for academic credit at NMC, your graduation requirements are governed by the catalog in effect at the time of enrollment. This changes:

1. If you are not enrolled for three or more consecutive semesters (excluding summer), or
2. If the catalog is revised (print or web) and you wish to follow the newer catalog, or
3. If you change your program of study, you would be governed by the catalog in effect when the change is made.

When you do not enroll for three or more consecutive semesters (excluding summer), you will be governed by the catalog in effect when you re-enroll.

Student Government
www.nmc.edu/student-services
Office of Student Life, West Hall, lower level
(231) 995-1118

The NMC Student Government Association represents the student body. Full or part-time students are eligible to become an SGA representative. A student can become a representative three ways: through a signature process, appointment by an academic department, or by election. The student body annually elects three first-year and three second-year students to complete the board. SGA is funded by the student activity fee and is responsible for providing a well-rounded program of activities and events. SGA members meet weekly and represent the student body on several college committees.

Student Life
www.nmc.edu/student-life
Office of Student Life, West Hall, lower level
(231) 995-1118

Student Organizations
The Department of Student Life strives to create an active and meaningful community for students. It promotes learning, cultural and ethnic awareness on campus by organizing student groups, hosting speakers, and co-sponsoring events in the community that include all students, staff and faculty. For a complete list of current student organizations, visit www.nmc.edu/students and click on “Student Groups.”

Want to start a new student organization? The Student Life Office can help you access facilities and outdoor space for activities and meetings. Your organization can apply for funding assistance to host events or travel to conferences. To form a new group you need to:

1. Complete an application available in Student Life office
2. Recruit a faculty or staff advisor

Student Media Opportunities
NMC Magazine
www.nmc.edu/nmcmagazine
East Hall, lower level, (231) 995-1252

Serving on the magazine staff offers art, literary and design students exciting opportunities to learn about publishing and to express their creativity. The magazine is published two or three times a year in print, interactive DVD, and/or website versions. The magazine contains essays, poetry, short stories, illustration, photography, graphic design and other visual communication by NMC students and staff. Themed issues are conceived, edited and published by student volunteers, with honors credits optional.

White Pine Press
www.whitepinepress.org

This award-winning student newspaper provides the best opportunity in Northwest Lower Michigan for students to gain hand-on experience with the various roles in a news organization, including: news-writing, photography, graphic design, illustration, or advertising sales. The White Pine Press publishes a bi-weekly newspaper, maintains a news website, and recently won an NMC innovation grant to offer students the opportunity to work on broadcast journalism. Several paid positions are available. A successful White Pine Press experience can lead to internships with local news organizations.

WNMC Radio: 90.7 FM
www.wnmc.org
West Hall, lower level, (231) 995-2562

Interested in radio broadcasting? WNMC-FM is a volunteer radio station that invites students and community members to take part in both on-air and production opportunities. Technical training is provided for all volunteers. Call for additional information and to arrange a tour of this facility.

Get Involved...
For a full list of Student Groups visit www.nmc.edu/students
**Tuition, Billing & Fees**

www.nmc.edu/cashier
Tanis Building, (231) 995-1085

Tuition and fees are established and reviewed by the Board of Trustees on an annual basis and are subject to change without notice. Visit www.nmc.edu/tuition for most current rates.

You may pay any amount at any time prior to the due date, but the final balance must be paid by 5 p.m. on the dates listed online or in the Schedule of Classes or your enrollment may be cancelled. After final payment day, tuition is due at the time of registration. For online registration only, payment can be made by credit card or ACH (electronic) transfer from your bank account. Otherwise payment must be received within 24 hours. Note: If you decide not to attend, you must officially withdraw or you will be liable for tuition/fees. In the event that your check or ACH transfer is returned unpaid for non-sufficient or uncollected funds we will charge a $25 NSF fee. An NSF charge may affect your enrollment.

**Billing**

Tuition charges are based on contact hours with the instructor (shown in the column after “credit hours” in the Schedule of Classes). The tuition charge is the contact hour multiplied by your tuition rate plus any applicable fees as shown below.

**Fees**

**APPLICATION FEE:** ............................................................... $20

One-time, non-refundable fee for processing Application for Admission to NMC.

**CLASS FEES:** ................................................................. See course schedule

Fees are charged for specific courses involving additional materials, laboratory supplies and/or network services provided by instructors, Flexible Learning Options courses, or private studio lessons (Music Dept.). See course schedule (column “Class Fee”) for these special charges. For aviation flight fees, contact the Aviation Department.

**GENERAL FEE:** ...................................................... See www.nmc.edu/tuition

This fee provides partial support for the cost of registration, Orientation, COMPASS, career testing, Student Government Association, and other student services and activities. This fee contributes to the availability and maintenance of technology for classroom and student use. This fee also contributes to the maintenance of campus sidewalks and roadways.

**HEALTH FEE:**

For anyone taking 6 or more contact hours....................... $24

Paid fall and spring semester by all students taking 6 or more contact hours. Includes services of a family nurse practitioner, registered nurse, medical assistant and doctor, and reduced fees for some medications and lab tests. Refundable if student withdraws from all courses during the 100 percent refund period; nonrefundable thereafter. Students who are enrolled for less than 6 hours may pay a health fee of $40 and obtain services. Call (231) 995-1255 for more information.

**APARTMENTS**

Rent is paid monthly and due the first day of the month. Late payments will result in a late fee.

**RESIDENCE HALL**

Fees for the semester must be paid by final payment day or a completed and signed deferment form must be submitted to the Cashier’s Office.

**Billing Procedure**

It is your responsibility to pay any charges by applicable due dates whether or not a bill is received. We will attempt to bill you for tuition and fee charges prior to applicable due dates. However, if you register late in the registration process, this may not be possible. In case of errors or questions about your bill, contact the Cashier’s Office as soon as possible. Any collection costs incurred by NMC as a result of non-payment of any charges will be added to the outstanding balance and will become the student’s responsibility. Paper bills are no longer mailed to the student. Email notices directing students, or any other authorized user, to access the NMC Self-Service to view their e-bills are sent out monthly. We encourage you to access your account at www.nmc.edu/selfservice to view or print account information and make credit card or ACH transfer payments.

**Financial & Other Obligations**

Financial Aid Students: All tuition and fees in excess of your anticipated aid and/or third party authorizations must be paid by the designated due date. If you decide not to attend, you must officially withdraw or you will be liable for tuition/fees. Third party authorizations must be received in the Cashier’s Office with payment by the deadlines listed online and in the Schedule of Classes.

VISA, MasterCard and Discover are accepted for tuition, fees and books. You may pay by mail or in person, utilize the drop boxes (located in the Tanis Building outside the Cashier’s Office) or online at www.nmc.edu/selfservice to pay with your credit card or ACH transfer. All college debts and “holds” must be cleared to register.

**Refunds**

Refunds for courses dropped are based on the number of weeks in the session that the course is offered. The refund percentage is determined by the date the withdrawal or drop form is received and processed in the Records and Registration Office or entered by the student online. Students who officially drop all or part of their classes before the start date of the session that their course(s) is in will receive a 100 percent refund of tuition and related fees. Sessions that are 1 day to 6.5 weeks will receive no refund once the session has begun. Sessions that are 7-15 weeks will receive a 100 percent refund until the end of the session’s add period.
Each semester the refund schedule for each session is available at www.nmc.edu/records or in the Records and Registration Office.

Refund checks will be mailed to the student’s on-campus or local address unless the student requests the check be mailed elsewhere. It is the student’s responsibility to update this information if it changes. If a credit/debit card is used to pay a bill, financial aid and tuition refunds will be refunded back to the credit card that was used to pay on the account. Students can also enroll online to have their refunds deposited directly into their bank account instead of waiting for a check to arrive in the mail.

Tutoring

www.nmc.edu/tutoring
Osterlin Building, (231) 995-1138

Any student who is experiencing academic difficulties in a class can request free tutoring and it’s available for many NMC courses. A drop-in math lab, small group tutoring and self-study computer programs are among the services provided.

Upward Bound

nmc.edu/upwardbound
West Hall, lower level (231) 995-1393

Funded by the U.S. Department of Education, Upward Bound is a free college-preparation program which began at NMC in 1989 and serves students from grades 9-12 in Traverse City and Suttons Bay public schools. Student eligibility is determined by several factors, the most significant of which is that neither parent has received a four-year college degree. Another important criterion is the student’s commitment to pursue a college preparatory program in high school and to complete a college degree.

This year-round program offers weekly academic tutoring, study assistance, college visits, cultural and personal enrichment activities, assistance in preparing admissions and financial aid papers and career exploration. During the summer, students must be willing to attend a six-week program on the NMC campus which provides an intensive academic focus as well as career education to prepare students for college. Classes include English, literature, lab science, math to pre-calculus and foreign language.

Veterans

www.nmc.edu/veterans
Records & Registration Office, Tanis Bldg, (231) 995-1057

Educational Benefits

NMC’s Veterans Office assists veterans in exploring educational benefits, in preparing requests for benefits, and provides certifications of enrollment. Determination of veterans’ educational benefits lies with the regional office in St. Louis, Missouri. There are currently six active categories of benefit programs under which veterans and eligible dependents are classified:

Chapter 30...........Montgomery G.I. Bill
Chapter 31 ..........VA Vocational Rehabilitation
Chapter 33..........Post - 9/11 GI Bill
Chapter 35 ..........Eligible Dependents and Survivors
Chapter 1606.......Reservists - Montgomery G.I. Bill
Chapter 1607.........REAP

Tuition and Fees

Disabled veterans using the Vocational Rehabilitation benefits approved under Chapter 31 are given a waiver for tuition and fees, books, and approved supply expenses. Veterans enrolled in the Post-9/11 GI bill are given a waiver for tuition and fees.

The amount of veteran or dependent educational benefits varies according to the chapter of eligibility. Standard credit load requirements for determining rate-of-payment are:

Full-time........................minimum of 12 credit hours
Three-quarter time ..................9 to 11 credit hours
Half-time ................................6 to 8 credit hours
Less than half-time ...........1 to 5 credit hours; eligible for tuition and fee reimbursement only.

Check with the NMC Veterans representative for summer and partial semester credit load requirements.

Veteran Responsibilities

1. Register for classes early. Certification can only be granted towards those courses required to satisfy degree requirements as indicated on VA form 1990, 1995, or 5490.
2. In order to receive educational benefits in a timely manner you must provide a copy of your schedule of courses each semester to the NMC Veterans Office before certification can be sent to the Regional Processing Office, St. Louis, MO.
3. Monthly Verification - Veteran students who receive benefits under Chapter 30, 1606, and 1607 must verify their enrollment monthly to insure prompt payment of their VA benefits. The earliest a student can self-certify is the last day of the month either at www.gibill.va.gov or by phone: (877) 823-2378. Select “certify your attendance” from the “Information for Benefit Recipients” menu.
4. Report changes in address, phone number, number of dependents, and changes regarding eligibility to the NMC Veterans Office immediately.

Continued on next page.
5. Promptly inform the Veterans Office of any changes in your enrollment that would affect your benefits or program. If you reduce your course load, fail to attend, or withdraw from all classes, benefits will ordinarily be reduced or discontinued from the beginning of the semester, except in special circumstances.

6. Benefits can be paid for courses you are currently taking and that are required for your degree program.

7. Veterans and other eligible persons receiving educational benefits must conform to the College Regulations and Standards of Progress as specified by NMC. These Standards of Progress include academic achievement (maintain a 2.0 GPA) and attendance as well as standards of conduct.

8. A report will be made to the VA if unsatisfactory progress is made which may result in termination of VA benefits. A reinstatement of benefits may be possible only after the cause for unsatisfactory progress has been removed and there is a reasonable likelihood of academic success.

9. A veteran’s eligibility for educational benefits expires ten years from the date of discharge from the last period of active duty.

**Welcome Center**

Lobby of Health and Science Building, (231) 995-1135

Parking permits, campus tours, information, directions, lost and found.

**Writing Center**

[www.nmc.edu/writingcenter](http://www.nmc.edu/writingcenter)

Scholars Hall, Room 221, (231) 995-1189

When you visit the Writing Center, peer editors or “readers” will carefully read your paper and analyze its content, organization, mechanics and evidence. You conference with the reader to exchange ideas about writing in a more effective manner and you will receive a summary of the strengths of your paper and suggestions on what you might do to improve it. Readers are students from all areas of study who have had success in writing. Writing Center services are free.
Charting Your Course of Study

**Decide on your career goals and course of study.**
- Determine what degree your desired career requires. Are you interested in a transfer degree, such as an Associate in Science and Arts, or an occupational program leading to a Certificate of Achievement, an Associate in Applied Science or an Associate Degree in Nursing?
- Make an appointment with your advisor to review your options.

**Review specific degree requirements.**
- Understand what is required for your degree or certificate of choice.
- Review English and Math competency, Group 1 courses, degree electives, pre-requisite courses, grade point average and credit requirements.

**Choose your Group 1 courses.**
- Follow the Guidelines for Group 1 courses in Communications, Humanities, Science/Mathematics and Social Science based on your degree. Choose your Group 1 courses from the list on pages 56-57.
- Check the Schedule of Classes each semester to see which Group 1 courses are offered.
- If you’re planning on transferring to a public university in Michigan, inquire about the MACRAO stamp. See an advisor for more details. When MACRAO requirements are met, contact the Records and Registration Office.

**Select your degree electives.**
- Choose your major area courses and degree electives to meet your degree requirements.
- Make certain to plan for pre-requisites for major area courses. Be sure to review the transfer guides available in the counseling office or online at [www.nmc.edu/advising](http://www.nmc.edu/advising) for your four-year institution of choice to ensure transferability of courses.

**Register early!**
- Register as early as possible to get the classes you want. Some courses are only offered one semester every year or two and many courses fill up quickly.
- Register online at [www.nmc.edu/register](http://www.nmc.edu/register) or in the Records and Registration on the first level of the Tanis Building.
- Meet with your advisor as soon as schedules are available. First semester students have a hold on their registration until they meet with a counselor or advisor to discuss educational goals and class selections.

**Apply for graduation.**
- Apply for graduation at least one semester before you anticipate completing the requirements for your degree or certificate program.
- Complete an “Application for Associate Degree” or an “Application for Certificate” available in the Records and Registration Office, main level of the Tanis Building.
- Remember to order your cap and gown from the NMC Bookstore, during February or March, if you plan on participating in the commencement ceremony in May.

**Be prepared to transfer.**
- Many NMC students transfer to a four-year institution. You can complete your degree in Traverse City through NMC’s partners at the University Center, or transfer to another campus. See the Transfer Checklist on page 59.
General Education

Philosophy
General Education at Northwestern Michigan College promotes the acquisition of knowledge, skills and attitudes needed to function effectively in a changing world. This fosters intellectual curiosity, essential to lifelong learning.

Outcomes
To ensure students experience the benefits of our philosophy of general education, the faculty of NMC commits to instilling these practices throughout the curriculum.

COMMUNICATION: Students will practice effective communication with an awareness of audience and sense of purpose.

CRITICAL THINKING: Students will skillfully conceptualize, apply, analyze, synthesize, and evaluate information gathered from observation, experience, reflection, reasoning, or communication.

QUANTITATIVE REASONING: Students will accurately use numbers, symbols, measurements, properties, and the relationships of quantities to make sound decisions, judgments, and/or predictions.

Assessment
General Education outcomes are measured in several ways:
- Each year faculty members in designated courses submit selected student work to the Office of Research and Effectiveness. Faculty teams assess the level of achievement represented by the student work.
- Every other year, a sample of students participate in a national standardized test to measure critical thinking skills.
- Graduates are surveyed annually and are asked to provide their perceptions of achieving the outcomes.

The Curriculum Committee is charged with using the results of assessment to make curricular improvements.

Degrees & Certificates
NMC students may select from several educational options. Associate degrees and certificates are awarded to those students who complete a prescribed set of courses in specific areas of study. Many programs, especially in occupational areas, also lead to additional career licenses or certifications. Maritime programs require four years of full-time study, including summer sessions and result in a bachelor's degree with Ferris State University. Associate degree programs generally take two years of full-time study to complete. Certificate programs range from 16 to 48 credits.

NMC offers the following degree and certificate options:
- Certificate of Achievement Programs
- Associate in Applied Science (AAS)
- Associate Degree in Nursing (ADN)
- Associate in General Studies (AGS)
- Associate in Science and Arts (ASA)
- Associate in General Education (AGE)

Cultural Perspectives and Diversity
In order for NMC graduates to engage as educated and informed citizens of a diverse society, students pursuing the ASA and AGS degrees are required to take one Cultural Perspectives and Diversity (CPD) course. These courses are listed on page 57.

Certificate Requirements
Certificate Programs typically include specialty courses and may include some core education requirements. In most cases, they are designed for concentrated proficiency in specialized areas. In some cases, certificates are designed for students who are seeking to complete their core general education requirements for their AAS or ASA degrees. Certificates may range from 16 to 63 credit hours as established by individual program areas and/or the Curriculum Committee. Many certificate courses may apply toward an associate degree.

Certificate Program requirements include:
1. A specified group of credit hours in an area of specialization, as determined by the appropriate NMC academic area. These three levels are possible:
   - Level I: A minimum of 16 credits in a speciality area;
   - Level II: A minimum of 32 credits in a speciality area;
   - Level III: A minimum of 48 credits in a speciality area.
2. A minimum cumulative grade point average of 2.0.
3. Higher GPA standards may be required for specific courses within individual academic areas.

Certificate programs are listed in the Occupational Specialty Programs section of this catalog.

Group 1 & 2 Courses
Group 1 General Education courses are designed to enhance skills and knowledge for students to succeed in academic, career and life goals. Students pursuing a two-year degree will need to fulfill specific general education requirements by selecting courses from Group 1 based on the degree requirements listed on the following pages. The Group 1 courses are listed on pages 56-57 of this catalog.

Group 2 courses are all remaining 100-level courses or above which may fulfill occupational specialty program requirements, major area requirements, and elective requirements for degree and certificate programs.
## Associate in Science & Arts Degree (ASA)

The Associate in Science and Arts degree is generally pursued by students who are planning to transfer to a four-year college or university to complete a baccalaureate degree. Students who are deciding on a major area and want to explore the curriculum also frequently pursue the ASA degree.

### Communications 6-8 credits

ENG 11/111 or ENG 111 English Composition and ENG 112 English Composition.

### Humanities 8 credits

8 credits from at least 2 departments in Group 1 Humanities courses.

### Science/Mathematics 8 credits

8 credits from at least 2 departments in Group 1 Science/Math courses. One must be a Science lecture/lab course.

### Social Science 8 credits

8 credits from at least 2 departments in Group 1 Social Science courses.

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### Total Degree Credits: Minimum of 64

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### MATH AND READING COMPETENCY

- Math Competency may be fulfilled in one of two ways:
  - COMPASS placement into MTH 121 or higher, or
  - Successful completion of MTH 111 or higher with a grade of 2.0 or higher.

- Reading Competency: Guide available from academic advisors.

### OTHER REQUIREMENTS

- Complete at least 64 credit hours with a 2.0 or higher cumulative grade point average.
- Complete a minimum of 24 of the 64 credits through NMC classes.

### NOTES

- A maximum of two physical education credits, two professional development seminar credits, and four Academic Service Learning Internship credits may be used toward a degree.
- Courses with numbers below 100 level do not count toward graduation, even though they may be prerequisites for other courses needed to complete degree or certificate requirements. Some courses may require prerequisites which may add to the total number of credits taken. Review course prerequisites carefully.
- To count toward graduation, a course must be completed with a grade of 1.0 or higher. See page 42 for Applying for Graduation.

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A combination of 34 credits from Group 1 or Group 2.

One Cultural Perspectives and Diversity course from list on page 57.

Math Competency required.*
Reading Competency required.**

A list of courses in Group 1 and 2 begins on page 56.
## Associate in General Studies Degree (AGS)

The Associate in General Studies Degree is designed for students interested in obtaining a degree that can be customized based on varying areas of interest.

**Note:** This degree is not designed to meet the needs of the transfer student. Consult a counselor to discuss your educational goals and determine if this degree is right for you.

### Communications 6-8 credits

- ENG 11/111 or ENG 111 English Composition and either BUS 231, ENG 112 or ENG 220.

### Humanities 3 credits

- 3 credits of a **Group 1** Humanities course.

### Science/Mathematics 4 credits

- 4 credits of a **Group 1** Science lecture/lab course.

### Social Science 3 credits

- 3 credits of a **Group 1** Social Science course.

### Electives

- 46-48 semester credits chosen from any credit course in the college curriculum.

- One Cultural Perspectives and Diversity course from list on page 57.

- Math Competency required.*

- Reading Competency required.**

**A list of courses in Group 1 and 2 begins on page 56.

### Total Degree Credits: Minimum of 64

### MATH AND READING COMPETENCY

* Math Competency may be fulfilled in one of two ways:
  - COMPASS placement into MTH 111 or higher, or
  - Successful completion of MTH 23 with a grade of 2.0 or higher.

** Reading Competency:
  Guide available from academic advisors.

### OTHER REQUIREMENTS

- Complete at least 64 credit hours with a 2.0 or higher cumulative grade point average.
- Complete a minimum of 24 of the 64 credits through NMC classes.

### NOTES

- A maximum of two physical education credits, two professional development seminar credits, and four Academic Service Learning Internship credits may be used toward a degree.
- Courses with numbers below 100 level do not count toward graduation, even though they may be necessary to prepare for other courses needed to complete degree or certificate requirements. Some courses may require prerequisites which may add to the total number of credits taken. Review course prerequisites carefully.
- To count toward graduation, a course must be completed with a grade of 1.0 or higher. See page 42 for Applying for Graduation.
Associate in Applied Science Degree (AAS)

The Associate in Applied Science degree is generally pursued by those students who plan to enter the workforce following graduation from NMC. A career specialty emphasis is the dominant characteristic of the Applied Science Degree. View the list of specialty programs on pages 64-94. Although some students pursuing the AAS degree may transfer to a four-year college or university to pursue a baccalaureate degree, many AAS courses are not granted transfer equivalency credit at Michigan universities. Students considering the AAS degree who may wish to transfer should see an advisor.

<table>
<thead>
<tr>
<th>Communications</th>
<th>6-8 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 11/111 or ENG 111 English Composition and either ENG 220, BUS 231, or ENG 112. (Program of Study may specify.)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities</th>
<th>3 credits</th>
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</thead>
<tbody>
<tr>
<td>3 credits of a Group 1 Humanities course. (Program of Study may specify.)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Science/Mathematics</th>
<th>4 credits</th>
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</thead>
<tbody>
<tr>
<td>4 credits of a Group 1 Science/Math lecture/lab course. (Program of Study may specify.)</td>
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</table>

<table>
<thead>
<tr>
<th>Social Science</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 credits of a Group 1 Social Science course. (Program of Study may specify.)</td>
<td></td>
</tr>
</tbody>
</table>

**Total Degree Credits: Minimum of 64**

**Math and Reading Competency**
* Math Competency may be fulfilled in one of two ways:
  * COMPASS placement into MTH 111 or higher, or
  * Successful completion of MTH 23 with a grade of 2.0 or higher.

** Reading Competency: Guide available from academic advisors.

**Other Requirements**
* Complete at least 64 credit hours with a 2.0 or higher cumulative grade point average.
* Complete a minimum of 24 of the 64 credits through NMC classes.

**Math and Reading Competency**
* Math Competency may be fulfilled in one of two ways:
  * COMPASS placement into MTH 111 or higher, or
  * Successful completion of MTH 23 with a grade of 2.0 or higher.

** Reading Competency: Guide available from academic advisors.

**Other Requirements**
* Complete at least 64 credit hours with a 2.0 or higher cumulative grade point average.
* Complete a minimum of 24 of the 64 credits through NMC classes.

**Notes**
* A maximum of two physical education credits, two professional development seminar credits, and four Academic Service Learning Internship credits may be used toward a degree.
* Courses with numbers below 100 level do not count toward graduation, even though they may be necessary to prepare for other courses needed to complete degree or certificate requirements. Some courses may require prerequisites which may add to the total number of credits taken. Review course prerequisites carefully.
* To count toward graduation, a course must be completed with a grade of 1.0 or higher. See page 42 for Applying for Graduation.
Associate Degree in Nursing (ADN)

The Associate Degree in Nursing program is generally pursued by those students who plan to enter the nursing workforce following graduation. After successful completion of this program, graduates take the National Council Licensure Examination (NCLEX-RN). With passing scores, graduates are awarded licensure as a Registered Nurse.

Some students pursuing the ADN degree may decide to transfer to a four-year college or university to pursue a baccalaureate degree. Students considering the ADN degree who may wish to transfer should see an advisor.

Communications 6-8 credits

ENG 11/111 or ENG 111 English Composition and ENG 112 English Composition.

Humanities 3 credits

PHL 202 Contemporary Ethical Dilemmas.

Science/Mathematics 13 credits


Social Science 3 credits

PSY 101 Introduction to Psychology.

Major Area Requirements

45 semester credit hours in HNR and HAH courses as listed in the Associate Degree Program requirements.

Math Competency required.*

Reading Competency required.**

Computer Competency required.***

Admission requirements are on page 89 of this catalog.

Total Degree Credits: Minimum of 70-72

MATH AND READING COMPETENCY

* Math Competency may be fulfilled in one of two ways:
  • COMPASS placement into MTH 121 or higher, or
  • Successful completion of MTH 111 with a grade of 2.0 or higher

** Reading Competency:
  Guide available from academic advisors.

*** Computer Competency:
  CIT 122A Computer and Internet Basics, 1 credit

OTHER REQUIREMENTS

  • Complete a minimum of 70-72 credit hours with a cumulative grade point average of 2.0. Complete each nursing course at 2.0 or higher.
  • Complete a minimum of 24 degree credits through NMC classes.
  • Be enrolled at NMC the semester of graduation. Petitions for exceptions should be in writing and directed to the Registrar.

NOTES

  • A maximum of two physical education credits, two professional development seminar credits, and four Academic Service Learning Internship credits may be used toward a degree.
  • Courses listed below 100 level do not count toward graduation, even though they may be necessary to prepare for other courses needed to complete degree or certificate requirements. Some courses may require prerequisites which may add to the total number of credits taken. Review course prerequisites carefully.
  • To count toward graduation, a course must be completed with a grade of 1.0 or higher. Grades of 2.0 or higher are required for courses with the HNR prefix, CHM 101, ENG 111 and PSY 101. Grade point average of 2.5 or higher required for each of the courses in Anatomy and Physiology sequence (BIO 227, BIO 228). See page 42 for Applying for Graduation.
Group 1 Courses

Excess credits may be applied toward Group 2 requirements.

Communications

The MACRAO Agreement requires 2 semesters of English Composition.

<table>
<thead>
<tr>
<th>ENGLISH DEPT.</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
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<tr>
<td>ENG 112</td>
<td>English Composition</td>
</tr>
</tbody>
</table>

Note: Transfer students with Composition transfer credits totaling less than 5, choose one of the ENG Literature Department courses below. For Communications: Excess Literature credits may be applied to Group 1 Humanities requirements or Group 2 requirements.

Humanities

The MACRAO Agreement requires 8 credits from more than one department.

<table>
<thead>
<tr>
<th>ART DEPT.</th>
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<tbody>
<tr>
<td>ART 100</td>
<td>Art Appreciation</td>
</tr>
<tr>
<td>ART 111*</td>
<td>History of Western Art I</td>
</tr>
<tr>
<td>ART 112*</td>
<td>History of Western Art II</td>
</tr>
<tr>
<td>ART 213</td>
<td>Modern Art History</td>
</tr>
<tr>
<td>ART 214*</td>
<td>Women in Art</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HISTORY DEPT.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HST 101*</td>
<td>Western Civilization to 1500 AD</td>
</tr>
<tr>
<td>HST 102*</td>
<td>Western Civilization from 1500</td>
</tr>
<tr>
<td>HST 111*</td>
<td>US History to 1865</td>
</tr>
<tr>
<td>HST 112*</td>
<td>US History Since 1865</td>
</tr>
<tr>
<td>HST 211*</td>
<td>Native American History</td>
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<tr>
<td>HST 212*</td>
<td>African-American History</td>
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<td>HST 213*</td>
<td>American Women's History</td>
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<tr>
<td>HST 225</td>
<td>American Civil War</td>
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<tr>
<td>HST 228</td>
<td>The Vietnam War</td>
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<tr>
<td>HST 230</td>
<td>A History of Michigan</td>
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<tr>
<td>HST 235</td>
<td>20th Century Europe</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HUMANITIES DEPT.</th>
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<tbody>
<tr>
<td>HUM 101*</td>
<td>Introduction to Humanities I</td>
</tr>
<tr>
<td>HUM 102*</td>
<td>Introduction to Humanities II</td>
</tr>
<tr>
<td>HUM 111</td>
<td>American Experience</td>
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<tr>
<td>HUM 112</td>
<td>American Experience</td>
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<tr>
<td>HUM 116*</td>
<td>World Cultures</td>
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<tr>
<th>LANGUAGE (INTERMEDIATE LEVEL) DEPT.</th>
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<tbody>
<tr>
<td>MLF 201*</td>
<td>Intermediate French I</td>
</tr>
<tr>
<td>MLF 202*</td>
<td>Intermediate French II</td>
</tr>
<tr>
<td>MLS 221*</td>
<td>Intermediate Spanish I</td>
</tr>
<tr>
<td>MLS 222*</td>
<td>Intermediate Spanish II</td>
</tr>
</tbody>
</table>

Note: Not all four-year schools will accept second year Foreign Language courses as Humanities Distribution credits.

LITERATURE DEPT.

ENG 210* Children's Literature .......... 3
ENG 240 Introduction to Literature .......... 3
ENG 241* Mythology .......... 3
ENG 242* Women in Literature .......... 3
ENG 245* Native American Literature .......... 3
ENG 254 Shakespeare .......... 3
ENG 256 Environmental Literature .......... 3
ENG 261 British Literature .......... 3
ENG 262 American Literature .......... 3
ENG 263* World Literature .......... 3
ENG 264 Detective Fiction .......... 3
ENG 265 Science Fiction and Fantasy .......... 3
ENG 266 Popular Culture .......... 3
ENG 267 Film as Literature .......... 3
ENG 271* Adolescence and Cultural Diversity .......... 3

MUSIC DEPT.

MUS 110 Music Appreciation Standard Literature .......... 3
MUS 111 Music Appreciation Jazz .......... 3

PHILOSOPHY/RELIGION DEPT.

PHL 101* Introduction to Philosophy .......... 3
PHL 105* Critical Thinking .......... 3
PHL 121* Western Religions .......... 4
PHL 122* Eastern Religions .......... 4
PHL 181 Old Testament .......... 4
PHL 182 New Testament .......... 4
PHL 201* Ethics .......... 3
PHL 202* Contemporary Ethical Dilemmas .......... 3
PHL 222 The World of Jesus .......... 4
PHL 223 Jesus and Early Christianity .......... 4

Science/Math

The MACRAO Agreement requires 8 credits from more than one department including a lab class.

ASTRONOMY DEPT.

AST 109-AST 109L Planetary Astronomy .......... 4
AST 119-AST 119L Astronomy .......... 4

BIOLOGY DEPT.

BIO 100 - BIO 100L Food and Nutrition Biology .......... 4
BIO 105 - BIO 105L Living in the Environment .......... 4
BIO 106 - BIO 106L Human Biology .......... 4
BIO 107 - BIO 107L Field Biology .......... 4
BIO 108 - BIO 108L Plant Biology .......... 4
BIO 109 - BIO 109L Principles of Life Science .......... 4
BIO 115 - BIO 115L Cell, Plant and Ecosystem Biology .......... 4
BIO 116 - BIO 116L Cell and Animal Biology .......... 4
BIO 208 - BIO 208L Microbiology .......... 4
BIO 215 Genetics (no lab) .......... 3
BIO 216 Genetics Lab .......... 1
BIO 227 - BIO 227L Human Anatomy and Physiology I .......... 5
BIO 228 - BIO 228L Human Anatomy and Physiology II .......... 5
BIO 250 - BIO 250L Natural History of Vertebrates .......... 4
BIO 260 - BIO 260L General Ecology .......... 5
BIO 268 Biochemistry (no lab) .......... 3
BIO 270A Ecological Field Studies (lab only) .......... 2
BIO 270B Campus Botany (lab only) .......... 2
CHEMISTRY DEPT.
CHM 101 - CHM 101L Introductory Chemistry ............... 4
CHM 150 - CHM 150L - 150R General Chemistry I .......... 5
CHM 151 - CHM 151L - 151R General Chemistry II ....... 5
CHM 250 - CHM 250L Organic Chemistry I ............... 5
CHM 251 - CHM 251L Organic Chemistry II .......... 5

ENVIRONMENTAL SCIENCE DEPT.
ENV 103 - ENV 103L Earth Science ......................... 4
ENV 104 - ENV 104L Life of the Past ...................... 4
ENV 111 - ENV 111L Physical Geology .................... 4
ENV 112 - ENV 112L Historical Geology .......... 4
ENV 117 - ENV 117L Meteorology and Climatology .... 4
ENV 131 - ENV 131L Oceanography ....................... 4
ENV 140 - ENV 140L Watershed Science ................. 4
ENV 210 - ENV 210L Fundamentals of Soil Science .... 4
ENV 231 - ENV 231L Environmental Science ..........4
ENV 270A Michigan Basin Geology (lab only) .......... 2
ENV 270B Field Mapping Techniques (lab only) .......2
ENV 270C Pre-Cambrian Geology of MI (lab only) .... 2

MATHEMATICS DEPT.
MTH 116 Intro to Computer Science ...................... 4
MTH 121 College Algebra ..................................4
MTH 122 Trigonometry ....................................3
MTH 131 Intro to Probability and Statistics ..........3
MTH 140 College Algebra and Trigonometry ..........5
MTH 141 Calculus I .......................................5
MTH 142 Calculus II .......................................5
MTH 241 Calculus III .....................................4
MTH 251 Differential Equations ......................... 4

PHYSICS DEPT.
PHY 105 - PHY 105L Physics of the World Around Us ....4
PHY 121 - PHY 121L General Physics I ................. 4
PHY 122 - PHY 122L General Physics II .......... 4
PHY 221 - PHY 221L - 221R Prob & Prin of Physics I ....5
PHY 222 - PHY 222L - 222R Prob & Prin of Physics II .....5

SOCIOLGY DEPT.
ANT 112 Introduction to Physical Anthropology ........3
ANT 113* Introduction to Cultural Anthropology ......3

ECO 121 Basic Economics .................................3
ECO 201 Principles of Macroeconomics ................. 3
ECO 202 Principles of Microeconomics ................. 3

PHYSICAL SCIENCE DEPT.
MTH 101* Intro to American Politics ..................3
MTH 132* Comparative Politics ........................3
MTH 211* International Relations .......................3
MTH 222 Intro to Political Theory ..................... 3

SOCIOLGY DEPT.
SOC 101* Introduction to Sociology ..................3
SOC 201 Modern Social Problems .......................3
SOC 211 Marriage and the Family ........................3
SOC 220* Gender and Society ..........................3
SOC 231* Deviance and Criminal Behavior .............3

*“Cultural Perspectives & Diversity (CPD) - One CPD course is required for the ASA and AGS degrees. To meet this requirement, choose any course marked with an asterisk (*) or a 100 level French or Spanish course.

MACRAO Transfer Stamp
Upon completion of all Group 1 requirements in each of the areas listed above, students must request the Records Office stamp their transcript. It will state, “MACRAO Agreement satisfied.”

CPD is not required for the MACRAO Stamp.

Social Science
The MACRAO Agreement requires 8 credits from more than one department.

ANTHROPOLOGY DEPT.
ANT 112 Introduction to Physical Anthropology ........3
ANT 113* Introduction to Cultural Anthropology ......3

ECONOMICS DEPT.
ECO 121 Basic Economics .................................3
ECO 201 Principles of Macroeconomics ................. 3
ECO 202 Principles of Microeconomics ................. 3

GEOGRAPHY DEPT.
GEO 101* Introduction to Geography ..................3
GEO 105-105L Physical Geography with Lab ..........4
GEO 108 Geography of U.S. and Canada .............. 3
GEO 109* World Regional Geography ..................3
GEO 110 Economic Geography ..........................3

Group 2 Courses
All 100-level or higher courses not listed in the Group 1 section are Group 2 courses.
Linked Courses

This approach offers students an opportunity to “link” the content of a course such as the reading and writing of composition to the content of classes in areas such as business and science. Sections are generally small to allow for individual attention, and when the same students take the same sections of a composition and business class, for example, they become a “learning community” and can write composition papers about business topics, enhancing the learning in both classes. For more information, contact the Business, Communications or Humanities academic areas.

Work-Based Learning

NMC provides various work-based learning options.

Internships

Internship opportunities are offered for students who wish to integrate academics with professional work experience. Students can earn college credit while working in positions related to their academic and career goals. Contact the Office Manager in the academic area where you would like to pursue your internship.

Service Learning

(For credit or non credit)

A Service Learning Internship is a method of earning college credit in a supervised field experience. It is an opportunity for students who want to explore career or interest areas, apply classroom theory to a real situation, or gain practical experience for resume building. It is also an opportunity to earn credits while giving some of your talents to the community as a volunteer. Service Learning Internships are arranged between the student, supervising faculty, field supervisor, and service learning coordinator in any academic area. Up to four internship elective credits can be applied to graduation. Students may also do non-credit volunteering using the same process. For more information, (231) 995-1294.

MACRAO Transfer Agreement

The Michigan Association of College Registrars and Admissions Officers (MACRAO) has adopted an agreement to help students transfer more easily from Michigan community colleges to participating four-year colleges and universities. The agreement provides for transferability of up to 30 semester credits to meet many (in some cases all) of the General Education Requirements at participating Michigan institutions. Some participating institutions include provisos with limitations and exceptions, which may be based on the student’s program of study. Students should check with NMC counselors and admissions personnel at the transfer institution to learn about an institution’s level of participation. Also, go to www.macrao.org for more information.

The following courses satisfy the MACRAO agreement requirements:

1. English Composition: MACRAO specifies minimum of 6 credit hours, which can be fulfilled through completion of NMC’s ENG 111 and 112 English Composition.

2. Humanities: 8 credits from Group 1. Courses must be taken in more than one department.

3. Natural Science: 8 credits from Group 1 Natural Sciences (with at least one lecture/laboratory course). Mathematics may be included in this category. Courses must be taken in more than one department.

4. Social Sciences: 8 credits from Group 1 Courses must be taken in more than one department.

All courses which meet MACRAO requirements are listed as “Group 1 Courses” on pages 56-57 of this catalog.

When students have completed the MACRAO requirements, they should notify the NMC Records Office so their transcripts will be noted “MACRAO AGREEMENT SATISFIED.” Completion of the ASA degree will fulfill the MACRAO requirements. However, it is not necessary to complete the entire associate degree to satisfy the MACRAO agreement or to transfer to four-year schools.

If you’ve received the MACRAO stamp from another Michigan community college, NMC will honor this agreement. However, courses transferred in below a 2.0 will not count toward the total credits required for the degree.
Be Prepared to Transfer

About half of NMC students enroll with the intention of transferring to a four-year school to complete their degree. This checklist will help you transfer smoothly. If you want to complete your degree in Traverse City, you can choose from more than 50 programs offered through NMC’s University Center partners. More information is on page 22-23.

Meet with an NMC Counselor or Academic Advisor
- Discuss your transfer plan including associate degree requirements, general education, and transferability of courses.
- Right from the beginning, be sure you take NMC courses that will transfer.

Evaluate Colleges and Decide Early!
- Investigate entrance and degree requirements for four-year institutions.
- Consider the options available for colleges including setting and character, cost, size of school, teacher/student ratio, educational opportunities, program options and accreditation status.
- Visit the Counseling Office to review four-year institution transfer guides and resource materials, or visit www.nmc.edu/counseling. Ask about the MACRAO Transfer Agreement.
- Visit with representatives of four-year transfer institutions visiting NMC.
- Investigate the web page of your transfer institution.

Seek Advising
- Contact the transfer school admissions office and speak with an advisor specializing in transfer.
- Note the name of the advisor you spoke with - remember to keep accurate records of your discussions (who, what, when) and make copies of everything you send.
- Review application procedures and time lines for admission and financial aid.

Apply Early!
- Complete your applications for admission and financial aid.
- Determine deadlines for financial aid, including scholarships and transfer funding, as well as major and housing applications.
- Send necessary documents including transcripts from NMC and all other colleges attended, high school transcripts, ACT scores and other scores as required. (Keep copies for your file.)
- Send a final copy of your transcripts from NMC to the school after completion of your courses at NMC.
- Verify that your transfer school received a complete file.

Visit Transfer School
- Call the Admissions Office and schedule a visit. Request a meeting with a student and/or advisor in your major area and a campus tour.
- Do this as early in your academic career at NMC as possible.
Transfer Options

Some students select a course of study that requires a four-year degree of which two years may be completed at NMC through completion of the Associate in Science and Arts degree (ASA). See page 52 for ASA degree requirements. Visit www.nmc.edu/counseling for additional information.

Accounting

The Accounting Program contains a blend of specialized classes and liberal arts studies to prepare student for today's competitive, complex, and changing business world. Students who plan to pursue a bachelor’s degree should refer to NMC's degree requirements for the Associate in Science and Arts (ASA) degree. Also, transfer students should familiarize themselves with the requirements of the school where they plan to complete their bachelor's degree. Students interested in a bachelor's degree may also elect to stay in Traverse City and transfer to the University Center.

Anthropology

Anthropology is the study of humanity. Archaeology is the study of the material humans leave behind. Students planning to pursue degrees in anthropology or archaeology at four-year colleges or universities should take these courses. Introduction to cultural anthropology is a required course for many areas of study.

NMC offers specialty courses in Nautical and Underwater archaeology that may not be found at larger institutions. This area of study can include field-work and research activities in Northwestern Michigan, as well as, application of advanced technologies. Students planning careers in the following field may find these courses useful: offshore oil and gas industry, underwater search and recovery (such as police divers), maritime and naval, university research, homeland security, commercial surveying, remote sensing (applied water-related technologies), cultural heritage development and management. See page 98 for course listings.

Art/Fine Arts

The Fine Arts courses are designed for students who plan to transfer to a four-year college or university for a Bachelor’s or Master’s in Fine Arts (BFA or MFA). Careers for students specializing in Fine Arts with a bachelor's or master's degree include education, museum/gallery management, or self-employment as an artist.

Students specializing in Fine Arts while completing an Associate of Science and Arts degree at NMC will pursue a program of study which includes Drawing, Design (2-D and 3-D Design), Life Drawing, and Art History and may be able to specialize in one or more of the following areas: painting, watercolor painting, pottery, photography, and computer graphics. Students are urged to discuss course selection early with transfer schools since portfolio requirements for admission vary. See page 52 for Associate in Science and Art degree requirements.

Astronomy

NMC offers courses that focus on Observational, Planetary, and Stellar Astronomy. Students planning on transferring to pursue a bachelor's degree in this area should also take course work in Mathematics and Physics. See page 100.

Biology

Individuals planning to pursue a four-year degree in Biology should select from courses beginning on page 104. In addition, students should select courses in Mathematics, Chemistry and Physics.

Business Administration

Students planning to pursue a four-year degree in Business Administration should follow NMC's degree requirements for the ASA or AAS degree (depending on the transfer institution) AND familiarize themselves with the requirements of the school of choice for their bachelor's degree.

Chemistry

Students planning on transferring to pursue a bachelor's degree in Chemistry will pursue course work which includes credits selected from those beginning on page 109. In addition to taking Chemistry courses, students with an emphasis in Chemistry gain a solid background in Math and Physics.

Child Development

Child Development courses, such as Early Childhood Education and Guiding Young Children are designed to prepare students to work with children and their families. Students may be seeking a career as the director of a child care program, a paraprofessional/teacher's aide in the school system, a lead teacher in a daycare/preschool setting, a daycare teacher’s aide, or preparing for a Bachelor’s degree in Child Development. CD 101, CD 202, CD 203, CD 204, CD 206, CD 220, PSY 212 and SOC 211 are required classes to meet the Child Development concentration. If you are pursuing elementary education, please consult the transfer guide from the transferring school, or see an advisor.

Communications

Communications as a separate field of study may include a variety of careers and specialties, ranging from media and public relations to technical writing. It is also an important component of other programs of study or careers, including computer science, human services, health occupations and art therapy.

Criminal Justice

NMC now offers a Criminal Justice program in collaboration with other colleges through the Michigan Community College Virtual Learning Collaborative. This program may involve agreements that lead to a four-year degree from another college/university. Visit www.nmc.edu/flo for current information on the status of this program, the courses, program requirements, or articulation agreements.
Economics NMC Code 712
The most basic and enduring strength of economics is that it provides a logical and orderly way of looking at contemporary issues. It draws upon geography, history, philosophy and mathematics to address topics ranging from how an individual, household or firm, can make sound decisions to social issues, such as how to confront unemployment, inflation or environmental decay. As a result, economics is widely recognized as a solid background for many jobs and professions in the private and public sectors. Students interested in this field of study will select courses from among those on page 119.

Education NMC Code 708
NMC offers an introductory course to teaching as a career and prepares student for further study in education at transfer institutions. Transfer requirements vary greatly. Go to www.nmc.edu/counseling to view NMC transfer guides.

Engineering NMC Code 709
The NMC engineering curriculum parallels engineering programs offered during the first two years at other colleges and universities. Traditionally, these first two years emphasize the tools and theories that provide background for all engineering fields. Completion of the following program requirements will prepare most students for transfer to a four-year engineering program.

Northwestern Michigan College has joined with Michigan Technological University, Kettering University, and Lake Superior State University to offer a two plus two program whereby a student attends NMC for the first two years and then completes the final two years of an engineering degree at one of the participating four-year institutions. A student admitted into the two plus two program at NMC has the added advantage of a guaranteed place in the major of their choice at one of the four year institutions.

ENGINEERING REQUIREMENTS Credits: 82-84
General Education Credits as required for ASA.........30-32
Chemistry*: CHM 150........................................... 5
Mathematics**: MTH 141, 142, 241, and 251........... 18
Physics: PHY 221 and 222.................................. 10
Engineering: EGR 101, 113, 131, 201, 202, 203.......... 19

Note: Use this list of courses as a guide only. It is not applicable for all engineering specialties or all schools of engineering. It is important to follow specific requirements for each engineering program available in transfer guides at www.nmc.edu/counseling or in the Counseling Center. Students who plan to earn an associate degree at NMC before transferring should consult a counselor for assistance in modifying this schedule.

Engineering Certificate NMC Code 079
ENGINEERING REQUIREMENTS Credits: 52
Chemistry: CHM 150 ........................................... 5
Mathematics: MTH 141, 142, 241, and 251........... 18
Physics: PHY 221 and 222.................................. 10
Engineering: EGR 101, 113, 131, 201, 202, 203.......... 19

English NMC Code 710
Students wishing to concentrate their studies in the field of English may be preparing for careers in writing or teaching. English is also crucial to many other careers since writing and reading are high-demand skills in most professions. Students planning to transfer to complete a bachelor’s degree in English should pursue an Associate in Science and Arts degree program that includes credits selected from among the courses beginning on page 124.

Environmental Science NMC Code 717
The study of Environmental Science includes courses in Geology, Biology, Meteorology, Chemistry, Soils, Oceanography and Watershed Science. Students planning on transferring to pursue a bachelor’s degree in any of these areas will choose a program of study which includes courses selected from those beginning on page 125. Students are encouraged to contact a faculty member in the Environmental Science department to learn more about employment opportunities and for assistance with class scheduling.

Freshwater Studies
GLOBAL POLICY AND SUSTAINABILITY NMC Code 591
ECONOMY AND SOCIETY NMC Code 592
SCIENCE AND TECHNOLOGY NMC Code 593
Students planning to pursue a four-year degree in Freshwater Studies should follow NMC’s degree requirements for the ASA degree on page 52. Students are strongly encouraged to consult a Freshwater Studies advisor for scheduling guidelines and degree selection.

Gen. Liberal Arts/Science NMC Code 712
Students interested in transferring to pursue a bachelor’s degree should enroll in the General Liberal Arts/Science area of study if they are undecided. Students planning on pursuing this avenue will select liberal arts and sciences courses from the course descriptions beginning on page 97.

General Studies Certificate NMC Code 074
Students are able to have a certificate that would be used for the general education basis for the AAS degree. The certificate can either be connected with occupational specialty courses to meet the requirements of other certificates, a specific AAS, or stand-alone until the students determine which direction they wish to pursue beyond the certificate.

COURSE REQUIREMENTS Credits: 17-18
ENG 111 and ENG 112 or BUS 231 or ENG 220 ......7-8
Social Science Group 1 ........................................ 3
Science Lab .......................................................... 4
Humanities Group 1 .............................................. 3
Math competency of AAS degree............................. (4)

Geography NMC Code 726
NMC offers course work in Physical Geography and Introduction to Geography. Regional courses are also offered that focus on the United States and Canada and the World. In addition, a tools course concentrating on Geographic Infor-
mation Systems (GIS) is offered. Students planning on pursuing a rewarding career in Geography are encouraged to meet with the Geography Department Head for help in course selection. See page 127 for course listings in Geography.

**Geology**

*NMC Code 717*

Students interested in pursuing a career as a Geologist will take Environmental Studies courses, including Physical and Historical Geology. In addition, students will complete course work in Chemistry, Physics, and Mathematics.

**History**

*NMC Code 730*

As a separate field of study within the humanities, history will prepare students to enter secondary education, journalism, the archival and museum professions, and a variety of public history positions upon completion of at least a bachelor’s degree. It will also prepare students for entering professional and graduate schools in law and in fields that will enable graduates to teach and do research in institutions of higher learning.

**Mathematics**

*NMC Code 715*

Students planning on transferring to complete a bachelor’s degree in Mathematics will pursue course work that includes MTH 141, MTH 142, MTH 241, and MTH 251. Other suggested courses include PHY 221, PHY 222 & MTH 116.

**Modern Languages**

*NMC Code 731*

Modern Languages as a field of study at NMC includes specialization in American Sign Language, French, and Spanish. In a world of international telecommunications and interdependent economies, language specialization is an important component for those planning careers in business, communication, or teaching.

**Music**

*NMC Code 716*

Professional opportunities for a skilled musician are endless in that music, in some way, touches our lives every day in many ways. The study of music offers a vast variety of career options including: music education, instrumental music, vocal performance, conducting, composing, music for worship, music business, instrument making and repair, music publishing, music communications, recording industry, and in the TV and radio industry. Contact the Music Department for a detailed list of career options in each of these categories.

NMC offers applied (private) lessons for all major instrument types and voice types. Auditions for placement are held during the summer or between semesters. Contact the academic area office manager or the department chair to arrange for a date and time.

Music students at NMC have the unique opportunity to perform as often as twice each semester in a student recital in the Milliken Auditorium. These Wednesday recitals are open to the public and provide students the opportunity to practice their “live” performance skills. Students who participated in high school programs may wish to continue doing so at the collegiate level. See page 148 for ensemble courses at NMC.

Standard coursework would include: MUS 101, 102, 103, and 104 - Music Theory and Sight Singing and Ear Training; MUS 106, 107, 206, 207 - Group Piano Instruction; Independent Study in Music Theory both semesters of your sophomore year; MUS ensembles*; and MUS Applied Instruction*.

Those studying Audio Technology would also enroll in our four-Semester sequence of courses: MUS 130A, Ensembles-Sound and Recording Techniques; MUS 130B, Ensembles-Signal Processing; MUS 230A, Ensembles-Midi Processing, and MUS 230 B, Ensembles-Recording Practicum. These audio technology courses, along with successful completion or required music courses would result in a NMC Audio Certificate Level I and an Apple Pro-Logic Certification, Level II.

Additional Audio-Technology course work, along with successful completion of required music courses would result in a NMC Audio Certificate Level II and an Apple Pro-Logic Certification, Level II.

*Placement in an ensemble/applied music instruction (private lessons) is based on audition and faculty recommendation. Students requiring remedial study to prepare for collegiate level applied instruction will be placed in 90 level applied instructions to attain the required skills. Students transferring music credits can expect to be tested for placement.

**Performing Arts**

**DANCE**

*NMC Code 707*

Students wishing to pursue an interest in the field of dance should take the courses in dance on page 118 and consult with an advisor and the dance faculty member before their first semester at NMC.

**THEATER**

*NMC Code 707*

Students interested in the field of theater at NMC will study acting and play production. Course work in this area will also include credits chosen from the public speaking, communications, and literature areas. Students planning to transfer to complete a bachelor’s degree in theater should pursue an Associate in Science and Arts degree program that includes credits from the courses on page 158.

**Philosophy and Religion**

*NMC Code 729*

Careers in the fields of philosophy and religion include college teaching and research, secondary education, as well as positions as ministers, priests, or rabbis. Other potential careers for those who specialize in religion are pastoral administration, religious education, church office management, and church mission work. The fields of clinical medicine and medical research as well as commercial business fields like accounting are employing ethicists, a specialized branch of philosophy.

Students seeking to transfer to a four-year college or university to major in philosophy or religion may complete basic course work while at NMC. That course work will include credits selected from those courses on page 153-154.
Physical Education

Physical Education activity courses are offered to students wishing to expand personal interests, health and fitness, recreation, and sports skills. Most Physical Education courses provide a starting point for students transferring to four-year institutions and who seek a Physical Education major or minor.

Physics

NMC Code 717

Students planning on transferring to complete a bachelor’s degree in Physics will pursue course work which includes credits selected from those beginning on page 155. These students should also include Calculus I, II, & III, Differential Equations, and General Chemistry I & II.

Plant Science, Applied

FRUIT PRODUCTION

NMC Code 581

LANDSCAPE & NURSERY

NMC Code 582

TURFGRASS MANAGEMENT

NMC Code 583

VITICULTURE

NMC Code 580

Students interested in pursuing a four-year degree in Plant Science should follow a general education curriculum with courses in science, including Chemistry and Biology. In addition, students may take technical courses in soils, plants and plant diseases from Michigan State University at the NMC University Center. See page 95 for course requirements.

Political Science

NMC Code 725

Political science as a field includes the study of American politics, comparative politics, international relations, political theory, and political economy. Undergraduate courses in political science are an important component of any liberal arts education as students gain important knowledge concerning the political structures that shape our world. Courses in political science are especially useful for students pursing careers or advanced degrees in public policy, law, business, economics, social work, education, history, and, of course, politics. Bachelors and graduate degrees in political science and public policy offer career opportunities in a variety of areas such as education, policy research, law, and international business. Students interested in political science courses, see page 156.

Pre-Law

NMC Code 718

Pre-law is a major often selected by students interested in pursuing careers in government or law.

Pre-Med, Pre-Dental, Pre-Vet

NMC Code 713

The medical sciences major is designed for pre-professional students interested in graduate training in the medical field.

Psychology

NMC Code 724

Students interested in the following fields of psychology, such as counseling, social work, research or teaching, may select from courses such as Introduction to Psychology, Introduction to Social Psychology, Developmental Psychology, Exceptional Child, Human Sexuality, Abnormal Psychology Psychology of Personality and Psychology of Adjustment.

Science & Arts Certificate

NMC Code 071

Students are able to use the general education requirements as the basis of an ASA or as a one-year transfer program since it fulfills the state’s MACRAO agreement.

COURSE REQUIREMENTS

Credits: 32

ENG 111 and ENG 112 .................................................. 8

Group 1 Courses from two different

Social Science Disciplines ........................................... 8

Group 1 Courses from two different

Humanities Disciplines .................................................. 8

Group 1 Courses from two different

Science/Math Disciplines .............................................. 8

Math competency of ASA degree: .................................. (4)

• COMPASS placement into MTH 121 or higher, or

• Successful completion of MTH 111 or higher with a 2.0

Social Work

NMC Code 723

The social work courses are designed to transfer to other four-year schools with certified social work programs. It is specifically designed to fit into the Ferris State University Social Work Program at the University Center in Traverse City and on the Ferris main campus in Big Rapids. When choosing this program of study, it is highly recommended to meet with the social work coordinator; call (231) 995-1294. This will assist you in building a program that will transfer smoothly. Social work is a rapidly growing field that employs people in many different areas of work and requires very specific training and course work. Students interested in this field of study will select courses from among those beginning on page 157.

Sociology

NMC Code 720

Sociology is the study of the social context of human behavior. It includes the study of social change, socialization of group attributes such as social class, race, gender and age; and the workings of our social institutions. Courses in sociology are an important component of any liberal arts education, especially involving critical thinking and an understanding of diversity. It is also a major study for those interested in a wide variety of careers including teaching, social work, public policy, criminal justice, law, non-profit organizations, and social research. See page 157 for course listings.

Visual Communications

NMC Code 728

Students completing the Visual Communications program at NMC earn an Associate in Applied Science degree. After completion of the AAS degree, students can take a third-year option in Visual Communications and earn an AAS in Creative Management in Art Direction that will aid in local employment while exposing the student to marketing and business-related classes. Students interested in transferring to a four-year art and design college or university may pursue the Associate in Science and Arts degree. See page 52 for degree requirements.
Occupational Specialty Programs

Occupational Specialty degrees and certificate programs prepare students to enter the workforce through development of technical specialties and related skills appropriate to the chosen occupational area. See the following program listings for specific program requirements.

Each Occupational Specialty program has specific learning outcomes that are assessed each year. Assessment methods vary from program to program. Specific outcomes are available from the academic chair. Students who would like to know how a specific academic area meets these outcomes should contact the academic chair of that area.

Accounting

**Associate in Applied Science Degree**  
*NMC Code: 103*

This program will prepare students to begin a career in accounting. Graduates will be prepared to work as bookkeepers and entry-level accountants in accounts receivable, accounts payable, payroll, and other entry-level areas of accounting. Students considering transfer should see an advisor.

**General Education Requirements**  
Credits: 17

- Communications: ENG 111 and BUS 231 .............. 7
- Humanities: PHL 201 or PHL 202 .................. 3
- Mathematics: Placement into MTH 121 or higher,  
  or completion of MTH 111* ......................... (4)
- Science: Any Group 1 course with a lab .............. 4
- Social Sciences: ECO 201 .......................... 3

*These credits may be used as directed electives.

**Occupational Specialty Requirements**  
Credits: 36

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 121</td>
<td>Accounting Principles I</td>
<td>4</td>
</tr>
<tr>
<td>ACC 122</td>
<td>Accounting Principles II</td>
<td>4</td>
</tr>
<tr>
<td>ACC 221</td>
<td>Intermediate Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACC 222</td>
<td>Intermediate Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUS 101</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 105</td>
<td>Business Math*</td>
<td>3</td>
</tr>
<tr>
<td>BUS 155</td>
<td>Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS 261</td>
<td>Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>CIT 100</td>
<td>Computers in Business/An Intro</td>
<td>3</td>
</tr>
<tr>
<td>CIT 210</td>
<td>Spreadsheet Apps - MS Excel or</td>
<td>3</td>
</tr>
<tr>
<td>CIT 128</td>
<td>Microsoft Excel Level I and</td>
<td>3</td>
</tr>
<tr>
<td>CIT 129</td>
<td>Microsoft Excel Level II</td>
<td>3-4</td>
</tr>
<tr>
<td>CIT 216</td>
<td>Computerizing Accounting Systems</td>
<td>2</td>
</tr>
</tbody>
</table>

**Directed Electives (Choose any combination)**  
Credits: 11

- ACC 225  Cost/Management Accounting ...... 3
- ACC 290  Accounting Internship .......... 3
- BUS 262  Business Law II ............... 3
- ECO 202  Principles of Microeconomics ... 3
- ENG 112  English Composition .......... 4
- MGT 241  Principles of Management ...... 3
- MTH 111  Intermediate Algebra** ....... 4
- MTH 131  Probability and Statistics ... 3

**Program Requirements**  
Credits: 64

**Administrative Support Specialist**

**Certificate of Achievement (Level II)**  
*NMC Code: 003*

Well-trained office professionals continue to be in demand and play an integral role in the successful operation of an organization. They work as a team with managers, professionals, and other support staff to control and manage administrative operations.

The Administrative Support Specialist Certificate builds on the Clerical Support Certificate and focuses on specific skills which area employers consider essential.

**Certificate Requirements**  
Credits: 39

Completion of all courses required for the Clerical Support Certificate (see page 71) ..................... 17
- BUS 231  Professional Communications .......... 3
- BUS 290  Business Administration Internship ..... 3
- CIT 210  Spreadsheet Apps – MS Excel ...... 3
- CIT 170  Intro to Database Management ...... 3
- CIT 120A Microsoft Word Level I A .......... 1
- CIT 120B Microsoft Word Level I B .......... 1
- CIT 121A Microsoft Word Level II A .......... 1
- CIT 121B Microsoft Word Level II B .......... 1
- CIT 124A Microsoft PowerPoint Level I A ..... 1
- CIT 124B Microsoft PowerPoint Level I B ..... 1
- PHL 105  Critical Thinking .................. 3
- BPD 133  Keyboarding Speed/Accuracy .... 1

**Program Information**

- **NMC Code**: 003
- **2011-2013**: NMC Catalog
- **To apply**: Use the three-digit NMC Code on your admissions application.


Automotive - Automotive Service Technology

**Associate in Applied Science Degree** NMC Code 560

This program is designed for either the person with little or no prior experience or the skilled technician who needs to keep pace with current technology. Students may take the classes they need to update skills, pursue an Associate in Applied Science degree which combines automotive technician classes with courses in the liberal arts and sciences, or work toward a Master Technician Certificate which qualifies graduates to enter the workplace as entry-level state-certified technicians. Students may also choose from two specialized certificates: Under Car Specialist or Electrical and Drivability Specialist. The certificates are explained in more detail in the proceeding pages. All eight state or ASE certifications must be passed to be awarded the AAS degree or Master Technician Certificate.

Day and evening classes allow technicians at every level to develop new skills at convenient times. The program is a series of modules, each designed to teach an individual system. This flexibility allows the more experienced technician to learn a specific system while the beginning technician can combine the modules for a complete course in automotive technology.

**Foundation Requirements**

For successful completion of the AT courses, placement into ENG 111 and completion of MTH 08 or placement into MTH 23 is recommended. Remedial courses may be recommended for new students not meeting the recommended level.

**Certificate Requirements**

**Credits: 17-18**

- Communications: ENG 111 and ENG 112 or ENG 220 .............................................7-8
- Mathematics: Placement into MTH 111 or higher, or completion of MTH 23* .....................................4
- Science: Any Group 1 course with lab ..............................................4
- Social Sciences: Any Group 1 course ...............................................3

* These credits do not count toward degree requirements.

**Occupational Specialty Requirements** 56

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 100**</td>
<td>2</td>
</tr>
<tr>
<td>AT 110</td>
<td>5</td>
</tr>
<tr>
<td>AT 120**</td>
<td>5</td>
</tr>
<tr>
<td>AT 220</td>
<td>5</td>
</tr>
<tr>
<td>AT 130</td>
<td>5</td>
</tr>
<tr>
<td>AT 230</td>
<td>4</td>
</tr>
<tr>
<td>AT 140</td>
<td>4</td>
</tr>
<tr>
<td>AT 150</td>
<td>6</td>
</tr>
<tr>
<td>AT 160</td>
<td>6</td>
</tr>
<tr>
<td>AT 170</td>
<td>4</td>
</tr>
<tr>
<td>AT 180</td>
<td>6</td>
</tr>
<tr>
<td>AT 190**</td>
<td>2</td>
</tr>
<tr>
<td>AT 200</td>
<td>2</td>
</tr>
</tbody>
</table>

All eight state or ASE certifications must be passed to be awarded the AAS degree or Master Technician Certificate.

**May be waived with appropriate work experience or education.**

**Program Requirements** 73-74

Automotive - Electrical & Drivability Specialist

**Certificate of Achievement (Level II)** NMC Code 031

This certificate is designed to train students in the automotive systems related to the operation of the engine and its control systems. Emphasis is placed on the automotive electrical and electronic control systems. For students to be awarded this Electrical and Drivability Specialist certificate, they must pass the related State of Michigan exams or ASE test for all five of the required automotive courses.

**Foundation Requirements**

For successful completion of the AT courses, placement into ENG 111 and completion of MTH 08 or placement into MTH 23 is recommended. Remedial courses may be recommended for new students not meeting the recommended level.

**Certificate Requirements**

**Credits: 32**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 100*</td>
<td>2</td>
</tr>
<tr>
<td>AT 190*</td>
<td>2</td>
</tr>
</tbody>
</table>

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 120</td>
<td>5</td>
</tr>
<tr>
<td>AT 220</td>
<td>5</td>
</tr>
<tr>
<td>AT 130</td>
<td>5</td>
</tr>
<tr>
<td>AT 230</td>
<td>4</td>
</tr>
<tr>
<td>AT 160</td>
<td>6</td>
</tr>
</tbody>
</table>

Elective course ..............................................3

**May be waived with appropriate work experience or education.**

**Program Completion Requirements**

A minimum of 32 AT credit hours are required to receive this certificate. Students must choose elective courses from the Automotive Program course list to reach the required credit level.

Must pass the related State of Michigan or ASE test for all of the required automotive courses.
**Automotive - Hybrid Technology Specialist**

**Certificate of Achievement (Level II)  NMC Code 034**

**Foundation Requirements**
For successful completion of the AT courses, placement into ENG 111 and completion of MTH 08 or placement into MTH 23 is recommended. Remedial courses may be recommended for new students not meeting the recommended level.

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Credits: 32</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
</tr>
<tr>
<td>AT 100  Auto Service Basics*</td>
<td>2</td>
</tr>
<tr>
<td>AT 120  Automotive Electrical I</td>
<td>5</td>
</tr>
<tr>
<td>AT 130  Engine Performance I</td>
<td>5</td>
</tr>
<tr>
<td>AT 160  Engine Repair</td>
<td>6</td>
</tr>
<tr>
<td>AT 210  Hybrid Technology</td>
<td>5</td>
</tr>
<tr>
<td>AT 220  Automotive Electrical II</td>
<td>5</td>
</tr>
<tr>
<td>AT 230  Engine Performance II</td>
<td>4</td>
</tr>
<tr>
<td>AT 230  Automatic Transmissions</td>
<td>6</td>
</tr>
</tbody>
</table>

*May be waived with appropriate work experience or education.*

**Program Completion Requirements**
A minimum of 32 AT credit hours are required to receive this certificate. Students must choose elective courses from the Automotive Program course list to reach the required credit level. Must pass the related State of Michigan or ASE test for all of the required automotive courses.

**Automotive - Master Automotive Technician**

**Certificate of Achievement (Level III)  NMC Code 001**

State and federal levels of certification are offered.

**Foundation Requirements**
For successful completion of the AT courses, placement into ENG 111 and completion of MTH 08 or placement into MTH 23 is recommended. Remedial courses may be recommended for new students not meeting the recommended level.

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Credits: 56</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
</tr>
<tr>
<td>AT 100* Automotive Service Basics</td>
<td>2</td>
</tr>
<tr>
<td>AT 110  Automotive Brake Systems</td>
<td>5</td>
</tr>
<tr>
<td>AT 120* Automotive Electrical I</td>
<td>5</td>
</tr>
<tr>
<td>AT 220  Automotive Electrical II</td>
<td>5</td>
</tr>
<tr>
<td>AT 130  Engine Performance I</td>
<td>5</td>
</tr>
<tr>
<td>AT 230  Engine Performance II</td>
<td>4</td>
</tr>
<tr>
<td>AT 140  Suspensions and Steering</td>
<td>4</td>
</tr>
<tr>
<td>AT 150  Automatic Transmissions</td>
<td>6</td>
</tr>
<tr>
<td>AT 160  Engine Repair</td>
<td>6</td>
</tr>
<tr>
<td>AT 170  Heating and Air Conditioning</td>
<td>4</td>
</tr>
<tr>
<td>AT 180  Manual Drivetrain and Axles</td>
<td>6</td>
</tr>
<tr>
<td>AT 190* Automotive Facility Orientation</td>
<td>2</td>
</tr>
<tr>
<td>AT 200  Service Department Management</td>
<td>2</td>
</tr>
</tbody>
</table>

Must pass all eight (8) State or ASE certification tests to be awarded this certificate.

*May be waived with appropriate work experience or education.*

**Automotive - Under Car Specialist**

**Certificate of Achievement (Level II)  NMC Code 032**

This certificate is designed to train students in the systems underneath the automobile. These systems include brakes, suspension, and drive train. For students to be awarded this Under Car Specialist certificate, they must pass the related State of Michigan or ASE test for all five of the required automotive courses.

**Foundation Requirements**
For successful completion of the AT courses, placement into ENG 111 and completion of MTH 08 or placement into MTH 23 is recommended. Remedial courses may be recommended for new students not meeting the recommended level.

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Credits: 32</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
</tr>
<tr>
<td>AT 110  Automotive Brake Systems</td>
<td>5</td>
</tr>
<tr>
<td>AT 120  Automotive Electrical I</td>
<td>5</td>
</tr>
<tr>
<td>AT 140  Suspension and Steering</td>
<td>4</td>
</tr>
<tr>
<td>AT 150  Automatic Transmissions</td>
<td>6</td>
</tr>
<tr>
<td>AT 180  Manual Drive train and Axles</td>
<td>6</td>
</tr>
</tbody>
</table>

Elective course | 3

*May be waived with appropriate work experience or education.*

**Program Completion Requirements**
A minimum of 32 AT credit hours are required to receive this certificate. Students must choose elective courses from the Automotive Program course list to reach the required credit level. Must pass the related State of Michigan or ASE test for all of the required automotive courses.
Aviation

Associate in Applied Science Degree  NMC Code 562

General Education Requirements  Credits: 17-18

Communications: ENG 111 and ENG 112 or ENG 220 or BUS 231 .............................................. 7-8

Humanities: Any Group 1 Course ................................................. 3

Mathematics: Placement into MTH 111 or higher, or completion of MTH 23* ...................................... (4)

Science: Any Group 1 Course with lab ......................................... 4

Social Sciences: Any Group 1 course ............................................ 3

* These credits do not count toward degree requirements.

Occupational Specialty Requirements  23

AVF 111 Private Flight .............................................................. 5
AVG 101 Private Pilot Ground School ...................................... 5
AVF 118 Instrument Flight I .................................................. 1
AVF 130 Instrument Flight II .................................................. 2
AVG 202 Advanced Aircraft Systems .................................. 3
AVG 252 Instrument Ground School .................................. 4
AVG 161 Mechanics for Pilots ................................................ 5

Choose at least 24 credits from the following list of courses:

AVF 230 Commercial Flight I ............................................. 2
AVF 232 Commercial Flight II ............................................. 3
AVF 234 Commercial Flight III .......................................... 2
AVG 251 Commercial Ground School .................................. 4
AVF 271 Multi-Engine Rating .............................................. 1
AVG 190 Aviation Weather ................................................... 3
AVF 141 Introduction to UAS ................................................ 2
AVG 261 UAS Ground School ............................................. 4
AVF 241 UAS Flight School ................................................ 4
AVG 240 Corporate Aviation Ground .................................. 3
AVG 204 Airline Aircraft Ground School .......................... 3
AVG 381 Instructor Ground School ................................... 5
AVF 274 Tailwheel Flight .................................................... 1
AVF 275 Seaplane Flight .................................................... 2
AVF 283 Upset Maneuver Training ..................................... 1
AVF 284 Instrument Flight Instructor .................................. 2
AVF 382 Flight Instructor Rating ........................................ 4

Students seeking an AAS Degree in Aviation Flight from NMC shall earn the required aviation credits listed for their degree or a combination of three methods:

1. Aviation courses listed in the NMC catalog;
2. Approved transfer credit;
3. NMC competency testing - maximum of 17 aviation credits may be obtained through competency testing, not to include AVF 271, AVF 284, AVF 382 and AVG 381. Testing allowed only with director's approval.

To obtain the Associate in Applied Science Degree, students must complete a minimum of three flight courses listed in this catalog through the normal process for obtaining credit, and complete a minimum of 64 credit hours. All AVF and AVG courses must be completed with a 2.0 grade or higher. Please consult an aviation advisor for scheduling guidelines.

Independent study and specialty courses are also available.

Before beginning flight training, students must obtain a medical certificate from an FAA-approved doctor. Visit www.flightphysical.com or www.faa.gov for a list of FAA-approved doctors. Students must be cleared to fly by the TSA before receiving flight instruction.

Program Requirements  64

Bridge Learning Community

Academic and Workforce Training

The NMC Bridge Learning Community is designed for the nontraditional adult learner’s transition into higher education or to upgrade workforce skills. This academic program offers skill set development through intensive, hands-on curricula in mathematics, communications (writing, speaking, listening) and technology in a learning community environment. Learners opt for industry-recognized Microsoft certifications and prepare to become online learners as well as lifelong learners as they work through a career development process with employability activities that determine career pathways.

Foundational Bridge Classes  Credits: 15

BPC 092* Bridge to Math .................................................. 3
BPC 094* Bridge to Communication ...................................... 4
BPC 096* Bridge to Technology ........................................... 4
CIT 109A Keyboarding I ................................................... 2
CIT 120A Microsoft Word Level I A .................................. 1
CIT 120B Microsoft Word Level I B .................................. 1

* Denotes developmental classes.
Business Administration

Associate in Applied Science Degree

Computer Applications ........................................ NMC Code 122
Entrepreneur ........................................................ NMC Code 151
General ............................................................. NMC Code 105
Management ......................................................... NMC Code 115
Marketing ............................................................ NMC Code 107

This program prepares students for the challenges of the ever-changing world of business. Specialized courses and liberal arts studies provide students with a foundation needed to pursue careers characterized by technology, constant change, and increasing competition.

The order in which courses are taken is not critical except where prerequisites are involved. Course substitutions may be made only with the approval of the program coordinator or the academic area chair. It is strongly encourage that students meet with an academic advisor because not all classes are offered online every semester. Students considering transfer should see an advisor.

General Education Requirements

Credits: 17

Communications: ENG 111 and BUS 231 ..................... 7
Humanities: PHL 202 or PHL 201 ................................. 3
Mathematics: Placement into MTH 111 or higher, or
completion of MTH 23* ............................................. (4)
Science: Science Group 1 course with a lab ............... 4
Social Sciences: ECO 201 ......................................... 3

*These credits do not count toward degree requirements.

Occupational Specialty Requirements 35

ACC 121 Accounting Principles I .................................. 4
ACC 122 Accounting Principles II ................................ 4
BUS 101 Introduction to Business .............................. 3
BUS 105 Business Math ............................................. 3
BUS 155 Interpersonal Communications .................. 3
BUS 261 Business Law I ............................................. 3
CIT 100 Computers in Business-An Intro ................ 3
CIT 210 Spreadsheet Apps - MS Excel or
CIT 128 Microsoft Excel Level I and
CIT 129 Microsoft Excel Level II ................................. 3-4
MGT 241 Principles of Management ......................... 3
MGT 251 Human Resources Management ................ 3
MKT 201 Principles of Marketing .............................. 3

General Business 12

Any 12 credits from the other four concentration areas.

Areas of Concentration 12-13

Select at least 12-13 credits from your area of concentration:

Computer Applications

CIT 124A Microsoft PowerPoint I A ................................ 1
CIT 124B Microsoft PowerPoint I B .............................. 1
CIT 155 Personal Computer Maintenance ................... 2
CIT 170 Intro. to Database Management ..................... 3
CIT 180 XHTML Programming ..................................... 2
CIT 213 Networking Technologies .............................. 4
CIT 215 Windows Server Environment ....................... 3
CIT 216 Computerized Accounting Systems ................ 2

CIT 233 Project Management ................................... 3
CIT 290 CIT Internship ........................................... 3

Entrepreneur

BUS 262 Business Law II ......................................... 3
CIT 216 Computerized Accounting Systems ............... 2
CIT 233 Project Management ................................... 3
MGT 245 Principles of Entrepreneurship .................... 3
MGT 246 Entrepreneur Marketing/Finance ................ 3
MKT 210 Principles of Selling ....................................

Management

BUS 262 Business Law II ......................................... 3
BUS 290 Business Administration Internship .............. 3
CIT 124A Microsoft PowerPoint I A .......................... 1
CIT 124B Microsoft PowerPoint I B .............................. 1
CIT 216 Computerized Accounting Systems ............... 2
CIT 233 Project Management ................................... 3
MKT 245 Entrepreneurship ....................................... 3
MTH 111* Intermediate Algebra ............................... 4
MTH 131 Probability and Statistics ........................... 3

Marketing

BUS 262 Business Law II ......................................... 3
BUS 290 Business Administration Internship .............. 3
CIT 124A Microsoft PowerPoint I A .......................... 1
CIT 124B Microsoft PowerPoint I B .............................. 1
MKT 210 Principles of Selling ....................................
MKT 245 Entrepreneurship ....................................... 3
MTH 111* Intermediate Algebra ............................... 4
MTH 131 Probability and Statistics ........................... 3

* Or a higher level math course, excluding MTH 116 and MTH 118.

Program Requirements 64
Business Administration - Online

Associate in Applied Science Degree

Computer Applications ........................................ NMC Code 122
General Studies .................................................. NMC Code 105
Management ....................................................... NMC Code 115
Marketing .......................................................... NMC Code 107

Online Option for the General Business Concentration:
NMC offers an online alternative for students pursuing an Associate in Applied Science degree with a Business Administration - General concentration. It includes a hands-on internship and computer lab experiences in addition to online classes. Students are strongly encouraged to meet with an academic advisor because not all classes are offered online every semester.

General Education Requirements Credits: 17
Communications: ENG 111 and BUS 231 .................... 7
Humanities: PHL 202 or PHIL 201 ............................ 3
Mathematics: Placement into MTH 111 or higher, or
completion of MTH 23* ........................................ 4
Science: Science Group 1 course with a lab ............... 4
Social Sciences: ECO 201 .................................... 3
*These credits do not count toward degree requirements.

Occupational Specialty Requirements 35
ACC 121 Accounting Principles I .......................... 4
ACC 122 Accounting Principles II ......................... 4
BUS 101 Introduction to Business ......................... 3
BUS 105 Business Math ..................................... 3
BUS 155 Interpersonal Communications ................. 3
BUS 261 Business Law I ................................... 3
CIT 100 Computers in Business-An Intro ................ 3
CIT 210 Spreadsheet Apps - MS Excel or
CIT 128 Microsoft Excel Level I and
CIT 129 Microsoft Excel Level II ......................... 3-4
MGT 241 Principles of Management .................... 3
MGT 251 Human Resources Management ............... 3
MKT 201 Principles of Marketing ......................... 3

General Area of Concentration 12
Any 12 credits from the following:
BUS 262 Business Law II .................................. 3
BUS 290 Business Administration Internship .......... 3
(workplace based - not online)
CIT 170 Intro. to Database Management ................ 3
CIT 180 XHTML Programming ............................ 2
CIT 213 Networking Technologies ........................ 4
ECO 202 Principles of Microeconomics ................. 3
ENG 112 English Composition .......................... 4
MTH 111 Intermediate Algebra .......................... 4
MTH 131 Probability and Statistics .................... 3

If you are seeking online courses for your specific program that are not currently offered online, check out the Michigan Community College Virtual Learning Consortium at www.vcampus@mccvlc.org for online course options.

CAD/CAM - Advanced Manufacturing

Associate in Applied Science Degree NMC Code 555

As an NMC Advanced Manufacturing student, you will study drafting and design standards, 2D AutoCAD and 3D SolidWorks CAD software, manual machining, CNC and CAM programming, and other related topics. You may seek job opportunities as a CAD drafter or 3D modeler, CNC or CAM programmer, CNC operator, or a blend of these technologies. Manufacturing companies employing the latest technology use 3D parametric modeling (CAD) to create part and assembly models. Computer Numerical Controlled (CNC) machines or dedicated mass production machines are then used to make the parts. Computer Aided Machining software (CAM) generates cutter paths for the machines based on the solid models. Advanced Manufacturing graduates are ready to begin rewarding careers or transfer for a bachelor’s degree.

General Education Requirements Credits: 21-22
Communications: ENG 111 and ENG 112* ....... 7-8
Humanities: Any Group 1 course ......................... 3
Mathematics: Placement into MTH 121 or higher or
Completion of MTH 111* ................................. 4
Science: PHY 105 or PHY 121* .......................... 4
Social Sciences: Any Group 1 course ................. 3
* Recommended for students planning to transfer. Students placing above MTH 111 must select an elective to reach at least 64 total credits.
** Students testing out of math or transferring in courses with fewer credits must complete the minimum degree requirements of 64 credits with elective credits from any department.

Occupational Specialty Requirements 43-44
DD 101 Print Reading and Sketching, Mfg. ............... 3
DD 110 Basic Metallurgy .................................. 3
DD 120 Computer Aided Drafting (AutoCAD) ....... 2
DD 125 Mechanical Drafting (AutoCAD) ............... 2
DD 150 Detail Drafting .................................... 4
DD 160 Tolerancing and GD&T ......................... 3
DD 170 Part & Assembly Modeling ..................... 4
DD 240 Adv. Part and Assembly Modeling .......... 4
DD 295 Advanced Manufacturing Project or
DD 290 Internship (permission required) ............ 3-4
MFG 111 Math for Manufacturing .................. 3
MFG 113 Machining I .................................. 3
MFG 114 Machining II .................................. 3
MFG 211 CNC Programming .......................... 3
MFG 212 Computer-Aided Machining ............... 3

Program Requirements 64-66
**CAD/CAM - CAD Drafter, Mechanical**

**Certificate of Achievement (Level II)  NMC Code 027**

Certificate completers learn 2D mechanical drafting and 3D part and assembly modeling using AutoCAD and SolidWorks software. Threads, fasteners, conventional tolerancing, and geometric tolerancing are presented in the context of detail drawings for tooling assemblies. Applied mathematics and conventional machining are also presented. Students are prepared for entry level CAD drafting positions in companies that produce their own products or companies that produce components for other companies.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD 101</td>
<td>Print Reading and Sketching, Mfg.</td>
<td>3</td>
</tr>
<tr>
<td>DD 110</td>
<td>Basic Metallurgy</td>
<td>3</td>
</tr>
<tr>
<td>DD 120</td>
<td>Comp. Aided Drafting (AutoCAD)</td>
<td>2</td>
</tr>
<tr>
<td>DD 125</td>
<td>Mechanical Drafting (AutoCAD)</td>
<td>2</td>
</tr>
<tr>
<td>DD 150</td>
<td>Detail Drafting</td>
<td>4</td>
</tr>
<tr>
<td>DD 160</td>
<td>Tolerancing and GD&amp;T</td>
<td>3</td>
</tr>
<tr>
<td>DD 170</td>
<td>Part and Assembly Modeling</td>
<td>4</td>
</tr>
<tr>
<td>DD 240</td>
<td>Advanced Part and Assembly Modeling</td>
<td>4</td>
</tr>
<tr>
<td>MFG 111</td>
<td>Math for Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>MFG 113</td>
<td>Machining I</td>
<td>3</td>
</tr>
<tr>
<td>MFG 114</td>
<td>Machining II</td>
<td>3</td>
</tr>
<tr>
<td>MTH 23 or placement into MTH 111 or higher</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**CAD/CAM - CAD Trainee, Mechanical**

**Certificate of Achievement (Level I)  NMC Code 028**

Certificate completers learn basic AutoCAD and SolidWorks functions and demonstrate their abilities by applying these functions to mechanical drafting projects. They are prepared to work under supervision to update CAD drawings or create new drawings similar to a given example. With instruction, completers can learn company standards, practices, and product lines which will increase their value.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD 101</td>
<td>Print Reading and Sketching, Mfg.</td>
<td>3</td>
</tr>
<tr>
<td>DD 120</td>
<td>Comp. Aided Drafting (AutoCAD)</td>
<td>2</td>
</tr>
<tr>
<td>DD 125</td>
<td>Mechanical Drafting (AutoCAD)</td>
<td>2</td>
</tr>
<tr>
<td>DD 150</td>
<td>Detail Drafting</td>
<td>4</td>
</tr>
<tr>
<td>DD 170</td>
<td>Part and Assembly Modeling</td>
<td>4</td>
</tr>
<tr>
<td>MFG 111</td>
<td>Math for Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>MTH 23 or placement into MTH 111 or higher</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Child Development**

**Certificate of Achievement (Level II)  NMC Code 002**

This program is designed to be a building block program. By adding certain classes, a student may complete the requirements for an associate's degree and students may transfer to a college or university to complete a bachelor's degree. Students may also elect to stay in Traverse City and transfer to the University Center.

Receiving NMC's Certificate of Achievement (Level II) in Child Development qualifies individuals to meet the Early Childhood Lead Teacher requirements for the State of Michigan Licensing Rules for Child Care Centers. In addition, the following classes are approved by the National Child Development Associates (CDA) Program. Students completing NMC's Child Developmental certificate program and the CDA credentialing process will meet qualifications for Michigan's Licensing Rules for Early Childhood and/or School Age Care Program Director. A chart showing the breakdown of hours for the CDA functional areas is available in the Social Science Academic Area Office.

Students are encouraged to work closely with the Child Development coordinator to complete this certificate. A 2.0 GPA must be maintained to receive the certificate and 20 of the 36 credits must be earned at NMC.

**Child Development Certificate of Achievement Outcomes**

Students completing the Child Development Certificate will be able to reliably demonstrate a working knowledge of child development from conception to twelve years of age; possess observation skills and tools to assess, evaluate, and build individualized plans for children; apply curriculum development knowledge to provide age appropriate/multi-cultural activities and materials; apply environment design knowledge; demonstrate a working understanding of special need children/families in inclusion/self-contained classrooms; possess working knowledge and skills in discipline management, development of self-esteem and prosocial behaviors; apply knowledge of program management and philosophy building; apply knowledge in working with families, including diverse/multi-cultural systems.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD 101</td>
<td>Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>CD 202</td>
<td>Human Growth and Development</td>
<td>5</td>
</tr>
<tr>
<td>CD 203</td>
<td>Guiding Young Children</td>
<td>3</td>
</tr>
<tr>
<td>CD 204</td>
<td>Early Childhood Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>CD 206</td>
<td>Infant/Toddler Development</td>
<td>3</td>
</tr>
<tr>
<td>CD 220</td>
<td>Childhood Program Management</td>
<td>3</td>
</tr>
<tr>
<td>CD 230</td>
<td>Early Language and Literacy</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
<td>4</td>
</tr>
<tr>
<td>PSY 101</td>
<td>Intro to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 212</td>
<td>Psychology/Exceptional Child</td>
<td>3</td>
</tr>
<tr>
<td>CD 290</td>
<td>Service Learning Internship Experience*</td>
<td>2-3</td>
</tr>
<tr>
<td>MTH 23 or placement into MTH 111 or higher</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

* This internship can be split over more than one semester.
Clerical Support

Certificate of Achievement (Level I)  NMC Code 020

Well-trained office professionals continue to be in demand and play an integral role in the successful operation of an organization. They work as a team with managers, professionals, and other support staff to control and manage administrative operations.

The Clerical Support and Administrative Support Specialist Certificates focus on specific skills which area employers consider essential.

Certificate Requirements  Credits: 17

Prerequisite(s): CIT 109A Beginning Keyboarding I or equivalent skill

ACC 121 Accounting Principles I .....................4
BUS 101 Introduction to Business ......................3
BUS 130 Mechanics of Business Writing ............3
BUS 155 Interpersonal Communications ............3
CIT 109B Keyboarding II ................................2
CIT 122A Computer and Internet Basics I ........1
CIT 122B Computer and Internet Basics II .......1

Computer Studies - Computer Information Technology - General

Associate in Applied Science Degree w/Bachelor in Science - Computer Information Systems through Ferris State University  NMC Code 106

This program gives students comprehensive computer instruction in addition to a background in business and liberal arts. Successful Associate Degree graduates are qualified for entry-level positions as computer technicians, programmers, and other information technology positions.

Students enrolled in this program will be exposed to many facets of the Computer Information Technology Industry which includes programming, web development, databases, hardware, networking, and operating systems. Students will develop software using the latest programming languages and web development tools, create and develop databases using Microsoft Access and SQL, acquire skills needed to assemble/disassemble PCs and troubleshoot hardware and software issues, configure and setup local area networks and work with the latest client and server operating systems.

General Education Requirements  Credits: 17-18

Communications: ENG 111 and BUS 231 or ENG 112 .......................................................7-8
Humanities: PHL 202 or PHL 105 ..........................3
Mathematics: Placement into MTH 121 or higher, or completion of MTH 111* ................................(4)
Science: Any Group 1 course with a lab ...............4
Social Sciences: Any Group 1 course (ECO 201 recommended) .....................................3

* The four credits of MTH 111 do not count toward total CIT program credits.

Occupational Specialty Requirements  49-50

ACC 121 Accounting Principles I .....................4
BUS 101 Introduction to Business or
ACC 122 Accounting Principles II ..................3-4
CIT 110 Programming Logic & Design ..............3
CIT 156 CompTIA A+® Certification I .............3
CIT 157 CompTIA A+® Certification II ............3
CIT 170 Introduction to Database Management ...3
CIT 180 XHTML Programming .......................2
CIT 195 .NET Application Programming ..........3
CIT 210 Spreadsheet Apps - MS Excel or
CIT 233 Project Management .........................3
CIT 235 .NET Object-Oriented Programming .....3
CIT 248 SQL Server Databases .......................3
CIT 255 .NET Object-Oriented Programming .....3
CIT 256 Linux Administration ........................3
CIT 280 Systems Analysis and Design .............3
CIT 290 CIT Internship* ................................3

Program Requirements  66-68

Ferris State University Requirements  30
ISYS 411 Project Management ........................3
ISYS 470 Database Administration ..................3
ISYS 488 Systems Design & Implementation ....3
ISYS 489 Adv. Systems Design & Implementation ..3
BUSN 499 Interdisciplinary Experience ............3
FINC 322 Financial Management I .................3
ISYS 321 Business Information Systems .........3
MGMT 370 Quality/Operations Management ......3
PLSC 300+ Social Awareness Elective 300/400 ..3
ENGL 325 Advanced Writing in Business ........3

Other NMC courses for Bachelor's degree are: 36
ACC 122 Principles of Accounting II ..............4
BUS 216 Business Law I ................................3
MGT 241 Principles of Management ...............3
MKT 201 Principles of Marketing ...................3
COM 111 Public Speaking ................................4
ENG 143 English Composition ........................4
Science Course ...........................................3
2 Cultural Enrichment Classes .......................6
ECO 202 Principles of Macroeconomics ..........3
MTH 131 Probabilities and Statistics ...............3

* Two competencies are required for the Internship course: a 3.0 GPA in CIT classes (with 20 credits and an overall average of 2.5 and department approval) and a keyboarding competency.

While a 3.0 GPA in CIT classes is required for this internship, an alternative, campus-based internship opportunity is available for those students who do not meet this requirement.

Ferris State University

Program Information

Program Information

Contact the Ferris State University-University Center Office for updates at (231) 995-1734.
### Computer Studies - Computer Information Technology - Developer

**Associate in Applied Science Degree  NMC Code 108**

As everyone and everything becomes networked, the demand for software applications continues to expand. The CIT Developer program targets this need by producing graduates who are effective programmers and solution architects. The Microsoft .NET framework is utilized to deliver practical knowledge of data access and application development, with the goal of getting you as deep as possible into the patterns and practices of modern programming. A solid understanding of good design enables students to easily transition into other development platforms such as Java. Students considering transfer should see an advisor.

#### General Education Requirements  Credits: 17-18

| Communications: ENG 111 and ENG 112 | 7-8 |
| or ENG 220 | 7-8 |
| Humanities: PHL 105 or PHL 202 | 3 |
| Mathematics: Placement into MTH 121 or higher, or completion of MTH 111* | (4) |
| Science: Any Group 1 with a lab | 4 |
| Social Sciences: Any Group 1 course | 3 |
| (ECO 201 recommended) | |

*The four credits of MTH 111 do not count toward total CIT program credits.*

#### Occupational Specialty Courses  49

| BUS 101 Introduction to Business | 3 |
| BUS 155 Interpersonal Communications or | |
| BUS 231 Professional Communications | 3 |
| CIT 110 Programming Logic and Design | 3 |
| CIT 170 Introduction to Database Management | 3 |
| CIT 180 XHTML Programming | 2 |
| CIT 185 XML Programming | 2 |
| CIT 190 JavaScript Programming | 2 |
| CIT 195 .NET Application Programming | 3 |
| CIT 213 Networking Technologies | 4 |
| CIT 215 Windows Server Environment | 3 |
| CIT 218 Web App Programming ASP .NET | 3 |
| CIT 233 Project Management | 3 |
| CIT 248 SQL Server Databases | 3 |
| CIT 255 .NET Object-Oriented Programming | 3 |
| CIT 275 .NET Solutions Development | 3 |
| CIT 280 Systems Analysis and Design | 3 |
| CIT 290 CIT Internship | 3 |

#### Program Requirements  66-67

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### Computer Studies - Computer Information Technology-Infrastructure

**Associate in Applied Science Degree  NMC Code 125**

This program provides students with a comprehensive background in computer hardware, operating systems, local area networking, and internetwork routing and switching. This degree is designed to prepare students for the following internationally recognized certifications:

- CompTIA A+® IT Technician
- CompTIA Network+® Certification
- CompTIA Security+® Certification
- Cisco CCNA (Cisco Certified Network Associate)
- MCTS – Microsoft Certified Technology Specialist, MCITP – Microsoft Certified Information Technology Professional and MTA – Microsoft Technology Associate

Successful Associate Degree graduates are qualified for entry-level positions as hardware technicians, network administrators, and infrastructure support specialists. NMC is a Cisco Local Networking Academy. CompTIA (Computing Technology Industry Association), Microsoft, and Cisco certification exams are administered by VUE or Prometrics Testing Services. For current program information, call (231) 995-1166. Students considering transfer should see an advisor.

#### General Education Requirements  Credits: 17-18

| Communications: ENG 111 and ENG 112 | 7-8 |
| or ENG 220 | 7-8 |
| Humanities: PHL 105 or PHL 202 | 3 |
| Mathematics: Placement into MTH 121 or higher, or completion of MTH 111* | (4) |
| Science: Any Group 1 with a lab | 4 |
| Social Sciences: Any Group 1 course | 3 |
| (ECO 201 recommended) | |

*The four credits of MTH 111 do not count toward total CIT program credits.*

#### Occupational Specialty Courses  52

| BUS 155 Interpersonal Communications | 3 |
| CIT 156 CompTIA A+® Certification I | 3 |
| CIT 157 CompTIA A+® Certification II | 3 |
| CIT 160 Cisco Internetworking I | 4 |
| CIT 161 Cisco Internetworking II | 4 |
| CIT 213 Networking Technologies | 4 |
| CIT 215 Windows Server Environment | 3 |
| CIT 233 Project Management | 3 |
| CIT 240 Network Security Management | 3 |
| CIT 242 Windows Client Administration | 2 |
| CIT 246 Windows Server Infrastructure | 3 |
| CIT 247 Windows Server Administration | 3 |
| CIT 256 Linux Administration | 3 |
| CIT 260 Cisco Internetworking III | 4 |
| CIT 261 Cisco Internetworking IV | 4 |
| CIT 290 CIT Internship | 3 |

* Two competencies are required for the Internship course: a 3.0 GPA in CIT classes (with 20 credits and an overall average of 2.0 and department approval), and a keyboarding competency.*
While a 3.0 GPA in CIT classes is required for this internship, an alternative, campus-based internship opportunity is available for those students who do not meet this requirement.

Program Requirements 69-70

Computer Studies - Infrastructure Specialist I
Certificate of Achievement (Level I) NMC Code 033

The Infrastructure Specialist I Certificate of Achievement prepares computer professionals to assemble, upgrade, maintain and repair personal computers and work in the area of local area networks. The program is designed to prepare students for the following three internationally recognized certifications:

• CompTIA A+® Certification
• CompTIA Network+® Certification

CompTIA® (Computing Technology Industry Association) exams are administered by VUE Testing Services or Prometrics. For current program information, please call (231) 995-1166 or (231) 995-2000.

Certificate Requirements Credits: 18
BUS 155 Interpersonal Communications .................. 3
CIT 242 Windows Client Administration .................. 2

For CompTIA A+® Certification:
CIT 156 CompTIA A+® Certification I .................. 3
CIT 157 CompTIA A+® Certification II .................. 3

For CompTIA Network+® Certification:
CIT 213 Networking Technologies ....................... 4

For Microsoft MCTS and MCITP Certification:
CIT 215 Windows Server Environment .................. 3

Computer Studies - Infrastructure Specialist II
Certificate of Achievement (Level II) NMC Code 030

Students completing the Infrastructure Specialist I certificate may elect to continue their education and obtain a level II certificate. The Cisco CCNA certification is an industry recognized certification in internetwork routing and switching. NMC is a Cisco Local Networking Academy.

Cisco Certification Exams are administered by VUE Testing Services. For current program information, please call (231) 995-1166.

Certificate Requirements Credits: 34
Completion of Infrastructure Specialist I certificate .......... 18
CIT 160 Cisco Internetworking I ......................... 4
CIT 161 Cisco Internetworking II ......................... 4
CIT 260 Cisco Internetworking III ......................... 4
CIT 261 Cisco Internetworking IV ......................... 4

Certificate Requirements Credits: 52
Completion of Infrastructure Specialist I certificate .......... 18
Completion of Infrastructure Specialist II certificate .......... 16

For Microsoft MCTS and MCITP Certification*
CIT 246 Windows Server Infrastructure .................. 3
CIT 247 Windows Server Administration ................. 3

For CompTIA Network+® Certification:
CIT 240 Network Security Management .................. 3

Occupational Requirements
CIT 233 Project Management ............................ 3
CIT 256 Linux Administration ............................ 3
CIT 290 CIT Internship ................................. 3
Computer Studies - Industry Certifications

Industry Certifications

Microsoft Office Specialist - Microsoft Office Specialist certification proves expertise in Microsoft applications. Holders of these credentials stand out as truly knowledgeable people. NMC'S approved Microsoft testing center offers online training classes in Word, Excel, Access and PowerPoint. For additional information on testing and/or training please call (231) 995-2247.

Microsoft Certified Technology Specialist (MCTS) and Microsoft Certified Information Technology Professional (MCITP) are internationally recognized certifications focusing on Microsoft Windows, server and infrastructure environment.

CompTIA A+® Certification - The CompTIA A+® certification is the industry standard for validating vendor-neutral skills expected of an entry-level IT technician. CompTIA A+® Certification I and CompTIA A+® Certification II are NMC courses and provide the necessary preparation to pass the A+ Essentials and A+ IT Technician Certification exams.

CompTIA Network+® Certification - The CompTIA Network+® certification validates technical competency in network administration and support. Those holding Network+® certification demonstrate critical knowledge of media and topologies, protocols and standards, and network security. The Network Technologies course provides the necessary preparation to pass the Network+ Certification exam.

CompTIA Security+® Certification - The CompTIA Security+® certification tests for security knowledge mastery of an individual with experience in networking. The CompTIA Security+® certification validates technical competency in security and covers industry-wide topics, including communication security, infrastructure security, cryptography, access control, authentication, external attack and operational and organization security. Network Security Management provides the necessary preparation to pass the Security+ Certification exam.

Cisco CCNA Certification - The CCNA certification (Cisco Certified Network Associate) indicates a foundation in, and apprentice knowledge of networking. CCNA certified professionals can install, configure, operate LAN, WAN and dial access services for small networks (100 nodes or fewer), including but not limited to use of these protocols: IP, EIGRP, OSPF, Frame Relay, IP RIP, VLANs Rip, Ethernet, Access Lists.

Cisco Internetworking I through Cisco Internetworking IV are courses offered by the NMC Cisco Networking Academy and provide training for the CCNA Exam. CompTIA (Computing Technology Industry Association), Microsoft, and Cisco certification exams are administered by VUE or Prometrics Testing Services. For additional program information, please call (231) 995-1166.

Computer Studies - Office Applications Specialist

Certificate of Achievement (Level I) NMC Code 035

The Office Applications Specialist certificate helps meet the demand for qualified and knowledgeable people in today’s workplace. It helps students to acquire the desktop applications expertise and basic computer skills needed to work more productively and efficiently with Microsoft Office.

This NMC credential also serves to train candidates for the globally recognized Microsoft Specialist series of certifications. NMC is a Microsoft Office approved testing center, and the certification exams are administered at the Aero Park campus. For more information, please call (231) 995-2247.

Certificate Requirements Credits: 16

CIT 120A Microsoft Word Level I A ..................... 1
CIT 120B Microsoft Word Level I B ..................... 1
CIT 121A Microsoft Word Level II A ..................... 1
CIT 121B Microsoft Word Level II B ..................... 1
CIT 128 Microsoft Excel Level I ......................... 2
CIT 129 Microsoft Excel Level II ......................... 2
CIT 124A Microsoft PowerPoint Level I A ............. 1
CIT 124B Microsoft PowerPoint Level I B ............. 1
CIT 126 Microsoft Access Level I ....................... 2

Electives Credits: 4

Choose from the following:

ACC 121 Accounting Principles I ....................... 4
CIT 109A Keyboarding I ......................... 2
CIT 122A Computer & Internet Basics I ............ 1
CIT 122B Computer & Internet Basics II .......... 1
CIT 126 Microsoft Access Level I .................... 2
CIT 127 Microsoft Access Level II ................... 2
CIT 155 Personal Computer Maintenance .......... 2
Computer Studies - Support Specialist

Certificate of Achievement (Level III)  NMC Code 006

Students complete course work in business and computer operations leading to a certificate. This program is designed to provide students with the necessary skills to work as support specialist or computer technician. Students will have an opportunity to acquire skills using current operating system and application software and gain experience using Local Area Networks. Students will also learn troubleshooting methodologies and develop project management skills.

Certificate Requirements  Credits: 47-50

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101</td>
<td>3</td>
</tr>
<tr>
<td>BUS 105</td>
<td>3</td>
</tr>
<tr>
<td>BUS 155</td>
<td>3</td>
</tr>
<tr>
<td>BUS 231</td>
<td>3</td>
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<tr>
<td>CIT 120A</td>
<td>1</td>
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<td>CIT 157</td>
<td>2-3</td>
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<td>CIT 170</td>
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<td>CIT 210</td>
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<td>CIT 233</td>
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<td>CIT 292</td>
<td>3</td>
</tr>
<tr>
<td>ENG 220</td>
<td>3</td>
</tr>
<tr>
<td>PHL 105</td>
<td>3</td>
</tr>
</tbody>
</table>

Computer Studies - Web Developer II

Certificate of Achievement (Level II)  NMC Code 040

Prerequisites: Completion of all Web Developer Certificate Level I courses (19 credits)

Level I Certificate Requirements  Credits: 19

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 131</td>
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</tr>
<tr>
<td>CIT 110</td>
<td>3</td>
</tr>
<tr>
<td>CIT 180</td>
<td>2</td>
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<td>CIT 190</td>
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<td>VCA 123</td>
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<tr>
<td>VCA 147</td>
<td>3</td>
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<td>VCA 150</td>
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</table>

Level II Certificate Requirements  Credits: 37

<table>
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<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>BUS 231</td>
<td>or</td>
</tr>
<tr>
<td>BUS 155</td>
<td></td>
</tr>
<tr>
<td>CIT 170</td>
<td>3</td>
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<td>CIT 185</td>
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<td>CIT 195</td>
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<tr>
<td>VCA 125</td>
<td>3</td>
</tr>
<tr>
<td>VCA 146</td>
<td>3</td>
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</tbody>
</table>

Computer Studies - Web Developer III

Certificate of Achievement (Level III)  NMC Code 041

Prerequisites: Completion of all Web Developer Certificate Level I (19 credits) and Level II (18 credits) courses.

Level I Certificate Requirements  Credits: 19

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CIT 218</td>
<td>3</td>
</tr>
<tr>
<td>CIT 248</td>
<td>3</td>
</tr>
<tr>
<td>CIT 255</td>
<td>3</td>
</tr>
<tr>
<td>CIT 291</td>
<td>3</td>
</tr>
<tr>
<td>VCA 123</td>
<td>or</td>
</tr>
<tr>
<td>VCA 246</td>
<td>or</td>
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</table>

Level III Certificate Requirements  Credits: 52

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CIT 218</td>
<td>3</td>
</tr>
<tr>
<td>CIT 248</td>
<td>3</td>
</tr>
<tr>
<td>CIT 255</td>
<td>3</td>
</tr>
<tr>
<td>CIT 291</td>
<td>3</td>
</tr>
<tr>
<td>VCA 123</td>
<td>or</td>
</tr>
<tr>
<td>VCA 246</td>
<td>or</td>
</tr>
</tbody>
</table>

Level I courses (19 credits)

Level II courses (19 credits)

Level III courses (19 credits)

*Two competencies are required for the Internship course: a 3.0 GPA in CIT classes (with 20 credits and an overall average of 2.0 and department approval), and a keyboarding competency.

While a 3.0 GPA in CIT classes is required for this internship, an alternative, campus-based internship opportunity is available for those students who do not meet this requirement.
Construction Technology -
Carpentry Technology
Certificate of Achievement (Level I)  NMC Code 061

Skilled carpenters must knowledgeably use specialized tools; read blueprints; frame structures; install doors, windows, cabinets, insulation, and finish trim; and construct roofs, decks, and stairways. Being versatile opens a wide range of employment opportunities. The curriculum is designed by the industry and aligned with national competency standards. Students receive hands on training in our state-of-the-art science lab. Information: (231) 995-2007.

Certificate Requirements  Credits: 18
CAR 101  Introduction to Carpentry ..................3
CAR 105  Residential Framing .........................3
CAR 121  General Carpentry Practices ...............3
CAR 125  Interior Carpentry .........................3
CAR 131  Rigging and Concrete Practices ..........3
CAR 135  Layout and Formwork ......................3

Construction Technology -
Electrical Technology
Certificate of Achievement (Level I)  NMC Code 062

Qualified electricians install, troubleshoot, and repair electrical systems in residential and commercial settings. There is high demand for well-trained electricians nationwide. The curriculum is designed by the industry and aligned with national competency standards. Students receive hands-on training in our state-of-the-art science lab. Information: (231) 995-2007.

Certificate Requirements  Credits: 24
ELE 101  Introduction to Electrical ..................3
ELE 105  Residential Electrical ......................3
ELE 121  Electrical Applications ....................3
ELE 125  Electrical Components .....................3
ELE 131  Electrical Distribution .....................3
ELE 135  Motor Control Circuits ....................3
ELE 141  Commercial Electrical Systems ..........3
ELE 145  Commercial Electrical Controls ..........3

Construction Technology -
HVAC/R Technology
Certificate of Achievement (Level I)  NMC Code 064

There is high demand for qualified technicians in the heating and cooling industry. HVAC/R technicians install, maintain, and repair heating, ventilating, air-conditioning, and refrigeration systems. Because of continuing demand, HVACR technicians can usually find employment with good beginning salaries. The curriculum is designed by the industry and aligned with national competency standards. Students receive hands on training in our state-of-the-art science lab. Information: (231) 995-2007.

Certificate Requirements  Credits: 18
HVA 101  Introduction to HVAC/R ..................3
HVA 105  Thermodynamics of HVAC/R ..........3
HVA 121  Fundamentals of Heating .................3
HVA 125  A/C Applications .........................3
HVA 131  Gas Heating Diagnostics .................3
HVA 135  Commercial HVAC/R ....................3

Construction Technology -
Facilities Maintenance
Certificate of Achievement (Level II)  NMC Code 063

Performing facilities maintenance requires knowledge in several areas. This level II certificate covers reading blueprints, general carpentry, tools of the trade, electrical wiring and schematics, and thermodynamics of refrigeration. Also required will be 14 technical electives that can range from drafting to alternative energy integration into a facility. The curriculum is designed by the industry and aligned with national competency standards. Students receive hands on training in our state-of-the-art science lab. Information: (231) 995-2007.

Certificate Requirements  Credits: 32
CAR 101  Introduction to Carpentry ..................3
CAR 105  Residential Framing .........................3
ELE 101  Introduction to Electrical ..................3
ELE 105  Residential Electrical ......................3
HVA 101  Introduction to HVAC/R ..................3
HVA 105  Thermodynamics of HVAC/R ..........3
Technical Electives (approved list) .................14

NMC. Find it here.
Construction Technology - Plumbing Technology
Certificate of Achievement (Level I) NMC Code 067
There is high demand for qualified technicians in the plumbing industry. Plumbing technicians install, maintain, and repair plumbing systems. Because of continuing demand, plumbing technicians can usually find employment with good beginning salaries. The curriculum is designed by the industry and aligned with national competency standards. Students receive hands on training in our state-of-the-art science lab. Information: (231) 995-2007.

Certificate Requirements Credits: 18
PLU 101 Introduction to Plumbing.........................3
PLU 105 Plumbing Components..........................3
PLU 121 Commercial Plumbing..........................3
PLU 125 Plumbing Installation..........................3
PLU 131 Advanced Plumbing Practices................3
PLU 135 Plumbing Systems and Pumps................3

Construction Technology - Renewable Energy Technology - Electrical
Associate in Applied Science Degree NMC Code 655
Renewable energy is one of the most vital resources of the 21st century. NMC offers professional certificates and an Associate of Applied Science degree in this exciting, growing field.

Renewable Energy Technology - Electrical focuses on how to harness wind and solar-generated electricity and its use by residential consumers and utilities. Among the NMC resources you’ll use in the program are: mobile solar lab, two wind turbines (located at the University Center and Aero Park campuses), and 8 kw, grid-interconnected solar array. Information: (231) 995-2007.

General Education Requirements Credits: 26
Communications: ENG 111 and ENG 112
or ENG 220 ....................................................7-8
Humanities: PHL 202 .............................................3
Mathematics: MTH 111 and MTH 121 ......................8
Science: ENV 117 or PHY 121 .............................4
Social Sciences: Any Group 1 course .....................3

Technical Core Requirements 9
EGY 101 Principles of Renewable Energy .............3
EGY 105 Sustainable Building Design ................3
EGY 115 Residential Energy Efficiency ..............3

Electrical Track Requirements 18
EGY 141 Solar Photovoltaic Technology I .............3
EGY 161 Wind Power Technology ......................3
ELE 101 Introduction to Electrical ....................3
ELE 105 Residential Electrical ........................3
ELE 121 Electrical Applications ........................3
ELE 125 Electrical Components .......................3

Technical Electives - Electrical Track
CMT 103 Construction Safety .........................1
CMT 107 Construction Supervision ..................3
EGY 151 Solar Photovoltaic Technology II ..........3
EET 103 Electrical Studies I .........................3
EET 104 Electrical Studies II .......................3
EET 221 Industrial Controls .........................3
EET 231 Programmable Logic Controllers ........3
ELE 131 Electrical Distribution .....................3
ELE 135 Motor Controls Circuits ....................3
ELE 141 Commercial Electrical Systems ..........3
ELE 145 Commercial Electrical Controls ..........3

Program Requirements 64

Construction Technology - Renewable Energy Technology - Electrical
Certificate of Achievement (Level II) NMC Code 065

Certificate Requirements Credits: 34
ELE 101 Introduction to Electrical ..................3
EGY 101 Principles of Renewable Energy ..........3
MTH 111 Intermediate Algebra ....................4
ELE 105 Residential Electrical ......................3
EGY 105 Sustainable Building Design .............3
EGY 115 Residential Energy Efficiency ..........3
ELE 121 Electrical Applications ........................3
EGY 141 Solar Photovoltaic Technology I ..........3
ELE 125 Electrical Components ..................3
EGY 161 Wind Power Technology .................3
Technical Elective .................................3
Construction Technology - Renewable Energy Technology- HVAC

Associate in Applied Science Degree  NMC Code 656

Renewable Energy Technology - HVAC/R (heating, ventilation, air conditioning and refrigeration) emphasizes the use of solar and geo-thermal energy production in heating and cooling in residential applications. Among the NMC resources you’ll use in the program are: mobile solar lab, geothermal heat pump lab, solar thermal system and 8 kw, grid-interconnected solar array. Information: (231) 995-2007.

General Education Requirements  Credits:  34
Communications: ENG 111 and ENG 112 or ENG 220 ................................................................. 7-8
Humanities: PHL 202 ................................................. 3
Mathematics: MTH 111 and MTH 121 ......................... 8
Science: ENV 117 or PHY 121 or ENV 103 ...................... 4
Social Sciences: Any Group 1 course ............................ 3

Technical Core Requirements  9
EGY 101 Principles of Renewable Energy .................... 3
EGY 105 Sustainable Building Design ....................... 3
EGY 115 Residential Energy Efficiency ....................... 3

HVAC Track Requirements  18
EGY 143 Solar Thermal Technology I ....................... 3
EGY 145 Geothermal Technology .......................... 3
HVA 101 Introduction to HVAC/R ............................. 3
HVA 105 Thermodynamics of HVAC/R ....................... 3
HVA 121 Fundamentals of Heating .......................... 3
HVA 125 A/C Applications .................................... 3

Technical Electives - Electrical Track
CMT 103 Construction Safety ................................ 1
CMT 107 Construction Supervision ......................... 3
CAR 101 Introduction to Carpentry......................... 3
CAR 105 Residential Framing ................................ 3
EET 103 Electrical Studies I .................................. 3
EET 104 Electrical Studies II ................................ 3
EET 221 Industrial Controls ................................ 3
EET 231 Programmable Logic Controllers ............... 3
HVA 131 Gas Heating Diagnostics ......................... 3
HVA 135 Commercial HVAC/R ............................ 3
PLU 101 Introduction to Plumbing ......................... 3
PLU 105 Plumbing Components ............................ 3

Program Requirements  64

Construction Technology - Renewable Energy Technology- HVAC

Certificate of Achievement (Level II)  NMC Code 066

Certificate Requirements  Credits:  34
HVA 101 Introduction to HVAC/R .......................... 3
EGY 101 Principles of Renewable Energy .................. 3
MTH 111 Intermediate Algebra ............................. 4
HVA 105 Thermodynamics of HVAC/R .................... 3
EGY 105 Sustainable Building Design .................... 3
EGY 115 Residential Energy Efficiency .................... 3
HVA 121 Fundamentals of Heating ......................... 3
EGY 143 Solar Thermal Technology I .................... 3
HVA 125 A/C Applications .................................. 3
EGY 145 Geothermal Technology ......................... 3
Technical Elective ............................................. 3

NMC.
Find it here.
Culinary Arts
Great Lakes Culinary Institute

Associate in Applied Science Degree  NMC Code 109

The Great Lakes Culinary Institute believes in the principle of learning by doing. Extensive hands-on training will give you the competitive advantage in this highly competitive field.

This program is designed to provide rigorous and concentrated study for those students who plan careers in the rapidly-growing food service industry. The program's main emphasis is to prepare students for entry-level chef and kitchen management positions. Consideration is given to the science and techniques associated with the selection, preparation, and serving of foods to large and small groups.

The Great Lakes Culinary Institute's facility is located on NMC's Great Lakes Campus. It is comprised of five culinary labs including a bakery, introductory and food skills kitchen, an advanced cooking kitchen, a garde manger kitchen, an a la carte kitchen and Lobdell’s, a 90-seat training restaurant. Upon graduation, students will have an unbeatable combination of knowledge, skills and work experience.

The Great Lakes Culinary Institute is accredited by the American Culinary Federation and is one of more than 200 colleges in the U.S. to receive this distinction. Students are eligible for certification as Certified Culinarians upon graduation. Students wishing to pursue a baccalaureate degree may transfer to institutions with which NMC has transfer agreements.

General Education Requirements  Credits:  17-18
Communications: ENG 111 and BUS 231
or ENG 112 .........................................................7-8
Humanities: Any Group 1 course ........................3
Mathematics: Placement into MTH 111 or higher, or
completion of MTH 23* ........................................(4)
Science: Any Group 1 course with a lab .................4
Social Sciences: Any Group 1 course ..................3
*These credits do not count toward degree requirements.

Occupational Specialty Requirements  56
CIT 100 Computers in Business-An Intro ..............3
CUL 101 Today's Hospitality Industry ..................3
CUL 110 Safety and Sanitation ............................2
CUL 111 Professional Cookery ..........................6
CUL 118 Intro to Baking ......................................4
CUL 121 Purchasing and Receiving .....................2
CUL 190 Culinary Internship ..............................2
CUL 210 Nutrition for Culinary Arts ....................2
CUL 211 Menu Planning .................................3
CUL 213 World Cuisine .....................................6
CUL 215 Garde Manger .....................................4
CUL 217 Dining Room and Kitchen Management ....3
CUL 218 Advanced Baking ................................4
CUL 295 Contemporary Service & Cuisine ............12

Note: Admission to the Culinary Arts program requires COMPASS test scores of Writing 70, Reading 82 or co-requisite of ENG 111 + 11, and Pre-Algebra 21.
Dental Assistant

**Associate in Applied Science Degree**  NMC Code 300

Dental Assistants are members of a highly qualified health team whose varied duties require knowledge of the basic dental sciences, proficiency in laboratory and clinical skills, and practical experience in meeting patient needs. Both the associate and the certificate programs are accredited by the Commission on Dental Accreditation (CODA) and approved by the Michigan Board of Dentistry.

Few jobs offer the diversity and flexibility found in Dental Assisting. While most dental assistants work as chairside or business assistants in general or specialty dental practices such as orthodontics or oral surgery, other career paths include the following: lab technicians; sales representatives in dental supply companies; and as teachers in vocational or college dental auxiliary programs. It is suggested that students begin this program in fall semester. However, students wanting to begin spring, or a part-time program should contact the program director for academic advising. Students must be admitted to both the college and the Dental Assistant Program. Program admission requires a 2.0 minimum GPA on high school or college transcript, or pass GED.

**General Education Requirements**  Credits: 21-23

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities: Any Group 1 course</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics: Placement into MTH 111 or higher, or completion of MTH 23*</td>
<td>(4)</td>
</tr>
<tr>
<td>Science: BIO 106</td>
<td>4</td>
</tr>
<tr>
<td>Social Science: PSY 101</td>
<td>3</td>
</tr>
<tr>
<td>Electives: Group 1 or 2 courses</td>
<td>3-4</td>
</tr>
</tbody>
</table>

* These credits do not count toward degree requirements.

**Occupational Specialty Requirements**  42

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BUS 155 Interpersonal Communications or</td>
<td>3</td>
</tr>
<tr>
<td>COM 111 Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>HAH 120 Infection Control</td>
<td>2</td>
</tr>
<tr>
<td>HDA 101 Introduction to Dentistry</td>
<td>2</td>
</tr>
<tr>
<td>HDA 112 Dental Materials</td>
<td>2</td>
</tr>
<tr>
<td>HDA 113 Dental Materials Lab</td>
<td>1</td>
</tr>
<tr>
<td>HDA 120 Dental Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HDA 140 Oral Pathology/Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>HDA 150 Dental Office Management</td>
<td>2</td>
</tr>
<tr>
<td>HDA 160 Dental Emergencies</td>
<td>1</td>
</tr>
<tr>
<td>HDA 170 Preventive Dentistry</td>
<td>2</td>
</tr>
<tr>
<td>HDA 240 Chairside Procedures</td>
<td>5</td>
</tr>
<tr>
<td>HDA 241 Chairside Procedures Lab</td>
<td>2</td>
</tr>
<tr>
<td>HDA 242 Dental Radiography</td>
<td>2</td>
</tr>
<tr>
<td>HDA 243 Dental Radiography Lab</td>
<td>1.5</td>
</tr>
<tr>
<td>HDA 251 Dental Assistant Internship I</td>
<td>4</td>
</tr>
<tr>
<td>HDA 252 Dental Assistant Internship II</td>
<td>4</td>
</tr>
<tr>
<td>HDA 282 CDA/RDA Written Exam Prep</td>
<td>2</td>
</tr>
<tr>
<td>HDA 286 RDA Clinical Exam Prep</td>
<td>1</td>
</tr>
<tr>
<td>HPD 110 Basic Life Support for Health Care Providers</td>
<td>0.5</td>
</tr>
</tbody>
</table>

*Note: A 2.0 grade or higher is required in HDA & HAH courses.*

**Certificate of Achievement**  NMC Code 070

The following coursework may be taken in order to qualify for the Certificate of Achievement in Dental Assisting. Many of NMC’s dental assistant students enroll in the certificate program following either a part- or full-time schedule. Completion of the program qualifies students for the state board exam and after passing the exam, they may practice as Registered Dental Assistants. In addition, program completers are eligible for the National Certification exam which is recognized nationwide. While the associate degree is not required for either of these exams, the majority of students complete the associate degree after completion of the certificate. For additional information on the Dental Assistant program please see the previous listing for the Associate in Applied Science for Dental Assistant.

**Placement Requirements (to complete certificate)**

Mathematics: Placement into MTH 111 or higher, or successful completion of MTH 23*

Communications: Placement into ENG 111, or completion of ENG 99* or ENG 108

* These credits do not count toward degree requirements.

**Certificate of Achievement**  Credits: 42

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 155 Interpersonal Communications or</td>
<td>3</td>
</tr>
<tr>
<td>COM 111 Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>HAH 120 Infection Control</td>
<td>2</td>
</tr>
<tr>
<td>HDA 101 Introduction to Dentistry</td>
<td>2</td>
</tr>
<tr>
<td>HDA 112 Dental Materials</td>
<td>2</td>
</tr>
<tr>
<td>HDA 113 Dental Materials Lab</td>
<td>1</td>
</tr>
<tr>
<td>HDA 120 Dental Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HDA 140 Oral Pathology/Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>HDA 150 Dental Office Management</td>
<td>2</td>
</tr>
<tr>
<td>HDA 160 Dental Emergencies</td>
<td>1</td>
</tr>
<tr>
<td>HDA 170 Preventive Dentistry</td>
<td>2</td>
</tr>
<tr>
<td>HDA 240 Chairside Procedures</td>
<td>5</td>
</tr>
<tr>
<td>HDA 241 Chairside Procedures Lab</td>
<td>2</td>
</tr>
<tr>
<td>HDA 242 Dental Radiography</td>
<td>2</td>
</tr>
<tr>
<td>HDA 243 Dental Radiography Lab</td>
<td>1.5</td>
</tr>
<tr>
<td>HDA 251 Dental Assistant Internship I</td>
<td>4</td>
</tr>
<tr>
<td>HDA 252 Dental Assistant Internship II</td>
<td>4</td>
</tr>
<tr>
<td>HDA 282 CDA/RDA Written Exam Prep</td>
<td>2</td>
</tr>
<tr>
<td>HDA 286 RDA Clinical Exam Prep</td>
<td>1</td>
</tr>
<tr>
<td>HPD 110 Basic Life Support for Health Care Providers</td>
<td>0.5</td>
</tr>
</tbody>
</table>

*Note: A 2.0 grade or higher is required in HDA and HAH courses.*

**Program Requirements**  64
Electronics Technology

The Electronics Technology courses prepare students for employment as an electronic technician. These four courses cover many of the responsibilities of an electronic technician in industry. Typical job responsibilities include construction, installation, operation, testing and repair of a variety of electrical equipment. Also covered are applications in manufacturing equipment and troubleshooting. Students develop skills through laboratory exercises representing an industrial setting.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 103</td>
<td>3</td>
</tr>
<tr>
<td>EET 104</td>
<td>3</td>
</tr>
<tr>
<td>EET 221</td>
<td>3</td>
</tr>
<tr>
<td>EET 232</td>
<td>3</td>
</tr>
</tbody>
</table>

Entrepreneurship Certificate

Certificate of Achievement (Level I)  NMC Code 051

The Entrepreneurship Certificates help students manage and market a business and take an entrepreneurial perspective of business management. They offer an entrepreneur tool set of business knowledge and practices needed for competing in today’s global marketplace. These certificate courses apply to the course requirements for the Entrepreneurship Concentration of the Business Administration AAS degree.

Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 121</td>
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</tr>
<tr>
<td>BUS 101</td>
<td>3</td>
</tr>
<tr>
<td>CIT 216</td>
<td>2</td>
</tr>
<tr>
<td>MGT 245</td>
<td>3</td>
</tr>
<tr>
<td>MGT 255</td>
<td>3</td>
</tr>
<tr>
<td>MKT 201</td>
<td>3</td>
</tr>
</tbody>
</table>

Entrepreneurship Certificate

Certificate of Achievement (Level II)  NMC Code 052

Level I Certificate Requirements

Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BUS 105</td>
<td>3</td>
</tr>
<tr>
<td>BUS 261</td>
<td>3</td>
</tr>
<tr>
<td>BUS 295</td>
<td>3</td>
</tr>
<tr>
<td>MKT 210</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Elective  Any one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 155</td>
<td>3</td>
</tr>
<tr>
<td>BUS 262</td>
<td>3</td>
</tr>
<tr>
<td>CIT 233</td>
<td>3</td>
</tr>
<tr>
<td>MGT 241</td>
<td>3</td>
</tr>
<tr>
<td>MGT 246</td>
<td>3</td>
</tr>
<tr>
<td>MGT 251</td>
<td>3</td>
</tr>
<tr>
<td>MKT 241</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits for Level II 33
Freshwater Studies
Associate in Applied Science Degree

Global Policy and Sustainability ......................... NMC Code 491
Economy and Society ........................................ NMC Code 492
Science and Technology ..................................... NMC Code 493

The Freshwater Studies program is offered by NMC’s Great Lakes Water Studies Institute. Designed to prepare students for emerging career paths, the program is truly one-of-a-kind – the only associate level degree with emphasis in water studies in the United States. Students have a choice of three general streams or emphasis areas: Global Freshwater Policy and Sustainability, Economy and Society or Science and Technology. The Freshwater Studies degree program combines unique courses and opportunities for field experiences available through Northwestern Michigan College and our University partners. In addition to the partners in the Great Lakes region, our program has collaborators in selected sites in Central and South America. This water focused program has an interdisciplary approach designed to offer students flexibility and a variety of opportunities especially critical in these challenging economic times. The core program of studies includes Introduction to Freshwater Studies, Watershed Science, Geographic Information Systems (GIS), Oceanography, Meteorology and Climatology, and an Internship experience either locally or overseas. The degree is intended both for students who plan to enter the professional arena as well as those who wish to further their studies at a four-year school. There are opportunities to continue this field of study with University partnerships located in Traverse City and offsite.

General Education Requirements .......... Credits: 17-18
Communications: ENG 111 and BUS 231 or ENG 112 or ENG 220 ......................... 7-8
Humanities: Group 1 course ................................. 3
Mathematics: Placement into MTH 111 or higher, or completion of MTH 23* ......................... (4)
Science: Group 1 course with a lab ....................... 4
Social Sciences: Group 1 course ......................... 3
* These credits do not count toward degree requirements.

Core Requirements** 23-24
ENV 105 Introduction to Freshwater Studies .......... 2
ENV 115 Introduction to GIS .............................. 3
ENV 117 Meteorology and Climatology ................. 4
ENV 131 Oceanography ...................................... 3
ENV 140 Watershed Science ................................ 4
ENV 290 Freshwater Studies Internship ................. 3
PHL 105 Critical Thinking or PHL 202 Contemporary Ethical Dilemmas ..................... 3-4

Areas of Concentration:**
Global Freshwater Policy and Sustainability
MLS 222 Intermediate Spanish II .......................... 4
MTH 131 Intro to Probability and Statistics ............. 3
GEO 109 World Regional Geography ........................ 3
BIO 105 Living in the Environment ....................... 4

Economy and Society
BUS 101 Introduction to Business ....................... 3
ECO 201 Principles of Macroeconomics ................ 3
MGT 241 Principles of Management .................... 3
MGT 245 Principles of Entrepreneurship ............... 3
ENG 256 Environmental Literature ........................ 3
MTH 131 Intro to Probability and Statistics ............ 3
BIO 105 Living in the Environment ....................... 4

Science and Technology
MTH 141 Calculus I ......................................... 5
CHM 150 General Chemistry I or CHM 151 General Chemistry II or
BIO 115 Cell, Plant & Ecosystem Biology or BIO 211 General Zoology or
PHY 121 General Physics I ................................ 4-5

** Core and Concentration credits can also be applied to General Education requirements.

Please consult an NMC Freshwater Studies program advisor for scheduling guidelines.

Program Requirements Minimum credit hours: 64

Law Enforcement
Associate in Applied Science Degree  NMC Code 352

Graduates of this program are eligible to take the state law enforcement officer examination. Students who anticipate transferring to a four-year college or university need to see an NMC advisor during their first semester, as some courses may be acceptable for transfer credit. Students may enroll in the Law Enforcement Preservice Police Academy in the programs second year, or upon completing first year requirements with a college degree. Completion of the Police Academy (LWE courses) must occur within two semesters, beginning fall semester and completed the following spring semester. A minimum grade of 2.0 must be achieved in each LWE course, satisfying prerequisites for licensing and qualifying the student to take the state examination to be hired by a law enforcement agency, which activates the license. The Police Academy is approved and regulated by the Michigan Commission on Law Enforcement Standards (MCOLES).

It is mandatory that students meet with the Law Enforcement Coordinator a minimum of four weeks prior to beginning LWE courses to register with MCOLES. Students must pass MCOLES reading/writing and physical agility tests prior to starting the LWE courses. Call (231) 995-1283 with questions and visit www.michigan.gov/mcoles for online registration.

General Education Requirements Credits: 21
Communications: ENG 111 and ENG 112 .................. 8
Humanities: PHL 201 or PHL 202 ........................... 3
Mathematics: Placement into MTH 111 or higher, or completion of MTH 23* ................... (4)
Science: Any Group 1 course with lab .................... 4
Social Sciences: PLS 101 or PLS 132 ..................... 3
Additional Core Course: PSY 101 ......................... 3

* These credits do not count toward degree requirements.
Manufacturing Technology

Associate in Applied Science Degree

The Manufacturing Technology program is designed to provide a multi-disciplined technical background in fields for which NMC does not offer a specific degree program. For instance, students interested in pursuing careers in Machine Tool or Welding may enroll in the Manufacturing Technology program and design a model schedule that emphasizes their major area of interest. The program has the flexibility to match the student's interest with the skills necessary for job entry.

Students, with assistance from a counselor, advisor or instructor, will select a major area of technical emphasis. These technical courses plus supporting courses from other disciplines comprise the Manufacturing Technology degree requirements.

Each student's proposed Manufacturing Technology program must be approved by a committee consisting of the appropriate Department Head, the Academic Chair, and the Registrar. The following guidelines apply to the Associate in Applied Science Degree.

**General Education Requirements**

Credits: 17-18

**Communications:** ENG 111 and ENG 112 or ENG 220* ............................................. 7-8

**Humanities:** Any Group 1 course ............................................................. 3

**Science:** Any Group 1 course with a lab ............................................. 4

**Social Sciences:** Any Group 1 course .................................................... 3

**Mathematics:** Placement into MTH 111 or higher, or completion of MTH 23 ............................................. (4)

* Students intending to transfer to another college or university should take ENG 112.

**Occupational Specialty Requirements**

39

**Electives**

7-8

Choose any courses from Group 1 and/or Group 2.

**Program Requirements**

64

Legal Assistant

**IMPORTANT NOTICE REGARDING THE DISCONTINUANCE OF NMC’S LEGAL ASSISTANT PROGRAM:**

On July 26, 2010, the NMC Board of Trustees approved a plan for the discontinuance of NMC’s Legal Assistant Program. Under this discontinuance plan, some limited PAR course or credit opportunities will continue to be offered during the transition period, so that the program can make its best efforts to graduate students who are actively within the program and/or to facilitate the transfer of students to other programs. It is anticipated that this transition period will continue through the spring semester of 2012. Under this discontinuance plan, no new students will be admitted to NMC’s Legal Assistant Program.

The period of approval of NMC’s Legal Assistant Program by the American Bar Association is from August 8, 2005 to August 8, 2012, and, in light of this discontinuance plan, NMC will not be applying for ABA reapproval of the program beyond that period. Therefore, as of August of 2012 NMC’s Legal Assistant Program will no longer be approved by the ABA because approval of the program will be withdrawn by the ABA in August of 2012. Thus, if you are presently within the program and you graduate from NMC after August 8, 2012, you will not be graduated from an ABA approved paralegal education program and may not represent yourself as having graduated from an ABA approved paralegal education program. If you are actively within the program, you should refer to your catalog of record for the degree requirements and for information regarding the program outcomes, the tasks that legal assistants may perform under the supervision of attorneys, and the transfer of courses to NMC, and you should contact the program coordinator for academic advising.

**Program Information**

To apply, use the three-digit NMC Code on your admissions application.
Maritime
Great Lakes Maritime Academy
Associate in Applied Science Degree w/Bachelor of Science - Business Administration through Ferris State University  NMC Code 550 / 551

The Great Lakes Maritime Academy is more than just a college experience. As Michigan’s State Maritime Academy, our college educates and trains the finest Deck and Engineering Officers available to the commercial shipping industry.

As you learn more about us, you will discover a professional environment based on pride and tradition. The Academy prepares future merchant marine officers/business professionals for the challenge of operating ships of unlimited tonnage. Our training ship, State of Michigan, is utilized daily as a floating classroom and hands on learning environment. We set sail with our ship at various times throughout the academic year to reinforce the skills taught shore side. As cadets progress through the Academy, they learn our industry first hand by completing essential sea time aboard the training ship and commercial vessels of the Great Lakes and Oceans.

The Academy enjoys a unique relationship with our partner institution, Ferris State University. While classes are held in Traverse City, cadets simultaneously earn their maritime credentials and a Bachelor’s Degree in Business Administration. It has long been apparent this combination enables graduates to better compete for management level positions in any area of employment. We also offer a core maritime curriculum for those who enter the Academy with a Bachelor’s Degree. Upon completion of all requirements, cadets are prepared to write the U.S. Coast Guard examination for licensing as Third Mate Great Lakes and Oceans Unlimited Tonnage and First Class Great Lakes Pilot (Deck Officer), or Third Assistant Engineer, Steam and Motor Vessels of any Horsepower (Engineering Officer). Graduates are fully compliant with STCW ’95 (Standards of Training, Certification and Watchkeeping).

Great Lakes Maritime Academy is proud of the quality education and training we have provided since 1969. Curricula range from seamanship, navigation and piloting to steam and diesel engineering together with up to 276 days of sea time. Our alumni sail with the fleets of the Great Lakes and Oceans with many having reached the pinnacle of their professions as Masters and Chief Engineers. With exceptional employment opportunities and salaries upon graduation, the time is now to consider a career as a professional mariner. The Admissions Office is open weekdays from 8:30 am to 5:00 pm. Please visit www.nmc.edu/maritime for additional information.

This program is approved by the U.S. Maritime Administration, the U.S. Coast Guard, and the Michigan Department of Education. A new class begins each year in mid August (Fall semester).

ADMISSION REQUIREMENTS
Admission to the Great Lakes Maritime Academy requires candidates meet the following:

1. Be at least 17 years of age with a high school diploma or GED.
2. United States Citizen
3. Academic placement at Freshman English and Intermediate College Algebra level determined by minimum ACT score of 20, SAT score of 1440, transferrable college credits or COMPASS placement testing.

Acceptance to the Great Lakes Maritime Academy is competitive, with the incoming class of 60 cadets beginning in the fall of each year. Admissions decisions are made without regard to age, sex, marital status, national origin, or ethical/racial background. Applicants may apply at www.nmc.edu/maritime to submit online application. An application checklist is provided. If you have questions, please call the Maritime Admissions Office at (231) 995-1200.

GENERAL PROGRAM REQUIREMENTS
In addition to Northwestern Michigan College/Ferris State University rules and regulations, Maritime cadets comply with the rules and regulations specified in the booklet, “Maritime Cadet Rules and Regulations.”

DEPARTMENT OF NAVAL SCIENCE
The Department of Naval Science is staffed by an active duty Naval officer. The Department offers training designed to acquaint the cadet with the mutual dependence of the Navy and Merchant Marine in accomplishing their common objectives through the MNS 100 course. Additionally, Merchant Marine Reserve Midshipmen will receive Navy professional development training through the MNS 200 and MNS 250 courses.

GRADUATION REQUIREMENTS
In addition to NMC graduation requirements, Academy cadets must:

1. Successfully complete all components of the Maritime program.
2. Pass the U.S. Coast Guard license exam in the program selected.
3. Achieve a 2.0 (76%) grade or higher in all courses.
CURRICULUM
The Great Lakes Maritime Academy and NMC offer two four-year programs of study:
• Maritime Technology (Deck Officer) - Associate’s Degree; Business Administration - Bachelor’s Degree
• Marine Engineering Technology (Engineering Officer) - Associate’s Degree; Business Administration - Bachelor’s Degree

Each program provides the cadet with a background in business administration, mathematics, physical science, humanities and social studies, in addition to the required maritime subjects.

Federal regulations require that each cadet obtain up to 276 sailing days of practical training as a cadet observer aboard ship. Sea time is arranged by the Academy and spread over the program. In addition to shipboard duties, the cadets are required to complete written assignments, sea projects, for evaluation and grading. Great Lakes Maritime reserves the right to revise the program in accord with industry needs and government agency requirements.

The following program requirements are for a high school graduate or a person without transfer credits from another institution.

Maritime - Deck Officer
Great Lakes Maritime Academy

Associate in Applied Science Degree
w/Bachelor of Science - Business Administration
through Ferris State University

General Education Requirements

Credits: 23

Communications: ENG 111 and ENG 112
or ENG 220 ........................................7-8

Humanities: Any Group 1 course/FSU

     Humanities Elective ........................................3

Mathematics: MTH 141 or MTH 132 (FSU) ..........3-5

Science: PHY 105 .........................................4

Social Science: ECO 201 ....................................3

Maritime Requirements 89

ECO 202 Principles of Microeconomics ..........3
ENV 117 Meteorology & Climatology ..........4
MDK 100 Survival at Sea ..................................1
MDK 104 Rigging and Ship Maintenance Lab ....1
MDK 106 Watchstanding I ................................1
MDK 111 Marine Communications .................2
MDK 112 Rules of the Nautical Road ..............2
MDK 121 Navigation I .....................................3
MDK 122 Navigation I Lab ................................1
MDK 149 Damage Control & Safety ...............2
MDK 200 Ships Business & Labor Relations ....3
MDK 204 Marine Supervisory Lab .................1
MDK 206 Watchstanding II ................................1
MDK 210 Sea Project ......................................6
MDK 221 Lakes Pilotage ....................................2
MDK 222 River Pilotage ....................................3
MDK 224 Navigation III ..................................3
MDK 231 Electronic Navigation ......................3
MDK 232 Electronic Navigation Lab ................1
MDK 233 Automatic Radar Plotting Aids ..........1
MDK 241 Ship Construction ............................2
MDK 242 Ship Stability ...................................3
MDK 244 Dry Cargo Stowage ............................3
MDK 245 Liquid Cargo Stowage .......................2
MDK 311 Sea Project Deck ................................6
MDK 312 Sea Project Deck ...............................6
MDK 330 STCW Elementary First Aid .............2
MDK 344 Cargo Systems ..................................2
MDK 346 Bridge Team Management ................2
MDK 348 Pilot/Mate License Prep ....................2
MGT 241 Principles of Management .................3
MKT 201 Principles of Marketing ....................3
MNG 100 Introduction to Marine Engineering ....1
MNG 105 Shipboard Information Systems .......3
MNS 100 Naval Science I ................................2
MTH 131 Intro to Probability & Statistics ..........3

Ferris State University Requirements* 30
BLAW 301 Legal Environment of Business ........3
COMM 221 Small Group Decision Making ........3
ENGL 325 Advanced Business Writing ..........3
BUSN 499 Integrating Experience ................3
PLSC 331 Comparative World Governments ....3
INTB 310 International Business Systems ........3
INTB 320 International Logistics ................3
INTB 335 Cross-Cultural Business .................3
MGMT 350 Decision Making Tools ................3
Ferris Cultural Enrichment Elective ..........3

* See www.nmc.edu/maritime for Ferris course descriptions.

Program Requirements 145

To apply, use the three-digit NMC Code on your admissions application.

www.nmc.edu
Maritime - Engineering Officer
Great Lakes Maritime Academy

Associate in Applied Science Degree
w/Bachelor of Science - Business Administration
through Ferris State University

NMC Code 551

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<thead>
<tr>
<th>Program Information</th>
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<tbody>
<tr>
<td><strong>General Education Requirements</strong></td>
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<tr>
<td>Communications: ENG 111 and ENG 112 or ENG 220</td>
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<tr>
<td>Humanities: Any Group 1 course</td>
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<tr>
<td>Mathematics: MTH 141 or MTH 132 (FSU)</td>
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<td>Science: PHY 105</td>
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<td>Social Science: ECO 201</td>
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<thead>
<tr>
<th><strong>Maritime Requirements</strong></th>
<th><strong>89</strong></th>
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<tbody>
<tr>
<td>CHM 101 Introductory Chemistry</td>
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<tr>
<td>ECO 202 Principles of Microeconomics</td>
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<tr>
<td>MDK 100 Survival at Sea</td>
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<td>MDK 149 Damage Control &amp; Safety</td>
<td>2</td>
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<td>MDK 241 Ship Construction</td>
<td>2</td>
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<td>MDK 330 STCW Elementary First Aid</td>
<td>2</td>
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<tr>
<td>MGT 241 Principles of Management</td>
<td>3</td>
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<tr>
<td>MGT 251 Human Resources Management</td>
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<tr>
<td>MKT 201 Principles of Marketing</td>
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<tr>
<td>MNG 100 Introduction to Marine Engineering</td>
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</tr>
<tr>
<td>MNG 104 Engine Systems Graphics</td>
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</tr>
<tr>
<td>MNG 105 Shipboard Information Systems</td>
<td>3</td>
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<tr>
<td>MNG 110 Engineering Mechanics</td>
<td>3</td>
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<tr>
<td>MNG 175 Refrigeration</td>
<td>3</td>
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<tr>
<td>MNG 210 Diesel Engineering</td>
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<tr>
<td>MNG 221 Marine Boilers</td>
<td>3.5</td>
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<td>MNG 222 Marine Turbines</td>
<td>2.5</td>
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<tr>
<td>MNG 223 Steam Lab</td>
<td>1</td>
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<tr>
<td>MNG 234 Electronics Fundamentals</td>
<td>4</td>
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<tr>
<td>MNG 235 Electric Machines and Controls</td>
<td>4</td>
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<tr>
<td>MNG 236 Electric Machines and Controls Lab</td>
<td>2</td>
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<tr>
<td>MNG 250 Unloading Systems</td>
<td>3</td>
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<tr>
<td>MNG 317 Engineering Sea Project I</td>
<td>3</td>
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<tr>
<td>MNG 318 Engineering Sea Project II</td>
<td>6</td>
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<tr>
<td>MNG 319 Engineering Sea Project III</td>
<td>6</td>
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<tr>
<td>MNG 355 Watchstanding</td>
<td>2</td>
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<tr>
<td>MNG 366 Engine Room Business</td>
<td>2</td>
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<tr>
<td>MNG 396 License Preparation Engine</td>
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<tr>
<td>MNS 100 Naval Science</td>
<td>2</td>
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<tr>
<td>MTH 131 Intro to Probability &amp; Statistics</td>
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**Ferris State University Requirements**

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<td>MGMT 350 Decision Making Tools</td>
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<tr>
<td>Ferris Cultural Enrichment Elective</td>
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<tr>
<td>Machining</td>
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<tr>
<td>Welding</td>
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* See [www.nmc.edu/maritime](http://www.nmc.edu/maritime) for Ferris course descriptions.
Maritime - Power Plant Facilities Operator  
Great Lakes Maritime Academy  

Associate in Applied Science Degree  NMC Code 554

The Power Plant Facilities Operator Program is designed to prepare individuals for the maintenance and power production industries such as power plants, hospitals, industrial plants, and manufacturing plants. Operators in such industries read, interpret and adjust meters and gauges to make sure plant equipment and processes are working properly. Some operate chemical-feeding devices, take samples of the water or liquid waste, perform chemical and biological laboratory analysis and adjust the amount of chemicals such as chlorine in the water. Some use a variety of instruments to sample and measure water quality and common hand and power tools to make repairs. Operators also make repairs to valves, pumps and other equipment. As facilities become more sophisticated and industry demands more from those individuals who maintain and operate these physical plants, there is a need for intense technical training for these positions. Students at the Great Lakes Maritime Academy obtain these goals through coursework in mathematics, science and occupational courses. They also have hands-on experience through labs and internships for practical training that is beneficial to the application and understanding of the career path they have chosen.

General Education Requirements  Credits: 22-25
Communications: ENG 111 and ENG 112  
or ENG 220 .......................................................... 7-8
Humanities: Any Group 1 Course .................................. 3
Mathematics: Completion of MTH 121 and  
MTH 122 or Placement into MTH 141 .................. 5-7
Science: CHM 101 or PHY 105 ............................ 4
Social Science: Any Group 1 Course ...................... 3

Occupational Specialty Requirements  53
MGT 241 Principles of Management ..................... 3
MNG 100 Intro to Marine Engineering .................. 1
MNG 104 Engine Systems Graphics ..................... 2
MNG 105 Shipboard Information Systems .......... 3
MNG 110 Engineering Mechanics ....................... 3
MNG 175 Refrigeration ..................................... 3
MNG 210 Diesel Engineering ............................... 7
MNG 221 Marine Boilers .................................. 3.5
MNG 222 Marine Turbines ................................. 2.5
MNG 223 Steam Lab ......................................... 1
MNG 234 Electronic Fundamentals ....................... 4
MNG 235 Electric Machines and Controls .............. 4
MNG 236 Electric Machines and Controls Lab ....... 2
MNG 250 Unloading Systems ............................... 3
MNG 270 Issues in Power Production .................. 3
MNG 290 Power Systems Internship ................. 5
Elective Credits ............................................... 3

Recommended Elective  3
MGT 251 Human Resource Management ............. 3

Program Requirements  78-81
Nursing - Associate Degree Program Requirements

Associate Degree in Nursing  NMC Code 302

Nursing Students admitted to the nursing program prior to fall 2009 must follow the catalog requirements in effect the year they began unless they are returning as re-admitted students.

The NMC Associate Degree in Nursing (ADN) offers students the advantage of college-level academic and professional instruction in the classroom and clinical areas, and the preparation needed for employment after graduation. The associate degree program is a two-year course of study that begins each fall and spring semesters. All nursing courses in the ADN program must be completed within five years. Student clinical experiences may include assignments at Munson Medical Center and a variety of other agencies.

These affiliated facilities have the right to accept or reject a student. This action could result in a student being delayed or unable to complete the nursing program. This decision may be made just prior to the clinical rotation.

The program is approved by the Michigan Board of Nursing. Graduates are eligible to apply for the National Council Licensure Examination (NCLEX-RN) for licensing as a registered nurse.

ADMISSION REQUIREMENTS

Enrollment in any Nursing (HNR) course requires admission to the nursing program OR approval of the nursing department director. HNR 100 may be taken ahead of program admission if course prerequisites are met. Consideration for admission is on a “rolling” basis and requires satisfactory completion of program prerequisites. Space in the nursing program is limited. Completion of prerequisites does not guarantee admission to the nursing program. Should qualified applicants exceed space available, competitive admission criteria may apply. Submit completed applications to the Admissions Office.

The following are required for application:

1. *A 2.5 college GPA.

2. *A 2.0 grade or above in each of the following prerequisite courses and/or demonstrated competency or equivalent college course transfer:
   - English Composition (ENG 111)
   - Introduction to Psychology (PSY 101)
   - Introductory Chemistry (CHM 101) or equivalent college chemistry course with a 2.0 GPA or above within ten years of program entry. Students with a year of high school chemistry (with a combined GPA of 2.5 or above) or college chemistry older than 10 years may waive the CHM 101 requirement by passing the Chemistry competency examination.

3. *Human Anatomy and Physiology I (BIO 227), with a 2.5 GPA, within five years of program entry.
4. Human Anatomy and Physiology II (BIO 228), with a 2.5 GPA, within five years of program entry.

5. *COMPASS Test Scores:
   - Math-66 or above in Algebra

   - COMPASS students must place into MTH 121-College Algebra. If not, students must take MTH 111-Intermediate Algebra (or equivalent course work) within five years of program entry.

   6. *ACT Test Scores:
      - ACT of 24 in math within five years of program entry.
      - ACT of 19 in reading and writing, (or equivalent course work) within five years of program entry.

* Eligible for wait list once these prerequisites are completed.

Recommended courses to take prior to Nursing Program Admission

- BIO 240 Normal and Clinical Nutrition
- CIT 122A Computer and Internet Basics I (competency test available)
- PHL 202 Contemporary Ethical Dilemmas
- ENG 112 English Composition
- HPD 110 Basic Life Support for Health Care Workers (CPR) Equivalent classes are: American Red Cross Professional Rescuer or AHA Health Care Provider. Current CPR certification must be documented by the start of the first clinical day, and maintained throughout the program.

GENERAL INFORMATION

- A physical examination and completion of the Certificate of Health documenting good mental and physical health is required prior to clinical course work.

- Criminal Background Checks are now required on all students entering the Associate Degree of Nursing and the Practical Nursing programs at Northwestern Michigan College. This is due to the change in legislation that requires Criminal Background Checks be completed for certain health care institutions. The background check will be required by Northwestern Michigan College upon admission to the program and prior to the beginning of the first course. The costs associated with this background check will be the sole responsibility of the nursing student. Please visit www.nmc.edu/healthoccupations/nursing/cbcinfo for more detailed information on the Criminal Background Checks.

- The Board of Nursing may deny a license for a previous felony conviction, previous treatment for drug or alcohol abuse or after finding the existence of one or more grounds for board action listed in 333.16221 of the Public Health Code, Act 368 of 1978.

- The clinical facilities have the right to accept or reject a student. This action could result in a student being delayed or unable to complete the nursing program. This decision may be made just prior to the clinical rotation.

- Nursing program tuition is charged by the contact hour.

General Education Requirements

<table>
<thead>
<tr>
<th>Credits</th>
<th>Communications: ENG 111 and ENG 112</th>
<th>Humanities: PHL 202</th>
<th>Mathematics: Placement into MTH 121 or higher, or completion of MTH 111</th>
<th>Science: BIO 227, BIO 228**, BIO 240</th>
<th>Social Sciences: PHL 101</th>
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<tbody>
<tr>
<td>25-27</td>
<td>8</td>
<td>3</td>
<td>(4)</td>
<td>13</td>
<td>3</td>
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</table>
Online Nursing Option

NMC admits students to an online version of its traditional nursing curriculum each fall. This option is intended for full-time ADN students. It provides all of the nursing theory of academic classes available in an online format. It will still require attendance in person for the lab and clinical courses. The labs and clinical courses are generally scheduled in the Traverse City area and will require 2-3 days per week of attendance.

Once you begin the online option, the college will ensure that the online courses will be available until you complete the program as long as the full-time model schedule is followed.

If you need to change from full-time plan or your studies get out of sequence for any reason, you will need to move into the traditional program.

<table>
<thead>
<tr>
<th>Nursing Specialty Requirements</th>
<th>Credits: 45</th>
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</thead>
<tbody>
<tr>
<td>CIT 122A</td>
<td>Computers and Internet Basics**</td>
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<tr>
<td>(competency test available)</td>
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<tr>
<td>HAH 100C</td>
<td>Informatics Essentials</td>
</tr>
<tr>
<td>HNR 100</td>
<td>Introduction to Nursing</td>
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<tr>
<td>HNR 101</td>
<td>Fundamentals of Nursing-Lecture</td>
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<tr>
<td>HNR 102</td>
<td>Fundamentals of Nursing-Clinical</td>
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<tr>
<td>HNR 108</td>
<td>Pharmacology</td>
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<td>HNR 125</td>
<td>Nursing Across the Lifespan-Lecture</td>
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<tr>
<td>HNR 126</td>
<td>Nursing Across the Lifespan-Clinical</td>
</tr>
<tr>
<td>HNR 241</td>
<td>Adv. Maternal Child Nursing-Lecture</td>
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<tr>
<td>HNR 242</td>
<td>Adv. Maternal Child Nursing-Clinical</td>
</tr>
<tr>
<td>HNR 247</td>
<td>Nrsng Mgmt of Complex Patients I-Lecture</td>
</tr>
<tr>
<td>HNR 248</td>
<td>Nrsng Mgmt of Complex Patients I-Clinical</td>
</tr>
<tr>
<td>HNR 251</td>
<td>Mental Health Nursing-Lecture</td>
</tr>
<tr>
<td>HNR 252</td>
<td>Mental Health Nursing-Clinical</td>
</tr>
<tr>
<td>HNR 261</td>
<td>Nrsng Mgmt of Complex Patients II-Lecture</td>
</tr>
<tr>
<td>HNR 262</td>
<td>Nrsng Mgmt of Complex Patients II-Clinical</td>
</tr>
<tr>
<td>HPD 110</td>
<td>Basic Life Support for Health Care Providers*</td>
</tr>
</tbody>
</table>

* Equivalent classes are: American Red Cross Professional Rescuer or AHA Health Care Provider
**These credits do not count toward degree requirements.

Note: A 2.0 grade or higher is required in HAH 100C and all Nursing (HNR) courses. A minimum of 72 credits are required to receive the Associate Degree in Nursing. Any HNR course failure counts as a program fail and requires readmission. A second course failure is a program dismissal.

Program Requirements 72

Nursing - ADN Completion Program

Completed your LPN and ready to take the next step? NMC’s associate degree in nursing completion program for LPNs allows those with current clinical work experience in acute or extended care or who have graduated within three years to complete the nursing course work in two semesters.

NMC’s program is approved by the Michigan Board of Nursing. Graduates are eligible to apply for the National Council Licensure Examination (NCLEX-RN) for licensing as a registered nurse.

The ADN-Completion Program for Licensed Practical Nurses is designed to expand upon the previous education of the LPN. Upon completion of all non-nursing required course work, the LPN who has current clinical work experience in acute or extended care or who has graduated within the past three years can complete the nursing course work in two semesters. The technology and patient acuity in the agencies utilized for clinical course work have changed greatly in recent years. Recent experience in these settings is important to the success of students pursuing this course work.

Student clinical experiences may include assignments at Munson Medical Center and a variety of other agencies. The program is approved by the Michigan Board of Nursing. Graduates are eligible to apply for National Council Licensure Examination (NCLEX-RN) for licensing as a registered nurse. NMC utilizes hospital and non-hospital based clinical sites to meet the requirements for completion of the program.

These affiliated facilities have the right to accept or reject a student. This action could result in a student being delayed or unable to complete the nursing program. This decision may be made just prior to the clinical rotation.

ADMISSION REQUIREMENTS

Enrollment in any Nursing (HNR) course requires admission to the nursing program and/or approval of the nursing department director. Consideration for admission is on a rolling basis and requires satisfactory completion of program prerequisites. Space in the program is limited. Completion of prerequisites does not guarantee admission to the nursing program. Should qualified applicants exceed space available, competitive admission criteria may apply. Completed applications must be submitted to the Admissions Office.

The following are required for application:
2. Graduation from an accredited Practical Nursing Program with evidence of an official transcript with an overall GPA of 2.0 or above. Applicants must have work experience in the field of nursing or clinical coursework within the last three (3) years. Applicants who do not meet the work experience criteria will be required to complete the first year nationally normed nursing exam with a minimum competency as identified by the testing service before
progressing in the program. If this minimum competency is not achieved, HNR 126 will be required. Additional assessments may be used to determine course placement.

3. CHM 101 or equivalent college chemistry course at 2.0 GPA or higher within ten years of program entry. Students with a year of high school chemistry (with a combined grade of 2.5 or above) or college chemistry older than ten years may waive the CHM 101 requirement by passing the Chemistry competency examination.

4. COMPASS Test scores: Math-66 or above in Algebra (or equivalent course work) within five years of program entry. Students must place into MTH 121-College Algebra. If not, students must take MTH 111-Intermediate Algebra.

5. Completion of all General Education Requirements, as identified on the following pages, with an overall GPA of 2.0 or above. In addition to the overall GPA requirement, a minimum of 2.5 or higher in BIO 227 and BIO 228 (BIO 227 and BIO 228 within five years of program entry), a minimum grade of 2.0 is required in ENG 111 and PSY 101.

GENERAL INFORMATION

- A physical examination and completion of the Certificate of Health documenting good mental and physical health is required prior to clinical course work.

- Criminal Background Checks are now required on all students entering the Associate Degree of Nursing and the Practical Nursing programs at Northwestern Michigan College. This is due to the change in legislation that requires Criminal Background Checks be completed for certain health care institutions. The background check will be required by Northwestern Michigan College upon admission to the program and prior to the beginning of the first course. The costs associated with this background check will be the sole responsibility of the nursing student. Please visit www.nmc.edu/healthcare/nursing/cbcinfo for detailed information on the Criminal Background Checks.

- The Board of Nursing may deny a license for a previous felony conviction, previous treatment for drug or alcohol abuse or after finding the existence of one or more grounds for board action listed in 333.16221 of the Public Health Code, Act 368 of 1978.

- The clinical facilities have the right to accept or reject a student. This action could result in a student being delayed or unable to complete the nursing program. This decision may be made just prior to the clinical rotation.

- Nursing program tuition is charged by the contact hour.

General Education Requirements  Credits: 25-27

Communications: ENG 111 (2.0 or higher) and ENG 112 .................................................. 8

Humanities: PHL 202 ........................................................................................................ 3

Mathematics: COMPASS Placement into MTH 121 or higher, or completion of MTH 111* ................. (4)

Science: BIO 227, 228**, 240 .................................................. 13

Social Sciences: PSY 101 ......................................................................................... 3

* These credits do not count toward degree requirements.

**For an equivalent transfer of BIO 227 and BIO 228 from another institution, students must have completed a full year of Anatomy and Physiology, and one semester of Microbiology with a 2.5 grade or higher within five years of program entry.

Nursing Specialty Requirements  Credits: 45

Level One Nursing Coursework .................................................. 23

Note: Credit for the practical nursing level course work (HNR 100-145) must be established prior to admission to the program. At least 22 nursing credits must be established through NMC course completion or transfer equivalences to meet the program requirements. Additional course work may be required and will be arranged by the Nursing Director if needed.

CIT 122A Computers and Internet Basics (competency test available) ......................... (1)

HAH 100C Informatics Essentials .............................................................................. 1


HNR 242 Adv. Maternal Child Nursing-Clinical .............. 2

HNR 247 Nursing Management of Complex Patients I-Lecture ........................................... 3

HNR 248 Nursing Management of Complex Patients I-Clinical .............................................. 4

HNR 251 Mental Health Nursing-Lecture ....................... 2

HNR 252 Mental Health Nursing-Clinical .......... 1

HNR 261 Nursing Management of Complex Patients II-Lecture ........................................... 3

HNR 262 Nursing Management of Complex Patients II-Clinical .............................................. 4

HPD 110 Basic Life Support for Health Care Providers* ................................................. (0.5)

* Equivalent classes are: American Red Cross Professional Rescuer or AHA Health Care Provider

Note: A 2.0 grade or higher is required in HAH 100C and all Nursing (HNR) courses. A minimum of 70-72 credits are required to receive the Associate Degree in Nursing.

Program Requirements  70-72

Nursing - Practical

Certificate of Achievement (Level II)  NMC Code 010

Licensed Practical Nurses (LPNs) care for the sick, injured, convalescent and disabled under the direction of physicians and registered nurses. NMC's PN program can be completed in two semesters after pre-requisite courses are completed. The program is approved by the Michigan Board of Nursing. Graduates are eligible to apply for the National Council Licensure Examination (NCLEX-PN) for licensing as a practical nurse.

Northwestern Michigan College’s Practical Nursing Program is a two-semester certificate program after prerequisites are met. It is designed to give the student basic health care provider skills which will enable them to become eligible to take the National Council Licensure Examination (NCLEX-PN). After successfully completing the NCLEX-PN exam, students are able to enter the work force in various healthcare settings. License Practical Nurses often work in offices, long-term care and home health care facilities. All nursing courses must be completed within five years.
The program is approved by the Michigan Board of Nursing. Graduates of this program are eligible to apply for the National Council Licensure Examination (NCLEX-PN) for licensing as a Practical Nurse.

ADMISSION REQUIREMENTS
Enrollment in any Nursing (HNR) course requires admission to the nursing program OR approval of the Nursing Program Director. HNR 100 may be taken ahead of program admission if course prerequisites are met and space available. Consideration for admission is on a rolling basis and requires satisfactory completion of all program prerequisites. Space in the program is limited. Completion of prerequisites does not guarantee admission to the Nursing Program.

Should qualified applicants exceed space available, competitive admission criteria may apply. Completed applications must be submitted to the College Admission Office.

The following are required for application:

1. *2.0 college GPA for Nursing program prerequisite courses.
2. *COMPASS test scores: Reading-82 or above, Writing-70 or above, Math-66 on Algebra (or equivalent coursework) within five years of program entry. Students must place into MTH 121-College Algebra. If not, students must take MTH 111-Intermediate Algebra, OR have an ACT score of 19 for reading and writing, and math ACT of 24. (Reading and writing COMPASS scores are required for students who do not transfer equivalent courses)
3. Courses required for admission consideration.
   • *CHM 101 competency or equivalent college chemistry course at a 2.0 or higher within ten years of program entry. Students with a year of high school chemistry (with a combined grade of 2.5 or above) or with college chemistry older than 10 years, may waive the CHM 101 requirement by passing the Chemistry competency exam.
   • *BIO 227-Anatomy and Physiology I - 2.5 GPA required. Must be taken within five years of program entry. If not, students may retake BIO 227 and BIO 228 or successfully complete a competency exam. BIO 227 has specific prerequisites that may require additional coursework.
   • BIO 228-Anatomy and Physiology II with a 2.5 GPA required.
   • For an equivalent transfer of BIO 227 and BIO 228 from another institution, students must have completed a full year of Anatomy and Physiology, and one semester of Microbiology with a 2.5 grade or higher within five years of program entry.
4. Courses recommended to be completed prior to starting the PN program.
   • BIO 240-Normal and Clinical Nutrition
   • CIT 122A-Computer and Internet Basics (competency test available)
   • HPD 110-BLS for Health Care Providers
   *Eligible for wait list once these prerequisites are completed.

GENERAL INFORMATION
• A physical examination and completion of the Certificate of Health documenting good mental and physical health is required prior to clinical course work.
• Criminal Background Checks are now required on all students entering the Associate Degree of Nursing and the Practical Nursing programs at Northwestern Michigan College. This is due to the change in legislation that requires Criminal Background Checks be completed for certain health care institutions. The background check will be required by Northwestern Michigan College upon admission to the program and prior to the beginning of the first course. The costs associated with this background check will be the sole responsibility of the nursing student. Visit www.nmc.edu/healthoccupations/nursing/cbcinfo for detailed information on Criminal Background Checks.
• The Board of Nursing may deny a license for a previous felony conviction, previous treatment for drug or alcohol abuse or after finding the existence of one or more grounds for board action listed in 333.16221 of the Public Health Code, Act 368 of 1978.
• The clinical facilities have the right to accept or reject a student. This action could result in a student being delayed or unable to complete the nursing program. This decision may be made just prior to the clinical rotation.
• Nursing program tuition is charged by the contact hour.

Certificate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 227</td>
<td>Human Anatomy &amp; Physiology I with Lab</td>
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</tr>
<tr>
<td>BIO 228</td>
<td>Human Anatomy &amp; Physiology II with Lab</td>
<td>5</td>
</tr>
<tr>
<td>BIO 240</td>
<td>Normal and Clinical Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>CIT 122A</td>
<td>Computers and Internet Basics</td>
<td>3</td>
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<tr>
<td>HNR 100</td>
<td>Introduction to Nursing</td>
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<tr>
<td>HNR 101</td>
<td>Fundamentals of Nursing-Lecture</td>
<td>4</td>
</tr>
<tr>
<td>HNR 102</td>
<td>Fundamentals of Nursing-Clinical</td>
<td>4</td>
</tr>
<tr>
<td>HNR 108</td>
<td>Pharmacology</td>
<td>3</td>
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<tr>
<td>HNR 125</td>
<td>Nursing Across the Lifespan-Lecture</td>
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</tr>
<tr>
<td>HNR 126</td>
<td>Nursing Across the Lifespan-Clinical</td>
<td>5</td>
</tr>
<tr>
<td>HNR 145</td>
<td>Practical Nursing Role &amp; Issues</td>
<td>1</td>
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<tr>
<td>HAH 100C</td>
<td>Informatics Essentials</td>
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</tr>
<tr>
<td>HPD 110</td>
<td>Basic Life Support for Health Care Providers</td>
<td>0.5</td>
</tr>
</tbody>
</table>

* Equivalent classes are: American Red Cross Professional Rescuer or AHA Health Care Provider

Note: A 2.0 grade or higher is required in HAH 100C and all Nursing (HNR) courses.

NMC. Find it here.

www.nmc.edu | 91
Plant Science

Associate in Applied Science Degree

Fruit Production ................................................................. NMC Code 581
Landscape & Nursery .......................................................... NMC Code 582
Turfgrass Management ....................................................... NMC Code 583
Viticulture ............................................................................... NMC Code 580

NMC and MSU offer a joint program that can lead to an Associate in applied Science degree in the areas of Viticulture, Commercial Horticultural Operations, Landscape and Nursery, or Commercial Turfgrass Operations through NMC. Students dual enroll with NMC and MSU North at the University Center. After completing a minimum of 48 hours in the program, a certificate is awarded from the MSU, Institute of Agricultural Technology. Upon meeting the program requirements for the ASA, student may transfer to the MSU East Lansing Campus as a junior to complete a Bachelor of Science degree. AAS Degree is awarded upon completion of MSU certificate and the following additional NMC courses. See your MSU advisor prior to enrolling each semester.

General Education Requirements Credits: 18-19
Communications: ENG 111 and ENG 112 ............................. 8
Humanities: Any Group 1 course, (HST 111 or HST 112 are recommended) ........................................... 3-4
Mathematics: Placement into MTH 111 or higher, or completion of MTH 23* (see advisor) ......................... 4
Science: BIO 108 ................................................................... 4
Social Science: ECO 201 or ECO 202 ................................. 3
* These credits do not count toward degree requirements.

Occupational Specialty Requirements 20-22
CHM 101 Introductory Chemistry (CHM 150 General Chemistry required if students elect to pursue a Bachelor’s degree) .......................................................... 4
CIT 100 Computer in Business-An Intro (or equivalent) .... 3
Electives (see program coordinator for appropriate selection) .............................................................................. 13-15

Note: A min. of 24 of the 64 credits must be completed at NMC.

MSU North/University Center Requirements 28-30
AT 293 Professional Internship in Ag Technology......... 3
PLP 210 Plant Diseases and Pathogens ............................. 3
ENT 110 Applied Entomology ........................................... 3
CSS 210 Fund. of Soils & Landscape Science ................. 3
HRT 213 Landscape Maintenance ..................................... 2
HRT 215 Landscape Industry Seminar............................. 1
HRT 218 Landscape Irrigation .......................................... 3
Commercial Turfgrass Operations core & electives or ...... 12
Commercial Horticulture Operations core & electives or .... 10
Landscape and Nursery core and electives ..................... 12

* See program coordinator to assure core and elective requirements are met.

Program Requirements 66-71

MSU Transfer Students: Students wishing to transfer to MSU as juniors must meet with an MSU and an NMC academic advisor during their first semester to alter general education courses to meet MSU requirements.

Respiratory Therapy - RT

Associate in Applied Science Degree through Muskegon Community College  NMC Code 712

Northwestern Michigan College is a partner with Muskegon Community College and Munson Medical Center to offer a collaborative program leading to an Associate in Applied Science Degree. All liberal arts and science courses can be taken through NMC. All didactic respiratory classes will be offered at Munson Medical Center via live interactive television from Muskegon Community College. Most clinical courses can be completed at Munson Medical Center. This program is fully accredited by the Joint Review Committee for Respiratory Therapy Education.

The respiratory therapy program begins each fall semester. Enrollment in the program is based on the student meeting the following criteria: overall GPA of 2.0 and proficiency testing in Beginning Algebra and successful completion of ENG 111. Depending on placement test results and high school and/or college transcript evaluation, some prerequisite classes may be required. Class sizes generally begin with 8 students in the Munson interactive classroom.

After completing more than two years of instruction, the therapist student receives the Associate in Applied Science Degree (AAS) from Muskegon Community College. The student must pass the advanced practical examination given by the National Board for Respiratory Therapy in order to receive credentials.

Admission Requirements

Enrollment in any Respiratory Therapy (RT) course requires admission to the Respiratory Therapy program. Consideration for admission requires satisfactory completion of program prerequisites and admission to both Muskegon Community College and the Respiratory Therapy program. Space in the Respiratory Therapy program is limited. Completion of prerequisites does not guarantee admission to the Respiratory Therapy program. Students interested in pursuing a degree in Traverse City for Respiratory Therapy from Muskegon Community College would follow these guidelines for application to and registration in the program.

1. Submit an application to Northwestern Michigan College. Applications are available at www.nmc.edu/admissions or at the Admissions Office (231) 995-1054.
2. Meet with an NMC counselor or Health Occupations Respiratory Therapy Advisor to complete your educational development plan for completing your degree.
3. Complete the basic criteria for admissions to the Respiratory Therapy program including: overall GPA of 2.0 and proficiency testing in Beginning Algebra and successful completion of ENG 111.
4. Apply for Admission to Muskegon Community College and the Respiratory Therapy Program at www.muskegon.cc.mi.us/pages/894.asp or applications are also available by calling (231) 995-1235.
Technical Management Administration

**Associate in Applied Science Degree  NMC Code 573**

Adding technical training to a business background has long been recognized as a powerful combination in the job market. Technicians often work with non-technical personnel such as accountants, managers, and data processors.

In order to obtain this successful combination of technical and business skills, students who have earned an Associate in Applied Science degree in a technical program may earn a second AAS degree in Technical Management Administration by completing 32 additional credits with a business emphasis.

**Please note:** This program is available only to students who have already completed an associate degree program in a technical area (Technical, Health, and Visual Communications programs). This program is not available to the student whose first degree is from a Business program.

Previous Technical focused AAS degree Credits: 64

<table>
<thead>
<tr>
<th>Occupational Specialty Requirements</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 121 Accounting Principles I .....4</td>
<td></td>
</tr>
<tr>
<td>ACC 122 Accounting Principles II ....4</td>
<td></td>
</tr>
<tr>
<td>BUS 101 Introduction to Business ....3</td>
<td></td>
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<tr>
<td>BUS 231 Professional Communications ...3</td>
<td></td>
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<tr>
<td>BUS 261 Business Law I ..............3</td>
<td></td>
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<tr>
<td>CIT 100 Computers in Business-An Intro..3</td>
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<tr>
<td>MGT 241 Principles of Management .....3</td>
<td></td>
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<td>MGT 251 Human Resource Management ....3</td>
<td></td>
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<tr>
<td>MKT 201 Principles of Marketing ......3</td>
<td></td>
</tr>
<tr>
<td>Any Business Course ..................3</td>
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</tr>
</tbody>
</table>

Visual Communications

**Associate in Applied Science Degree  NMC Code 351**

This program is oriented to careers in advertising design and graphic design. Employment opportunities include entry-level positions in newspapers, publishing and printing firms, retail firms, manufacturers, advertising agencies and local freelance work. Students are encouraged to transfer to four-year colleges or universities to earn a bachelor's degree if they plan to seek higher level positions. Emphasis is placed on learning marketable job skills, process, problem-solving techniques, and portfolio preparation. Students explore a full range of skills: drawing, lettering, layout, computer illustration techniques, team-work, new media and design. Students who transfer to a four-year art and design college should complete the Associate in Science and Arts degree requirements.

**Previous Visual Communications AAS degree** 64

**General Education Requirements** Credits: 19

Communications: ENG 111 and ENG 112 .................8
Humanities: ART 111 or ART 112 (preferred) ...............4
Mathematics: Placement into MTH 111 or higher, or completion of MTH 23* ......................(4)
Science: Any Group 1 course with a lab ..................(4)
Social Sciences: Any Group 1 course ......................3

* These credits do not count toward degree requirements.

Occupational Specialty Requirements 45

| ART 121 Drawing I ....................3 |
| ART 122 Drawing II ..........3 |
| ART 131 2-D Design ............3 |
| ART 132 3-D Design ..........3 |
| ART 171 Photography ..........3 |
| VCA 100 Materials and Techniques ...3 |
| VCA 123 Photoshop I ............2 |
| VCA 125 Typography I ..........3 |
| VCA 126 Typography II ..........3 |
| VCA 150 Digital Graphic Design ....4 |
| VCA 200 Visual Communications II ....3 |
| VCA 220 Visual Communications III ....3 |
| VCA 225 Visual Communications Studio ...3 |
| VCA 230 Visual Communications V ..........3 |
| VCA 235 Visual Communications Portfolio ........3 |

Program Requirements 64

Visual Communications - Creative Management in Art Direction

**Associate in Applied Science Degree  NMC Code 251**

This Visual Communications program is designed for students who have completed the VCA Associate in Applied Science degree and have the desire to work locally or do not wish to transfer to a four-year BFA or university program. This degree focuses on a tailored set of courses from other disciplines that expose the student to marketing, copywriting, small business management, new media, digital photography and other skills that will aid them in breaking into the work force. A required summer internship with a local marketing/design/advertising firm is a key part of this program.

**Previous Visual Communications AAS degree** 64

**General Education Requirements** Credits: 32

| ART 175 Digital Photography or .....3 |
| ART 181 Printmaking I ............3 |
| ART 213 Modern Art History ........3 |
| ENG 221 Creative Writing or ......3 |
| ENG 222 Advanced Creative Writing ...3 |
| COM 111 Public Speaking or ........3 |
| COM 201 Mass Communication and Culture ...4 |
| ENG 220 Technical Writing ..........3 |
| MKT 201 Principles of Marketing or ...3 |
| MKT 210 Principles of Selling ..........3 |
| VCA 147 Web Design ................3 |
| VCA 146 Interactive Animation ..........3 |
| VCA 250 Time Based Media I ..........3 |
| VCA 290 Visual Communications Internship ......4 |

*www.nmc.edu*
Welding Technology
Certificate of Achievement (Level II)  NMC Code 016

The Welding Technology courses are designed to meet the needs of the beginning welding students as well as the needs of people who are upgrading their welding skills. Students will develop their skills in this area through laboratory experience using equipment representative of the welding industry. Welding classes can prepare students to be a certified welder, provide a certificate in Welding Technology, or an Associate in Applied Science degree through the Manufacturing Technology program. The welding curriculum includes Oxy-acetylene, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW), on both ferrous and nonferrous materials.

Certificate Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD 101</td>
<td>Print Reading and Sketching</td>
<td>3</td>
</tr>
<tr>
<td>DD 110</td>
<td>Basic Metallurgy</td>
<td>2</td>
</tr>
<tr>
<td>MFG 111</td>
<td>Math for Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>MFG 113</td>
<td>Machining I</td>
<td>3</td>
</tr>
<tr>
<td>MFG 114</td>
<td>Machining II</td>
<td>3</td>
</tr>
<tr>
<td>WPT 110</td>
<td>Oxy-Fuel Processes</td>
<td>3</td>
</tr>
<tr>
<td>WPT 120</td>
<td>GTAW (TIG) Welding I</td>
<td>2</td>
</tr>
<tr>
<td>WPT 121</td>
<td>GTAW (TIG) Welding II</td>
<td>2</td>
</tr>
<tr>
<td>WPT 130</td>
<td>SMAW (Arc) Welding I</td>
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</tr>
<tr>
<td>WPT 131</td>
<td>SMAW (Arc) Welding II</td>
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</tr>
<tr>
<td>WPT 140</td>
<td>GMAW (MIG) Welding I</td>
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</tr>
<tr>
<td>WPT 141</td>
<td>GMAW (MIG) Welding II</td>
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</tr>
<tr>
<td>WPT 142</td>
<td>Flux Cored Arc Welding</td>
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<tr>
<td>WPT 160</td>
<td>Welding Qualification Prep</td>
<td>2</td>
</tr>
</tbody>
</table>

NMC. Find it here.
## Course Prefixes by Academic Area

### Aviation
- **AVF** Aviation Flight
- **AVG** Aviation Ground

### Bridge
- **BPC** Bridge Courses

### Business
- **ACC** Accounting
- **BPD** Business Professional Development
- **BUS** Business Administration
- **CIT** Computer Information Technology
- **CUL** Culinary Arts
- **MGT** Management
- **MKT** Marketing
- **PAR** Legal Assistant

### Communications
- **COM** Communications
- **ENG** English
- **MLA** Modern Language–American Sign Language
- **MLF** Modern Language–French
- **MLS** Modern Language–Spanish
- **THR** Theater

### Construction Technology
- **CAR** Carpentry Technology
- **CMT** Construction Management
- **EET** Electronical/Electronics Technology
- **EGY** Renewable Energy
- **ELE** Electrical Technology
- **HVA** HVAC/R Technology
- **PLU** Plumbing Technology

### Health Occupations
- **HAH** Allied Health
- **HDA** Dental Assistant
- **HNR** Nursing
- **HPD** Health Professional Development

### Humanities
- **ART** Art
- **DNC** Dance
- **HST** History
- **HUM** Humanities
- **MUS** Music
- **PHL** Philosophy
- **VCA** Visual Communications

### Maritime
- **MDK** Maritime-Deck
- **MNG** Maritime-Engineering
- **MNS** Naval Science

### Physical Education
- **HF** Health and Fitness
- **OUT** Outdoor Pursuits
- **PE** Physical Education

### Science and Mathematics
- **AST** Astronomy
- **BIO** Biology
- **CHM** Chemistry
- **EGR** Engineering
- **ENV** Environmental Science
- **MTH** Mathematics
- **PHY** Physics

### Social Sciences
- **ANT** Anthropology
- **CD** Child Development
- **CJ** Criminal Justice
- **ECO** Economics
- **EDU** Education
- **GEO** Geography
- **LWE** Law Enforcement
- **PLS** Political Science
- **PSY** Psychology
- **SOC** Sociology
- **SWK** Social Work

### Technical
- **AT** Automotive
- **DD** Drafting and Design
- **MFG** Manufacturing Technology
- **WPT** Welding Process Technology

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For course availability, refer to [www.nmc.edu/schedule](http://www.nmc.edu/schedule) or the Schedule of Classes.
NMC Course Descriptions

ACC  Accounting

ACC 121  Accounting Principles I .................. 4.0 (4)
Required prerequisite(s): MTH 23 or placement into MTH 111
This course covers basic principles and procedures in accounting for both a service and merchandising business. It includes the accounting cycle, financial statement preparation, manual accounting systems, petty cash, bank reconciliations, receivables, inventories, and payroll. Group 2 course.

ACC 122  Accounting Principles II ................. 4.0 (4)
Required prerequisite(s): ACC 121
Second semester accounting continues with plant assets and related expenses, partnerships, corporations, bonds, cash flow statements, and statement analysis. Group 2 course.

ACC 221  Intermediate Accounting I ............... 4.0 (4)
Required prerequisite(s): ACC 122
A detailed analysis of the content of financial statements covering problems related to assets, liabilities, corporate capital, working capital, and various analytical processes used to interpret financial reports. The first semester begins with a brief review of the fundamental accounting process. Spreadsheets will be used. Group 2 course.

ACC 222  Intermediate Accounting II ............... 4.0 (4)
Required prerequisite(s): ACC 122
A detailed analysis of the content of financial statements covering problems related to assets, liabilities, corporate capital, working capital, and various analytical processes used to interpret financial reports. Group 2 course.

ACC 225  Cost/Management Accounting............ 3.0 (3)
Required prerequisite(s): ACC 121
Recommended prerequisite(s): ACC 122, MTH 111
This course introduces the basic concepts and terminology of managerial cost accounting, its nature and tasks. Both job order cost systems and process cost systems are analyzed. The student begins building a knowledge base for managerial cost accounting through the analysis of the theory and practical applications of 1) cost-volume-profit, 2) job costing, 3) budgeting and standard costing, and 4) study of internal control systems in a manufacturing setting. Group 2 course.

ACC 290  Accounting Internship .................... 3.0 (3)
Required prerequisite(s): 12 semester credits of accounting in addition to a spreadsheet course. This internship requires the approval of accounting instructor, a GPA of 3.0 in accounting and a minimum of eight hours per week.
The accounting work experience is an elective of the two-year Associate in Applied Science degree in Accounting. The purpose of this work experience course is to provide an opportunity for students to acquire accounting work experience, to apply their skills in a real work setting, and to build ties with the business/professional community. Students spend 10 hours per week in this paid or non-paid, supervised on-the-job training experience. In addition to the required 150 hours in an accounting site, students participate in semi-monthly seminars. Students must apply one month prior to the semester in which they will complete the internship. Group 2 course.
## ANT 102 Underwater Archaeology .................................. 3.0 (3)
Recommended prerequisite(s): ENG 99 or placement into ENG 11/111
This course will provide students with an introduction to theory, method, technologies, and practice in underwater archaeology, with case studies of prehistoric and historical sites worldwide, including the Michigan Great Lakes. Course content will draw primarily from anthropology and the applied social sciences. This is a lecture-based course with field trips to coastal sites in northern Michigan. No diving is required. Group 2 course.

## ANT 113 Intro to Cultural Anthropology ...................... 3.0 (3)
Required prerequisite(s): ENG 99 or placement into ENG 11/111
The study of the role of society and culture in humankind’s adaptation to a variety of environments is the focus of this course. A variety of cultures are studied, utilizing cross-cultural comparisons. Among topics considered are field methods, theories of cultural evolution, the family, kinship, economics, religion, political organization and language. Group 1 course.

## ART 100 Art Appreciation ........................................... 3.0 (3)
This course prepares the student to make sense of the visual arts, with the emphasis on the process of evaluating meaning and value. The student is exposed to the various media and forms with which the artist works. In addition, the student is given a brief overview of the history of art from classical to the present. Group 1 course.

## ART 111 History of Western Art I ................................. 4.0 (4)
This course will introduce major trends of Western Art from Pre-History through Greece, Rome and the Middle Ages. Significant works of painting, sculpture and architecture will be presented within the social, political and cultural context of each period. Group 1 course.

## ART 112 History of Western Art II ............................... 4.0 (4)
This course is designed to introduce major trends in Western Art from the Renaissance through Modernism to the present. Significant works of painting, sculpture and architecture will be presented within the social, political and cultural context of each period. Group 1 course.

## ART 121 Drawing I .................................................... 3.0 (4)
Drawing I introduces the students to basic drawing skills and techniques through the use of line, form, composition, perspective and the use of chiaroscuro. The course emphasis is on using drawing as a vehicle for seeing and communicating. Students will learn to judge proportion, create volume, depict the illusion of space and to analyze and evaluate their own work as well as others. Black and white dry medium will be used for all assignments. Group 2 course.

## ART 122 Drawing II .................................................. 3.0 (4)
Required prerequisite(s): ART 121
Course will explore advanced methods in drawing including freehand perspective and conceptualizing of compositions with an emphasis on the use of new media and developing a personal style. Use of color media and theory will also be explored in this course. Assignments will include still lifes and object studies designed by both the instructor and the students. Group 2 course.

## ART 131 2-D Design ................................................... 3.0 (4)
Course will study the concepts and theory of two-dimensional design, pattern, and color as they apply to visual perception and communication. Students will study visual structure, color and their application. Group 2 course.

## ART 132 3-D Design ................................................... 3.0 (4)
Required prerequisite(s): ART 131 or permission of department; may also be taken as a co-requisite.
An introduction to the elements of construction and production of three-dimensional design. Shape, volume, mass, and interaction of forms and colors will be studied within a variety of conceptual models, e.g. architecture, sculpture, package design, display, etc. Group 2 course.
ART 151  Ceramics I ................................................. 3.0 (4)
This is an introductory course consisting of instruction and development of hand-building skills and basic ceramic design. Students prove critical thinking and development of technical skills by completing hand building projects that include: sets, complex shapes (made from multiple shapes), relief, pouring vessels, and a detailed sketchbook that includes research and design focused on each project. Functional pottery, sculpture, and hybrids of these forms will be the focus of this course.
Group 2 course.

ART 152  Ceramics II ................................................. 3.0 (4)
Required prerequisite(s): ART 151
This course is an advanced studio intensive class that building on the skills and knowledge developed in Ceramics I. Advanced projects using hand building and wheel throwing techniques will be completed for assessment. Projects will include the concepts of sets, bottle forms, wheel throwing, the human figure, and large stacking forms. Sketchbook/source book documentation of research and design will be required.
Group 2 course.

ART 161  Painting I ................................................. 3.0 (4)
Course will introduce concepts of painting as well as principles of design, including the development of painting techniques. Students will be given painting projects/problems throughout the semester ending with one self-directed painting which make application of learned concepts. Oils and acrylics will be used.
Group 2 course.

ART 162  Painting II ................................................. 3.0 (4)
Required prerequisite(s): ART 161
This course will continue the concepts of Painting I as well as elements of design, including the development of a personal styled technique. Students will deal with more complex and involved painting concepts with an emphasis upon a particular focus of interest and challenge. The course is designed to give more latitude in an independent/individual approach. Students will work in either oil or acrylic paint.
Group 2 course.

ART 165  Watercolor Painting I ......................................... 3.0 (4)
An introduction to the techniques and materials of watercolor painting. Includes use of creative effects, additive and subtractive approaches, and mixing of color to create effective paintings in a step-by-step manner.
Group 2 course.

ART 166  Watercolor Painting II ......................................... 3.0 (4)
Required prerequisite(s): ART 165
Watercolor II deals with advanced problems in watercolor painting with special emphasis on individual development and creativity particularly in the area of compositional conceptualization.
Group 2 course.

ART 171  Photography I ................................................. 4.0 (4)
This is an introductory course in black and white photography, emphasizing composition theory, analogue/film, 35mm SLR camera functions, exposure control and film processing. An introduction to digital darkroom technology is covered. Students will demonstrate their understanding of two-dimensional design in photography by producing two portfolios of their work.
Group 2 course.

ART 173  Photography II ................................................. 3.0 (3)
Required prerequisite(s): ART 171
Photography II builds on the competencies in black and white photography developed in the Photography I lecture and lab courses with an emphasis on identifying and enhancing technical and compositional skills of the student on an individual basis. The student is expected to identify those skills and areas for improvement that are the most needed and develop, with the aid of the instructor, a plan for addressing those needs.
Group 2 course.

ART 175  Digital Photography I ......................................... 3.0 (4)
Required prerequisite(s): ART 171 or instructor permission
Digital Photography I is an intermediate photography course covering the basics of working with photographs in digital form. Specific topics will include digitizing images, image enhancement using software programs (Adobe Photoshop), color theory as it applies to both image making and image enhancement, and output to digital prints.
Group 2 course.

ART 181  Printmaking I ................................................. 3.0 (4)
Printmaking I is an introductory survey course that introduces the students to a wide variety of print media: intaglio, relief embossing and mono type. Students will gain knowledge of the history, conception, production and presentation of achromatic prints.
Group 2 course.

ART 182  Printmaking II ................................................. 3.0 (4)
Required prerequisite(s): ART 181
Printmaking II expands on processes and concepts explored in Printmaking I with the emphasis on more complex techniques, including lithography, dry point, and collagraphs. Students will refine their technical skills and concepts begun in Printmaking I. Students will explore contemporary printing techniques and issues.
Group 2 course.

ART 213  Modern Art History ......................................... 3.0 (3)
This course examines the history of art from the beginning of the 20th Century to present. Emphasis is placed on the continuing interplay of modern art movements and the relationship of art to the social and cultural context.
Group 1 course.
ART 214 Women in Art ......................... 3.0 (3)
This course will provide a historical study of selected European and American women painters, sculptors, architects, and craftspersons from the 17th through 20th Centuries. Art works will be examined within the social and cultural context of each century. Group 1 course.

ART 221 Life Drawing I ......................... 3.0 (4)
Required prerequisite(s): ART 121
Recommended prerequisite(s): ART 122
Life Drawing I involves comprehensive studies in drawing the human figure with a variety of materials and discusses the solution of the problems of figure drawing used to advance the general qualities of grace, rhythm, and form. Explorations include gesture drawing, contour drawing and drawing the figure in motion. Life Drawing I will work primarily in charcoal and pencil. Group 2 course.

ART 222 Life Drawing II ......................... 3.0 (4)
Required prerequisite(s): ART 221
Life Drawing II is an advanced study of problems in drawing the human figure in multiple views and in longer studies with an accent on composition and dealing not only with the model but the environment the model is in. Life Drawing II will include the introduction of color and wet media. Group 2 course.

ART 252 Art Education ......................... 3.0 (4)
Course will introduce students to the language of art and art terms within the context of discipline-based art education. Students will address issues concerning aesthetics within a hands-on environment (process production) utilizing a context of art criticism and art history. Each student will develop and present an art lesson plan which incorporates learned art objectives. Group 2 course.

ART 275 Digital Photography II .............. 3.0 (4)
Required prerequisite(s): ART 175
Digital Photography II is an advanced photography course dealing with working with photographs in digital form. Specific topics will include advanced tools for image, advanced features of software digital imaging programs (Adobe Photoshop), color management in the digital environment, and specialized options for output to digital imagersetters (slides, negatives, art prints, etc.). Group 2 course.

AST 100 Observational Astronomy ............ 2.0 (2)
This is an introduction to astronomy. The goal of this course is to acquaint the student with the constellations, solar system objects and their motions, the celestial sphere concept and co-ordinate system. Stars, star clusters, nebulae and galaxies are also studied. Students will use naked-eye observations as well as telescopes, spectrograph, photometer and CCD camera to observe and report findings. Each session includes training in the operation of equipment. Group 2 course.

AST 109 Planetary Astronomy ................. 4.0 (3)
AST 109L Planetary Astronomy Lab .......... 0.0 (2)
Required prerequisite(s): ENG 111, may be taken concurrently
Corequisite(s): AST 109 and AST 109L
Recommended prerequisite(s): MTH 111
Characteristics and properties of the solar system and its components are presented to students in the context of the history of discovery. This information is integrated with student observational data to develop a mathematical model in the laboratory. The model is developed by incorporating equations used to compute characteristics and properties of solar system components. The model is utilized by students to encourage understanding of why the solar system has evolved to its current state by evaluating the effects of changes in values of fundamental measured properties and characteristics. Group 1 lab course.

AST 119 Astronomy ......................... 4.0 (3)
AST 119L Astronomy Lab ................. 0.0 (2)
Required prerequisite(s): ENG 111, may be taken concurrently
Corequisite(s): AST 119 and AST 119L
Recommended prerequisite(s): MTH 111
History of discovery of the nature of the cosmos and its contents is the format utilized to develop understanding of the nature of stars and the universe, and the physical principles determining this nature. These principles underlie our proficiency for prediction of the nature of the universe and our ability to make observations of our universe. The principles are analyzed by means of a student developed mathematical model incorporating the quantitative relationships derived by physicists and astronomers. Observations provide students with the sky knowledge and data necessary for prediction of stellar characteristics. Group 1 lab course.

Visit www.nmc.edu/science-math for detailed information.

AT Automotive Technology

AT 100 Automotive Service Basics ............ 2.0 (2)
Recommended prerequisite(s): ENG 99, MTH 08
Automotive Service Basics is the first class in our Automotive Service Program. Engine theory, cooling systems, lube requirements will be covered. Bolts, micrometers and basic specialty tools are integrated into the class. Training in the use of acetylene torch equipment will be taught along with it’s use in the automotive field. Students who passed a prior approved high school tech prep program will not be required to take this course. This course is designed to prepare the student to enter the automotive program. Group 2 course.

AT 110 Automotive Brake Systems ............ 5.0 (7)
Required prerequisite(s): AT 100, may be taken concurrently
This course covers theory, components, nomenclature, and service of automotive brake systems. Students will use standard skills to diagnose hydraulic systems, drum and disk brakes, power assist units and systems. The study and repair of modern A.B.S. systems along with the replacement of associated parts such as wheel bearings will also be covered. Lab work
will include procedures such as the use of brake lathes, brake line cutting and flaring procedures and the use of electronic test equipment. **Group 2 course.**

**AT 120  Automotive Electrical I**  5.0  (8)
**Required prerequisite(s): AT 100, may be taken concurrently**
This course covers basic electricity, circuits, testing equipment, and solid state electronics. This course will also familiarize the student with the operation, testing, and service of the automotive starting and charging system. This is a combination lecture and lab course using both components and vehicles for demonstration. **Group 2 course.**

**AT 130  Engine Performance I**  5.0  (8)
**Required prerequisite(s): AT 220**
This course is designed to familiarize students with the theory and operation of the automotive fuel and injection systems. Topics include: distributors, electronic ignition, distributorless systems, fuel injection systems, turbochargers and superchargers. The lab portion provides the student with actual hands on experience with tune-up, ignition, and fuel system service. Modern test equipment will be provided and proper diagnostic techniques will be stressed. **Group 2 course.**

**AT 140  Suspensions and Steering**  4.0  (6)
**Required prerequisite(s): AT 100, may be taken concurrently**
This course is designed to familiarize the student with the theory of the automotive steering and suspension system. Includes the the repair of MacPherson struts and rack and pinion service. The course will provide the student with actual experience with alignment and tire balancing equipment. **Group 2 course.**

**AT 150  Automatic Transmissions**  6.0  (9)
**Required prerequisite(s): Instructor permission required**
This course is designed to familiarize the student with hydraulic theory, control systems, powerflow, electronic control and torque converter operation. All aspects of transmission operation will be covered as well as removal, overhaul and installation procedures. Students will remove, overhaul, dyno-test and install actual failed units in the lab. The cause of the failure of these units will be explored in detail. Factory and aftermarket updates to prevent future failures will be taught. **Group 2 course.**

**AT 160  Engine Repair**  6.0  (8)
**Required prerequisite(s): AT 100, may be taken concurrently**
This course covers the theory, construction, and repair of the four stroke automotive engine. This will include the proper use of compression and leakage test equipment, precision measuring tools, special engine tools and valve grinding equipment. Lab work includes diagnosis, replacement of external parts and tear down and overhaul of actual failed engines. **Group 2 course.**

**AT 170  Heating and Air Conditioning**  4.0  (6)
**Required prerequisite(s): AT 120**
This course covers the principles of refrigeration with emphasis on the particular problems of application to automotive air conditioning. The course also covers automotive heating systems which include heater cores, blower motors, vent and will learn how to use refrigerant recovery and charging equipment and will have hands on experience in the lab with that equipment. **Group 2 course.**

**AT 180  Manual Drivetrain and Axles**  6.0  (9)
**Required prerequisite(s): AT 100, may be taken concurrently**
This course covers the basic operating principles, construction, power flow and repair of clutches, manual transaxles and drive shafts. Different theory and overhaul will be covered including ring and pinion replacement and set up. Lab work will include hands on repair of late model vehicles including four wheel drive. **Group 2 course.**

**AT 190  Automotive Facility Orientation**  2.0  (2)
This course is an automotive repair facility internship experience that will focus on students learning about the day to day duties of an auto repair technician, the organization supporting the technician, and how automotive repair facilities function. This will be accomplished as an internship using a combination of: observation, interview, analysis, written documentation of the experiences, and group discussions. **Group 2 course.**

**AT 200  Service Dept. Management**  2.0  (2)
This course is designed to acquaint the student who plans a career in the automotive service industry with the duties, responsibilities, qualifications, and problems of service department manager. The student will learn general shop organization, types of service, and cost and returns by department. Time will be devoted to employer-employee and customer relations and instruction in the use of the service manual. Also includes practice in writing and administering various forms such as work orders, rate sheets, etc. **Group 2 course.**

**AT 210  Hybrid Technology**  5.0  (8)
**Required prerequisite(s): AT 130 or Certification in Electrical and Engine Tune Up.**
This course provides a comprehensive systems overview of the operating principles, maintenance, and service of hybrid electric vehicles. **Group 2 course.**

**AT 220  Automotive Electrical II**  5.0  (8)
**Required prerequisite(s): AT 120**
This course covers advanced automotive electronics with the emphasis placed on operation, troubleshooting, and repair of lighting, gauges, accessories, and power option circuits. Body hardware is covered including diagnostics of modern systems with body control modules. **Group 2 course.**

**AT 230  Engine Performance II**  4.0  (6)
**Required prerequisite(s): AT 130**
This course covers computerized engine controls including the latest emission control systems. The student will become proficient with the use of scanners, scopes and the latest engine analyzers. The art of diagnostics and troubleshooting will be stressed. The student will have hands on experience in this area including practice using the computer as a source of information. **Group 2 course.**
AVF 111  Private Flight..................................................................... 5.0 (5)
A flight course structured to provide a minimum of 40 dual and solo flight hours to meet the aeronautical experience requirements for a private pilot. Upon completion of this course the student will have attained the FAA Private Pilot Rating. Group 2 course.

AVF 118  Instrument Flight I...................................................... 1.0 (1)
Required prerequisite(s): Private Pilot Rating
This course is the beginning stage of the Instrument Pilot Rating. The ground work will be laid for students to safely fly by the instruments. Skills and techniques will be gained to effectively move to Instrument Flight II where holding, tracking, and approaches will be learned. Both the aircraft and flight simulator will be used to obtain skills required for this course. Objectives learned will go toward the FAA Instrument Rating. Group 2 course.

AVF 130  Instrument Flight II.................................................... 2.0 (2)
Recommended prerequisite(s): AVF 118
At the completion of this course the student will be signed off for the FAA Instrument check ride. The aircraft and the simulator will be used to tech the student skills required. The student will learn tracking, holding, and instrument approaches. At the culmination of this course the student will have gained actual instrument flight time and be a competent instrument pilot. Group 2 course.

AVF 141  Introduction to UAS ................................................. 2.0 (2)
This course will introduce students to the world of unmanned flight. The course will consist of the construction of a remotely controlled aircraft and the skills needed to maintain it. Additionally they will conduct flight operations to become proficient at directly controlling a small aircraft. They will learn about propulsion, communication links, servos, design, materials and regulations of the r/c aircraft world. Group 2 course.

AVF 230  Commercial Flight I.................................................. 2.0 (2)
Required prerequisite(s): Instrument Flight Rating
The student will learn the skills required by the FAA to safely operate the complex aircraft. They will also increase their instrument proficiency while conducting required cross country flights. Students will learn in an aircraft and flight simulator during this course. Group 2 course.

AVF 232  Commercial Flight II.................................................. 3.0 (3)
Recommended prerequisite(s): AVF 230
A flight course structured to provide a minimum of 51 dual and solo flight hours to partially fulfill the flight hour requirements for the FAA Commercial Pilot Rating. This course will provide a review of VFR and IFR cross country navigation procedures and introduce the student to commercial flight maneuvers. Upon completion of this course the student will have completed Stage Seven in the Commercial Pilot Syllabus. Group 2 course.

AVF 234  Commercial Flight III.................................................. 3.0 (3)
Recommended prerequisite(s): AVF 224, AVF 232
This course is the last of four flight courses required to obtain the FAA Commercial Pilot Certificate. This course consists of approximately 49 flight hours flown in a training airplane and will consist of dual/solo cross country flights and a review of all commercial flight maneuvers in preparation for the Commercial Pilot FAA Practical Test. Upon completion of this course, the student will have completed Stage Eight of the Commercial Pilot syllabus and attained the FAA Commercial Pilot Rating. Group 2 course.

AVF 241  UAS Flight School..................................................... 4.0 (5)
Co-requisite(s): AVG 261
Recommended prerequisite(s): AVF 141
Students will fly in the Grayling Restricted Area (R-4201B) on prescribed missions, either as a single pilot or as a crew, where advance sensor operations are conducted. Students will be programming the aircraft and conduct various missions that will resemble typical work that they will see in the field. These include surveillance, structure inspection, advanced sensor operations and search and rescue. Group 2 course.

AVF 271  Multi-Engine Flight.................................................... 1.0 (1)
Required prerequisite(s): AVF 111 or Private Pilot Rating
This is a flight course involving approximately 10 flight hours in an airplane/simulator and 11 ground hours is designed to give the student the aeronautical knowledge, proficiency, and experience required to meet the FAA Practical Test Standards for the Private or Commercial Multi-engine rating. Upon completion of this course, the student will have attained the FAA Multi-engine Land Rating. Group 2 course.

AVF 274  Tailwheel Flight......................................................... 1.0 (1)
Required prerequisite(s): Private Pilot Rating
This course is designed to provide the student with the skills, knowledge, and experience to receive a logbook endorsement to fly tailwheel aircraft. This course will usually be taught in the fall, winter, and spring months in a tailwheel aircraft. Group 2 course.

AVF 275  Seaplane Flight......................................................... 2.0 (2)
Required prerequisite(s): Private Pilot Rating
In this course, the student will gain the skills, knowledge, and experience to receive endorsement for the FAA Practical Test. Students will learn in a Piper Super Cub on floats as they demonstrate maneuvers and landings. Group 2 course.

AVF 283  Upset Maneuver Training........................................ 1.0 (1)
Required prerequisite(s): Private Pilot Rating
In this course the student will learn the foundations to safely perform basic aerobatic maneuvers. Also, the student will gain confidence and skills necessary to recover from various unusual flight attitudes that will increase the students’ overall flight safety. Group 2 course.
AVF 284 Instrument Flight Instructor .................. 2.0 (2)
Required prerequisite(s): Commercial Pilot with instrument Rating
The student perfects both teaching and instrument flying skills while sitting in the right seat of the cockpit. The student develops the knowledge and ability to teach others instrument flying procedures. Training utilizes instrument equipped aircraft and a Frasca simulator. The course consists of 10-20 hours of flying and 10-20 hours of ground time. Group 2 course.

AVF 382 Flight Instructor Rating ......................... 4.0 (4)
Required prerequisite(s): Commercial Pilot with instrument Rating
In this course the student will learn the skills to be a Certified Flight Instructor (CFI). They will master the skills of the Private and Commercial Pilot ratings. In addition they will learn how to be an effective teacher and understand all FAA rules and regulations that accompany being an instructor. The student will learn in this course through the use of the simulator and aircraft. Group 2 course.

AVG 101 Private Pilot Ground School ................... 5.0 (5)
A course of study that will provide the aeronautical knowledge required of a private pilot and prepare the student to take the FAA Private Pilot written examination. Topics include: aerodynamics, engine and aircraft systems, airport operations, weight and balance, aircraft performance, Federal Aviation Regulations, meteorology, airspace, navigation, and flight physiology. Group 2 course.

AVG 161 Mechanics for Pilots ......................... 3.0 (3)
Required prerequisite(s): Private Pilot Rating
This course will teach the students about the systems, components, safe repair, and regulations involved with maintaining and operating small aircraft. Students will learn in the classroom and in the maintenance hangar. Group 2 course.

AVG 190 Aviation Weather ......................... 3.0 (3)
Recommended prerequisite(s): AVG 101
This course offers thorough coverage in the application and analysis of meteorological charts and how they pertain to aviation. It emphasizes the need for advanced knowledge on how NWS/NOAA charts are derived and how to understand their use in aviation today. Additional emphasis will be placed on predominant weather patterns, associated weather and planning flights to avoid severe weather. A basic understanding in the theory of meteorology is desired. Group 2 course.

AVG 202 Advanced Aircraft Systems .................. 3.0 (3)
Recommended prerequisite(s): AVG 101
This course is designed to prepare those students seeking to be career pilots to be successful in the intense aircraft systems ground schools offered by the airlines, manufacturers, and private training providers such as Flight Safety. Each major system of large turbine aircraft will be studied. Group 2 course.

AVG 204 Airline Aircraft Ground School ............ 3.0 (3)
Recommended prerequisite(s): AVG 202
This course is designed to prepare those students seeking to be career pilots to be successful in the intense aircraft ground schools provided by the airlines. Canadair Regional Jet systems, limitations, normal and emergency checklist, and flows and flight procedures will be covered in this course. Group 2 course.

AVG 240 Corporate Aviation Ground .................. 3.0 (3)
Recommended prerequisite(s): AVG 202
Students taking this course will learn about the aspects of corporate aviation. Aircraft, regulations, business customs, and future outlooks of corporate aviation will be presented. Group 2 course.

AVG 251 Commercial Ground School .................. 4.0 (4)
Recommended prerequisite(s): AVF 111 or Private Pilot Rating
An advanced study of aviation topics including GPS, meteorology, radio communications, airspace, and Federal Aviation Regulations. In addition, aircraft systems, career opportunities, aviation safety, aircraft weight and balance, performance charts, and aerodynamics are re-viewed with emphasis on commercial pilot operations. Group 2 course.

AVG 252 Instrument Ground School .................. 4.0 (4)
Recommended prerequisite(s): AVF 101 or Private Pilot Rating
A course of study that will provide the aeronautical knowledge required for the instrument rating and prepare the student to take the FAA Instrument Rating-Airplane written examination. Topics include: flight instruments, radio navigation, departure, enroute, and arrival procedures, VOR, NDB, ILS, and GPS approaches, IFR emergencies, aviation weather, and IFR cross-country flight planning. Group 2 course.

AVG 261 UAS Ground School .................. 4.0 (4)
Co-requisite(s): AVG 261
Recommended prerequisite(s): AVF 234
This course will prepare students for the theory behind piloting a UAV, along with its sensor management. They will learn about rules and regulations, uses, types of aircraft, components, programming, communications and economic impact of the industry. Upon completion students will have a solid foundation of the UAV industry. They will be prepared to gain specific UAV training on larger aircraft like the Predator, Reaper or Global Hawk. Group 2 course.

AVG 381 Instructor Ground School .................. 5.0 (5)
Recommended prerequisite(s): AVG 251
A course of study that will provide basic education principles and a review of the aeronautical knowledge required for the flight instructor (airplane single engine) certificate and prepare the student to take the FAA Fundamentals of Instruction (FOI) and the Flight Instructor-Airplane Single Engine written examinations. Through classroom presentations and one-on-one student teaching, students will gain practical teaching experience. Group 2 course.
BIO Biology

How to select a first course in Biology:
If you are in a transfer program requiring a full year of introductory biology such as pre-med, pre-dental, pre-vet, agriculture, wildlife and fisheries, or environmental programs, you should choose:
• BIO 115 Cell, Plant and Ecosystem Biology
• BIO 116 Cell and Animal Biology

If you need a one-semester laboratory science course to fulfill a basic education requirement, you may choose any one of the following:
• BIO 100 Food and Nutrition Biology
• BIO 105 Living in the Environment
• BIO 106 Human Biology
• BIO 108 Plant Biology
• BIO 109 Principles of Life Science

All of the above include a common core that is basic to the understanding of any branch of biology. The core topics include cell structure and function, genetics, the chemical and physical principles governing life processes, and evolution. Any 100-level Biology course may serve as a prerequisite for 200-level Biology courses.

It has been the experience of the Biology Department that students with COMPASS scores below MTH 23 and ENG 111 levels have difficulty successfully completing introductory-level biology courses. If your COMPASS scores are below these levels, the Biology Department recommends that you complete ENG 99, ENG 108 or ENG 11/111 and MTH 08 before enrolling in any biology course. If your COMPASS scores are below these levels and you decide to enroll in a Biology course, allow yourself additional time for study and preparation. If you are unsure of your ability, consult your advisor, a counselor, or a biology instructor.

BIO 100 Food and Nutrition Biology .................. 4.0 (3)
BIO 100L Food and Nutrition Biology Lab ............ 0.0 (2)
Note: There are no prerequisites for this course, but students scoring below MTH 23 and ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): BIO 100 and BIO 100L

This course is designed for students who wish to improve their understanding of nutrition in their daily activities. Healthy eating is attracting more attention as Americans struggle with the problems of obesity and in disease prevention. In addition to the normal topics of biology such as biochemistry, genetics, evolution, and DNA structure and function, this introductory course has an emphasis on nutrition. The student will gain a working knowledge of the principles of good nutrition as it relates to their personal health. Related topics will include the major classes of nutrients and their functions; personal energy needs, dietary habits and activity levels; the correlation between diet and diseases, including cancer, heart disease and diabetes; and an awareness of nutrition controversies, food faddism, weight loss gimmicks and quackery in the field of nutrition. Group 1 lab course.

BIO 105 Living in the Environment....................... 4.0 (3)
BIO 105L Living in the Environment Lab .......... 0.0 (2)
Note: There are no prerequisites for this course, but students scoring below MTH 23 and ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): BIO 105 and BIO 105L

Cell structure and function, chemical processes, ecological principles, human population, food and agricultural conservation, biodiversity, alternative energy, along with other topics related to conservation will be discussed. Students study environmental problems and possible solutions. There are also many field trips which illustrate, among other topics, ecology, habitats of Michigan, river quality, forest analysis, water treatment, and alternative energy generation. Group 1 lab course.

BIO 106 Human Biology .................................. 4.0 (3)
BIO 106L Human Biology Lab ....................... 0.0 (2)
Note: There are no prerequisites for this course, but students scoring below MTH 23 and ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): BIO 106 and BIO 106L

A survey of Human Anatomy and Physiology with a primary focus on health and disease. Topics to be discussed will include the cell structure, simple chemistry of biology, homeostasis, the organ systems, genetics, nutrition, exercise physiology, cancer, heart disease, immunology, AIDS, the effects of drugs and alcohol, and other topics of current interest. This course is offered in multiple formats such as online or traditional. Consult an advisor before enrolling. Group 1 lab course.

BIO 108 Plant Biology ..................................... 4.0 (3)
BIO 108L Plant Biology Lab .......................... 0.0 (2)
Note: There are no prerequisites for this course, but students scoring below MTH 23 and ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): BIO 108 and BIO 108L

Since almost all life on earth depends upon photosynthesis, this course places its emphasis on the fascinating world of plants. It includes a study of plant structure, growth, development, propagation and scientific concepts on which horticulture is based. Laboratory exercises will include greenhouse work. Group 1 lab course.

BIO 109 Principles of Life Science....................... 4.0 (3)
BIO 109L Principles of Life Science Lab ........... 0.0 (2)
Note: There are no prerequisites for this course, but students scoring below MTH 23 and ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): BIO 109 and BIO 109L

This course explores the fundamental nature of life and how living organisms adapt to a constantly changing world. The major emphasis of this course will be on the unity of life, the processes that are fundamental to any living organism. Laboratory exercises will cover a broad range of topics. Group 1 lab course.
BIO 115   Cell, Plant & Ecosystem Biology ........... 4.0 (3)
BIO 115L   Cell, Plant & Ecosystem Biology Lab ... 0.0 (3)

Recommended prerequisite(s): MTH 111
Corequisite(s): BIO 115 and BIO 115L

An introduction to the fundamental concepts of biology, including an investigation of the major kingdoms of life, classification, ecology, botany, cellular anatomy and biochemistry, DNA structure and function, genetic engineering, cloning and stem cell technologies. Laboratory includes field work and investigative exercises which illustrate lecture topics. Group 1 lab course.

BIO 116   Genetics, Evolution & Animal Bio ........... 4.0 (3)
BIO 116L  Genetics, Evolution & Animal Bio Lab .... 0.0 (2)

Recommended prerequisite(s): BIO 115, MTH 111
Corequisite(s): BIO 116 and BIO 116L

This lecture and lab course concentrates on cell division, classical genetics as well as evolution and speciation. It also covers the biology of invertebrate and vertebrate animals. The treatment of the topics in this course necessarily assume a degree of familiarity with the basic biological concepts covered in BIO 115. Students who have not completed BIO 115 should expect to spend extra time reviewing these concepts throughout the course. Group 1 lab course.

BIO 208   Microbiology ................................... 4.0 (3)
BIO 208L  Microbiology Lab ................................ 0.0 (3)

Recommended prerequisite(s): ENG 111, MTH 111 and completion of any 100-level Biology course.
Corequisite(s): BIO 208 and BIO 208L

Introductory microbe physiology emphasizes human response to disease and the importance of microbes in environmental cycles. Laboratory is included. Group 1 lab course.

BIO 215   Genetics .......................................... 3.0 (3)

Recommended prerequisite(s): ENG 111, MTH 111 and completion of any 100-level Biology course.

Continuation of general biology genetics. Classical genetics will be covered in addition to an in-depth study of molecular genetics, recombinant DNA and human inheritance. A major emphasis will be on the current state of genetic research as it applies to topics such as gene therapy, cloning and stem cell research. Population genetics will also be covered. Group 1 course.

BIO 216   Genetics Lab .................................... 1.0 (3)

Corequisite(s): BIO 215

Laboratory to complement BIO 215 Genetics for students needing to transfer a 200-level genetics laboratory to a four-year institution. In addition, students interested in the life sciences will earn a deeper understanding of classical, molecular and population genetics by completing this course. Group 1 course.

BIO 220   Nutrition in Human Health ................... 3.0 (3)

Recommended prerequisite(s): MTH 111, ENG 111 and completion of any 100-level biology course.

This course is an exploration of the fundamentals of nutrition: energy nutrients, vitamins and minerals. Function and sources of each is presented, as well as the role each plays in maintaining health. Students complete their own Food Intake Record and use this information throughout the semester so as to better understand human nutrition. In addition, study is made of the role nutrition along with other lifestyles plays in the prevention and protection from disease. Discussion also includes the relationship between nutrition and fitness. Group 2 course.

BIO 227   Human Anatomy & Physiology I ............ 5.0 (5)
BIO 227L  Human Anatomy & Physiology I Lab .... 0.0 (2)

Required prerequisite(s): CHM 101, ENG 111, MTH 111
Corequisite(s): BIO 227 and BIO 227L

Recommended prerequisite(s): BIO 106

This course will include an introduction to cells, histology, biochemistry and homeostasis. In addition, the following systems will be discussed: integumentary, skeletal, muscle, nervous, and special senses. Lecture will be accompanied by lab work and applications, which will stress the anatomy, histology and function of these organ systems. (Students with recent high school chemistry may waive the CHM 101 requirement by passing the introductory Chemistry competency exam). Group 1 lab course.

BIO 228   Human Anatomy & Physiology II ........... 5.0 (5)
BIO 228L  Human Anatomy & Physiology II Lab .... 0.0 (2)

Required prerequisite(s): BIO 227

Corequisite(s): BIO 228 and BIO 228L

This is a continuation of BIO 227 and will include an introduction to the following systems: endocrine, cardiovascular, immune, respiratory, digestive, metabolism, urinary, fluid/electrolyte and acid/base balance, reproduction and genetics. Lab work stressing the anatomy, histology and function of these topics will be included. Group 1 lab course.
BIO 240  Normal and Clinical Nutrition.............. 3.0 (3)
Recommended prerequisite(s): BIO 227, MTH 08 or equivalent
Nutrition is considered from a strong biological point of view. Discussions will include a brief overview of principles of normal nutrition and then will proceed to how these principles apply to cause and treatment of specific disease states and the nutrition care process required. Group 2 course.

BIO 250  Natural History of Vertebrates ............ 4.0 (3)
BIO 250L  Natural History of Vertebrates Lab....... 0.0 (3)
Recommended prerequisite(s): ENG 111, MTH 111 and completion of any 100-level Biology course.
Corequisite(s): BIO 250 and BIO 250L
This course introduces students to the biology and diversity of vertebrate species in Michigan. The life history, anatomy, behavior, systematics, ecology and conservation of each group of vertebrates are examined. Field studies, laboratory investigations, and classroom discussion will help students understand the biology of fishes, amphibians, reptiles, birds and mammals, as well as their relationships to particular habitats. Local vertebrate species and field study techniques are stressed.
Group 1 lab course.

BIO 260  General Ecology ............................. 5.0 (3)
BIO 260L  General Ecology Lab .................... 0.0 (4)
Recommended prerequisite(s): ENG 111, MTH 111 and completion of any 100-level Biology course.
Corequisite(s): BIO 260 and BIO 260L
The course is an introduction to the study of the complex relationships of organisms with one another and with the physical conditions under which they live. Students will study the conditions necessary for life, population ecology, community and ecosystem dynamics and ecosystem diversity. Field oriented lab exercises involve observations and data collection followed by analysis. Group 1 lab course.

BIO 268  Biochemistry ................................ 3.0 (3)
Required prerequisite(s): CHM 101
Recommended prerequisite(s): BIO 227, MTH 23
Study of the basic fundamentals of the chemical composition of living matter with application of concepts to normal and abnormal human function. Group 1 course.

Visit www.nmc.edu/science-math for more detailed information.

BPC  Bridge Program Courses

BPC 092  Bridge to Math.............. 3.0 (developmental) (3)
Bridge to Math is designed to help adult students make the transition to higher education math courses while at the same time prepares them for today's workplace math requirements.

BPC 094  Bridge to Communications ............ 4.0 (developmental) (4)
Bridge to Communications is designed to help adult students make the transition into higher education while at the same time prepares them for today's workplace. This class is comprised of intensive hands-on skill building in communications (writing, speaking, and listening) and also features job portfolios, employability activities, and a career development process.

BPC 096  Bridge to Technology ......... 4 (developmental) (4)
Bridge to Technology supports adult student learners by incorporating instructor led study sessions to complement an array of required CIT classes. The CIT classes are selected by individual students and can be in keyboarding, Microsoft Word, PowerPoint, Excel and other business software applications. The instructional goal of this course is to help develop the skill sets that can lead to certification or skill mastery.

BPD  Business Professional Development

BPD 133  Keyboarding Speed/Accuracy .......... 1.0 (1)
This refresher/skill improvement class is for students who already know how to key using the touch-type method. It focuses on improving the current skill level through drill and testing of the alphabetic characters and basic punctuation keys. It will allow the student to use the computer as an efficient tool in document creation for business, education, and personal life. Optional drill work can be completed in numbers and symbols. Group 2 course.

BUS  Business

BUS 101  Introduction to Business .......... 3.0 (3)
American business in the new millennium is exciting and challenging. Students will be introduced to the variety of opportunities by exploring ownership, management, the economy, marketing, international business, social responsibility and business ethics, and entrepreneurship. Group 2 course.

BUS 105  Business Math ............... 3.0 (developmental) (3)
Recommended prerequisite(s): COMPASS placement into MTH 23
Apply basic mathematical principles to solve problems in modern business practice. Topics include trade discounts, markups and markdowns, payroll and payroll taxes, interest, sinking funds, installment buying, the cost of home ownership, sales, excise and property taxes. It is designed for day-to-day business applications. Group 2 course.
**BUS 130  Mechanics of Business Writing ... 3.0 (3)**
Written communication skills are crucial to career and college success. This course demonstrates the need for clear and grammatically correct writing. The course content covers the elements essential to good writing: punctuation, capitalization, numbers, abbreviations, spelling, and word usage. **Group 2 course.**

**BUS 155  Interpersonal Communications ... 3.0 (3)**
To be well prepared for employment in the 21st Century it will be mandatory for students to demonstrate effective human relations. Individuals who enter the workforce in any field will need to possess interpersonal and customer service skills. The global workplace will demand competence in interpersonal or “soft” skills. Excellent customer service and relationship building skills are a necessary component of overall business communication. Topics include: communication and identity, conflict and communication climates, and how to build and maintain effective relationships with external and internal customers. Students should place into ENG 99. **Group 2 course.**

**BUS 231  Professional Communications ... 3.0 (3)**
Recommended prerequisite(s): BUS 130 (Students in the Administrative Support Certificate Program must take BUS 130 before BUS 231); placement into ENG 111
Communicating professionally is a critical skill in today’s world. This course is designed to help students understand communication theory and its application in their professional lives. Students will develop effective writing skills by analyzing complex issues, organizing thoughts logically, and communicating those ideas concisely—in verbal and written form. Students will also practice effective listening skills, understand the components of a successful job search, and use teamwork skills in solving communication problems. **Group 2 course.**

**BUS 261  Business Law I ... 3.0 (3)**
Recommended prerequisite(s): Placement into ENG 111
This course is a study of the U.S. legal system and specific areas of law related to business, with an emphasis on the techniques of legal decision-making. Topics include the judicial system, torts, contracts, and criminal law. **Group 2 course.**

**BUS 262  Business Law II ... 3.0 (3)**
Recommended prerequisite(s): BUS 261, placement into ENG 111
This course is the study of the U.S. legal system and specific areas of law related to business, with an emphasis on the techniques of legal decision-making. Topics include agency, partnerships, corporations, franchises, property, and employer-employee relationships. **Group 2 course.**

**BUS 290  Business Administration Internship ... 3.0 (3)**
Required prerequisite(s): 20 credits of business courses with a GPA of 3.0.
This course is an elective for the Associate of Applied Science degree in Business Administration. The purpose of the internship is to provide on-the-job training for the student who wishes to pursue a career in business. The internship will be customized to meet the learning needs of the student and the job requirements of the sponsoring firm. Students spend 10 hours per week in this paid or non-paid, supervised on-the-job training experience. In addition to the required 150 hours in a business site, students participate in semi-monthly seminars. Students must apply one month prior to the semester in which they will complete the internship. **Group 2 course.**

**BUS 292  International Work Experience ... 3.0 (3)**
**Internship**
American students to Germany (Summer/July-August).
Required prerequisite(s): German speaking and writing skills and relevant work experience.
Note: Letters of recommendation from college advisor and work experience coordinator approval are required. Contact the work experience coordinator before May 1.
This course is an elective that provides on-the-job training in Germany for U.S. students seeking international work experience. This experience will provide an intercultural, educational, and professional opportunity for students to gain a better understanding of German culture and employment practices. Students are employed on a full-time basis for six weeks. An internship will be customized to meet the learning needs of the student and the job requirements of the sponsoring international firm. **Group 2 course.**
**CAR 101 Introduction to Carpentry** .......................................... 3.0 (4)
Recommended Competencies: COMPASS placement into MTH 23 or higher, or co-enrollment in the recommended developmental math course. COMPASS placement into ENG 11/111 or higher, or co-enrollment in the recommended English course.
This course provides an introduction to residential carpentry. Through structured classroom and hands-on skill building, the student will learn about building materials, fasteners, and adhesives, hand and power tools, reading plans and elevations, floor systems. **Group 2 course.**

**CAR 105 Residential Framing** ............................................ 3.0 (4)
Required prerequisite(s): CAR 101
Through structured classroom and hands-on skill building, the student will learn wall and ceiling framing, roof framing, introduction to concrete, reinforcing materials, and forms, windows and exterior doors and basic stair layout. **Group 2 course.**

**CAR 121 General Carpentry Practices** ................................. 3.0 (4)
Required prerequisite(s): CAR 105
Through structured classroom and hands-on skill building, the student will learn about commercial drawings, roofing applications, thermal and moisture protection, exterior finishing, cold-formed steel framing, and drywall installation. **Group 2 course.**

**CAR 125 Interior Carpentry** ............................................... 3.0 (4)
Required prerequisite(s): CAR 121
Through structured classroom and hands-on skill building, the student will learn about drywall finishing, doors and door hardware, suspended ceilings, window, door, floor, and ceiling trim, cabinet installation, and cabinet fabrication. **Group 2 course.**

**CAR 131 Rigging and Concrete Practices** .............................. 3.0 (4)
Required prerequisite(s): CAR 125
Through structured classroom and hands-on skill building, the student will learn about rigging equipment, rigging practices, properties of concrete, reinforcing concrete, handling and placing concrete. **Group 2 course.**

**CAR 135 Site Layout & Formwork** ....................................... 3.0 (4)
Required prerequisite(s): CAR 131
Through structured classroom and hands-on skill building, the student will learn about trenching and excavation, foundations and slab-on-grade, vertical formwork, horizontal formwork and tilt-up wall panels. **Group 2 course.**

**CD 101 Early Childhood Education** .................................... 3.0 (3)
This course familiarizes students with the history and present state of early childhood education, from birth to 10 years of age. An overview of child development theories is presented in the context of the role of the educator/caregiver. Resources and careers, and contemporary issues such as school readiness and exploration of various education philosophies are also included. Environment observations are required as well as a working general education philosophy. The observations are set by students to meet their schedules. **Group 2 course.**

**CD 202 Human Growth and Development** ....................... 5.0 (5)
Recommended prerequisite(s): CD 101 or PSY 101, placement into ENG 111
Students will study research, the reasons for child study and its impact on families and education and the issues faced in child development today. Students will explore the dimensions and problems of pregnancy. They will also study the interactions between physical, cognitive, emotional and social developments in children between birth and adolescence. This study will be based on recent research and will be applied using various child development theories. From this, students will develop beginning observation skills and individual based research projects that test theories about child development. Field research is required and set by students to meet their schedules. Students will explore how professional work with and for children is changing and how they can be advocates for the well being of children and families. **Group 2 course.**

**CD 203 Guiding Young Children** ..................................... 3.0 (3)
Recommended prerequisite(s): CD 101 or PSY 101
This course examines the preparation of a positive learning environment. The development and use of equipment with the children from birth through 10 years of age is explored. Special emphasis on the development of techniques in personal interactions with children is also examined. Current concepts and approaches that directly relate to the mental health of the child and his/her family are explored. Anger management and conflict resolution skills are especially emphasized through the building of positive environments. Field observations are required and are set by students to meet their schedules. **Group 2 course.**

**CD 204 Early Childhood Curriculum** ................................. 3.0 (3)
Recommended prerequisite(s): CD 101
An active learning approach is used to develop student’s skills in planning, implementing and evaluating developmentally appropriate learning experiences for children ages two-and-a-half to 10. Various curriculum areas are covered: science, pre-math, math, drama and music, creative art, sensory, gross and fine motor social studies and language arts. Basic skills and concepts, resource materials and teaching methods (developmental) are explored for each curriculum area. There is a strong emphasis on individualizing curriculum using the child’s interests, modality of learning and intelligence theories. **Group 2 course.**
CD 206  Infant/Toddler Development .................. 3.0 (3)
Recommended prerequisite(s): CD 101
This class provides an in-depth study of the physical, cognitive, social and emotional development of the infant and toddler. There will be a focus on attachment and bonding and how that relates to brain development and later social and academic development. There will also be an emphasis on the connections of pregnancy and early bonding. Students will learn how to build foundation relationships that are trust based. They will also develop skills to help families build a respectful and responsive environment for children. Students will learn how to use best practice methods with infants and toddlers. **Group 2 course.**

CD 220  Childhood Program Management .......... 3.0 (3)
Recommended prerequisite(s): CD 101
This course will examine the administrative fundamentals of early childhood programs and will include establishment, funding, licensing, staffing, budgets, equipment, philosophy and program planning. **Group 2 course.**

CD 230  Early Language and Literacy ............... 3.0 (3)
Recommended prerequisite(s): CD 101
This course is designed to teach students how to recognize and implement appropriate environmental strategies that support early literacy development and appropriate early experiences with books and writing. Emphasis is placed on speaking and listening, as well as reading and writing readiness. This group of skills includes expressive and receptive language, concepts of print and appreciation of literature, emergent writing, letter knowledge, and phonological awareness. Upon completion of the course, students will be able to select, plan, implement, and evaluate appropriate early literacy experiences. **Group 2 course.**

CD 290A-E Service Learning Internship 1.0 - 4.0 (1-4)
Recommended prerequisite(s): CD 101
Placement in a daycare, nursery school, early elementary grades in grade school or other agencies that deal with children, birth through 10 years of age. The student will have the opportunity to interact with children, assist with planning for them and evaluate their progress under direct supervision. These credits can be divided over more than one semester. **Group 2 course.**

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**CHM**

CHM 101  Introductory Chemistry ....................... 4.0 (3)
Required prerequisite(s): MTH 111
Corequisite(s): CHM 101 and CHM 101L
Recommended prerequisite(s): ENG 111 is strongly encouraged for online students.
A one-semester chemistry course for the non-science major exploring the language, concepts and methods of chemistry. Topics include atomic theory, chemical periodicity, chemical bonding, stoichiometry, gases, nuclear energy, and acid/base chemistry. The laboratory will include descriptive and analytical experiments, focusing on measurement, physical and chemical properties of materials, acids and bases, laboratory procedures and calculations. Science, engineering, and premedical students must select CHM 150 and 151 to meet chemistry requirements. This course is offered in multiple formats such as online or traditional. Consult with an advisor before enrolling. **Group 1 lab course.**

CHM 150  General Chemistry I .......................... 4.0 (3)
CHM 150L General Chemistry I Lab .................... 0.0 (2)
CHM 150R General Chemistry I, Recitation ........... 1.0 (2)
Required prerequisite(s): MTH 111
Corequisite(s): CHM 150, CHM 150L, CHM 150R
Recommended prerequisite(s): MTH 121
First semester of a two-semester course covering matter and chemical measurement, basic laws, chemical symbols and formulas, stoichiometry and chemical calculations, gases and the gas laws, thermochemistry, atomic structure, electron configurations and the periodic table, elements, chemical bonding and molecular structure, liquids, solids, intermolecular forces, and modern materials. The laboratory includes descriptive and quantitative experiments illustrating the above topics. The recitation includes problem solving, quizzes and laboratory preparation to accompany lectures. **Group 1 lab course.**

CHM 151  General Chemistry II ........................ 4.0 (3)
CHM 151L General Chemistry II Lab .................. 0.0 (2)
CHM 151R General Chemistry II Recitation .......... 1.0 (2)
Required prerequisite(s): CHM 150
Corequisite(s): CHM 151, CHM 151L and CHM 151R
A second semester course covering chemical reactions in aqueous solution including acid-base and oxidation and reduction reactions, properties of solutions, atmospheric chemistry, chemical kinetics, gaseous equilibria, acids and bases, acid-base equilibria, pH, common ion effect, buffer systems, solubility product constant, thermodynamics, enthalpy, entropy and free energy, electrochemistry, nuclear, organic, and coordination chemistry. The laboratory will cover the above topics using quantitative and qualitative procedures. The recitation includes problem solving, quizzes, and laboratory preparation to accompany lectures. **Group 1 lab course.**

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For course availability, refer to [www.nmc.edu/schedule](http://www.nmc.edu/schedule) or the Schedule of Classes.
CHM 250 Organic Chemistry I.......................5.0 (3)
CHM 250L Organic Chemistry I Lab ..................0.0 (6)

Required prerequisite(s): CHM 151
Corequisite(s): CHM 250, CHM 250L

The first semester of a two-semester course covering the chemistry of carbon compounds. Designed to meet the requirements for majors in chemistry, chemical engineering, biological science, pre-medicine, etc. Topics include nomenclature, structure, aliphatic compounds, free-radical, nucleophilic substitution and elimination reactions, electrophilic addition reaction and mechanisms, alkyl halides, alkenes and alkynes. The laboratory portion will cover fundamental organic laboratory techniques of synthesis, separation and analysis. Specific assignments parallel lecture topics wherever possible. Group 1 lab course.

CHM 251 Organic Chemistry II.......................5.0 (3)
CHM 251L Organic Chemistry II Lab ..................0.0 (6)

Required prerequisite(s): CHM 250
Corequisite(s): CHM 251 and CHM 251L

A follow up to CHM 250. Topics include alcohols, aromatics, ethers and epoxides, arenes, carboxyls, carboxylic and sulfonic acids and their derivatives, amines, phenols, aryl halides, carbohydrates, amino acids, biochemical processes, polynuclear aromatics, heterocycles, and others together with appropriate mechanistic theories and structural concepts. Instrumental techniques discussed include infrared spectroscopy (IR), nuclear magnetic resonance (NMR), mass spectrometry (MS), and ultraviolet (UV) spectroscopy. The lab exercises will continue the development of organic chemistry laboratory technique on both semi-microscale and microscale. In addition, analytical techniques using infrared spectroscopy and gas chromatography will be developed. Group 1 lab course.

Visit [www.nmc.edu/science-math](http://www.nmc.edu/science-math) for more detailed information.

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**CIT Computer Information Technology**

**CIT 100** Computers in Business-An Intro ........3.0 (3)
Recommended prerequisite(s): Keyboarding skills; CIT 122A or equivalent experience

A first exposure to the world of computer applications in business, this course covers the hands-on use of word processing, spreadsheets, databases, and presentation graphics programs. In addition, the Windows operating system, file and folder management, basic concepts, terminology, and security threats will be covered. Group 2 course.

**CIT 109A** Keyboarding I ................................2.0 (2)

Whether for personal or business use, knowledge of keyboarding is a must today! This course introduces you to the computer keyboard. Areas of emphasis include touch keyboarding of letters, numbers, and symbols. Students who already have the above skills may bypass CIT 109A and enroll in CIT 109B. Online format. Group 2 course.

**CIT 109B** Keyboarding II ..............................2.0 (2)

Continuation of keyboarding skills development which has been acquired in either CIT 109A or previous keyboarding experience. Emphasis on computers and word processing software used in the application of keyboarding skills for personal and business situations, intensive drill work for speed and accuracy improvement, and use of numeric keypad. Online format. Group 2 course.

**CIT 110** Programming Logic and Design ..........3.0 (3)

Required prerequisite(s): MTH 111

Recommended prerequisite(s): CIT 122A

This course will prepare the student for programming courses. Topics covered include flow charting, pseudocode, object orientation, decisions and looping program constructs, collections and arrays, and recursion. Lecture topics will be reinforced with hands-on coding, testing, debugging, and documentation exercises. Group 2 course.

**CIT 111** Keyboarding III ............................4.0 (4)

Recommended prerequisite(s): CIT 109B, CIT 120A, CIT 120B, CIT 121A, CIT 121B

Learn advanced skills and techniques to format a wide variety of professional-looking business documents. Emphasis is on timesaving features to produce enhanced documents efficiently and accurately using word processing software. Supplementary skill-building drills are used to improve production techniques, keyboarding accuracy, and speed. Group 2 course.

**CIT 120A** Microsoft Word Level IA ................1.0 (1)

Recommended competency: Basic keyboarding and Windows skills

A one-credit course that focuses on the basic skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include preparing documents, formatting characters and paragraphs, customizing paragraphs, and formatting pages. The instructional goal of this course is to prepare students for the...
MOS exam in Word. The exam is separate from this course. Online format. **Group 2 course.**

**CIT 120B  Microsoft Word Level IB .......................... 1.0 (1)**
Recommended prerequisite(s): CIT 120A or equivalent experience
A one-credit course that continues focus on the basic skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include applying formatting and inserting objects, maintaining documents, creating tables and SmartArt, and merging documents. The instructional goal of this course is to prepare students for the MOS exam in Word. The exam is separate from this course. Online format. **Group 2 course.**

**CIT 121A  Microsoft Word Level IIA .......................... 1.0 (1)**
Recommended prerequisite(s): Word Specialist Certificate or CIT 120B or equivalent experience
A one-credit course that focuses on the advanced Word skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include customizing paragraphs and pages, proofing documents, automating and customizing formatting, and customizing and navigating a document. The instructional goal of this course is to prepare students for the MOS exam in Word and the exam is separate from this course. Online format. **Group 2 course.**

**CIT 121B  Microsoft Word Level IIB .......................... 1.0 (1)**
Required prerequisite(s): CIT 121A
A one-credit course that continues to focus on the advanced Word skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include inserting special features and references, creating specialized tables and indexes, working with shared documents, and protecting and preparing documents. The instructional goal of this course is to complete student preparation for the MOS exam in Word. The exam is separate from this course. Online format. **Group 2 course.**

**CIT 122A  Computer and Internet Basics I ................. 1.0 (1)**
Students will learn the essential skills required to use a computer with the Windows operating system. The student will learn to interact with the Windows desktop to access software and data. The course emphasizes the importance of file and folder maintenance. The course also includes introductions to the World Wide Web, e-mail and searching. Students completing this course will master skills required for on-line courses. **Group 2 course.**

**CIT 122B  Computer and Internet Basics II ............. 1.0 (1)**
Recommended prerequisite(s): CIT 122A
Students will learn additional skills required to use a computer and the Internet effectively. Additional experience with applications, object linking, and embedding is included. Students will investigate administrative and management tools with specific emphasis on security. Students will create and publish basic web pages using HTML. **Group 2 course.**

**CIT 124A  Microsoft PowerPoint Level IA ............... 1.0 (1)**
Recommended Competency: Basic keyboarding, Windows skills.
A one-credit course that focuses on the basic PowerPoint skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include preparing a PowerPoint presentation, modifying a presentation and using help, formatting slides and inserting elements in slides. The instructional goal of this course is to prepare students for the MOS exam in PowerPoint. The exam is separate from this course. Online format. **Group 2 course.**

**CIT 124B  Microsoft PowerPoint Level IB .................. 1.0 (1)**
Recommended prerequisite(s): CIT 124A or equivalent experience
A one-credit course that continues to focus on the PowerPoint basic skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include creating tables, charts and SmartArt graphics, using slide masters and action buttons, applying custom animation and setting up shows, and integrating, reviewing, protecting and saving presentations. The instructional goal of this course is to prepare students for the MOS exam in PowerPoint. The exam is separate from this course. Online format. **Group 2 course.**

**CIT 126  Microsoft Access Level I ....................... 2.0 (2)**
Recommended Competency: Basic keyboarding, Windows skills
A two-credit course that focuses on the basic Access skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include creating database tables, creating relationships between tables, modifying and managing tables, performing queries, creating forms, creating reports and mailing labels, modifying, filtering and viewing data, and importing and exporting data. The instructional goal of this course is to prepare students for the MOS exam in Access. The exam is separate from this course. Online format. **Group 2 course.**

**CIT 127  Microsoft Access Level II ..................... 3.0 (4)**
Recommended prerequisite(s): CIT 126
This course focuses on the advanced Access skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include designing table structure, designing and building relationships, advanced queries, creating customized forms, creating customized reports, using Access tools and objects, automating and securing Access, and integrating Access data. The instructional goal of this course is to prepare students for the MOS exam in Access. The exam is separate from this course. This is offered in the online format. **Group 2 course.**

**CIT 128  Microsoft Excel Level I ...................... 2.0 (2)**
Recommended Competency: Basic math, keyboarding, and Windows skills
A two-credit course that focuses on the basic Excel skill sets for Microsoft Office Specialist (MOS) certification. The skill sets include preparing an Excel workbook, inserting formulas in a worksheet, formatting an Excel worksheet, enhancing a worksheet, moving data within and between workbooks, maintaining workbooks, creating charts, and adding visual interest to workbooks. The instructional goal of this course is to prepare students for the MOS exam in Excel. The exam is separate from this course. Online format. **Group 2 course.**

For course availability, refer to [www.nmc.edu/schedule](http://www.nmc.edu/schedule) or the Schedule of Classes.
CIT 129  Microsoft Excel Level II .......................... 2.0 (2)
Recommended prerequisite(s): Excel Specialist Certificate,
CIT 128 or equivalent experience
A two-credit course that focuses on the advanced Excel skill
sets for Office Specialist (MOS) certification. The skill sets in-
clude advanced formatting, advanced functions and formulas,
working with tables and data features, summarizing and con-
solidating data, data analysis features, protecting and sharing
workbooks, automating repetitive tasks and customizing Excel,
importing, exporting and distributing data. The instructional
goal of this course is to complete student preparation for the
MOS exam in Excel. The exam is separate from this class. This
is offered in the online format. Group 2 course.

CIT 155  Personal Computer Maintenance............ 2.0 (3)
This course provides a detailed look inside the personal
computer and is designed for those students that want to learn
more about how the personal computer works. In this course
students will learn about the different hardware components as
well as how the computer interacts with the operating system.
This course is a great primer for those students that wish to
pursue the CIT 156 and CIT 157 A+ Certification classes.
Group 2 course.

CIT 156  CompTIA A+® Certification I .................. 3.0 (4)
Recommended prerequisite(s): CIT 155
This course, in conjunction with CIT 157, covers the objec-
tives of the CompTIA A+ IT Technician Certification exams.
CIT156 concentrates primarily, but not exclusively, on the
Essentials exam requirements, including: personal computer
components, laptop and portable devices, operating systems,
printers and scanners, networks, security, safety, environmental
issues, communication and professionalism. Group 2 course.

CIT 157  CompTIA A+® Certification II .............. 3.0 (4)
Recommended prerequisite(s): CIT 156
This course, in conjunction with CIT 157 covers the objec-
tives of the CompTIA A+ IT Technician Certification exams.
CIT157 concentrates primarily, but not exclusively, on the IT
Technician exam requirements, including: personal computer
components, laptop and portable devices, operating systems,
printers and scanners, networks, security, safety, environmental
issues, communication and professionalism. Group 2 course.

CIT 160  Cisco Internetworking I .......................... 4.0 (4)
This course, in conjunction with CIT 161, CIT 260, and
CIT 261, provides the necessary preparation to pass the Cisco
CCNA Exam (Cisco Certified Network Associate). The fol-
lowing topics are covered in detail: Cisco CLI, IOS, router
configuration, routing protocols and Access Control Lists.
This course is part of the Cisco Systems Networking Acad-
emy Program and will integrate online curriculum, classroom
activities and hands-on lab exercises. Group 2 course.

CIT 210  Spreadsheet Apps - MS Excel ............... 3.0 (3)
Recommended competency: PC and Windows experience
Recommended prerequisite(s): BUS 105, MTH 23 or MTH 111
This course deals with a comprehensive study of the most
current electronic Excel spreadsheet software and the business
applications which can be created and used with the software.
The entry of data with different formats, formula creations,
file transfer of data, database management, graphing, data tables, solver programs, and an introduction to macros will be covered. Group 2 course.

CIT 213  Networking Technologies....................... 4.0  (4)  
Recommended prerequisite(s): CIT 155 or CIT 156, CIT 157  
This course covers terminology, topologies and media necessary for LANs and WANs. The OSI model will be studied and identified to better enhance the understanding of how various parts work together. Included is an in depth study of TCP/IP and the characteristics for maintaining a network, and ensuring its security. This course maps to the CompTIA Networks® certification exam objectives. Group 2 course.

CIT 215  Windows Server Environment.................. 3.0  (3)  
Required prerequisite(s): CIT 213  
In this course students will learn about the latest Windows Server operating system. Students will learn and install many server roles and features. Concepts studied include Active Directory Domain Services, Certificate Services, Federation Services, DNS, DHCP, and Group Policy. Students will have an opportunity to work with a Server Core installation and virtualization using Hyper-V. Account management will be studied and students will setup users and groups, and configure access control lists. This course maps to the Microsoft 70-640 MCTS Windows Server Active Directory Exam objectives. Group 2 course.

CIT 216  Computerized Acctg. Systems............... 2.0  (2)  
Recommended prerequisite(s): ACC 121  
This course is designed to give the student experience with setting up an accounting system on the computer. QuickBooks software will be used. Accounts receivable, accounts payable, general ledger, inventory, and payroll will be covered. It is recommended that ACC 121 be taken before this class. Group 2 course.

CIT 218  Web APP Programming ASP .NET............. 3.0  (3)  
Required prerequisite(s): CIT 190, CIT 248, CIT 255  
Students will create dynamic web pages using ASP.NET. Page designs will use server controls to create common user interface elements and user controls to achieve site consistency. Students will develop interactive web pages that access and update databases using ADO.NET. Group 2 course.

CIT 233  Project Management......................... 3.0  (3)  
Recommended competency: Windows knowledge  
This course is intended for CIT students and business professionals who need to manage project activities or resources on time, on budget, and according to performance standards. Students use Microsoft Project as a project management tool to schedule tasks, and monitor resources, costs, and project progress. Group 2 course.

CIT 240  Network Security Management............... 3.0  (3)  
Required prerequisite(s): CIT 213  
Recommended prerequisite(s): CIT 161  
This course examines the fundamentals of computer network security and explores current practices for securing network resources. Course content is mapped to the CompTIA Security+ certification exam objectives, which include general security concepts, communication security, infrastructure security, cryptography and operational/organizational security. Group 2 course.

CIT 242  Windows Client Administration............... 2.0  (2)  
Recommended competency: Basic Windows skills  
In this course students will study the Windows Client operating system. Course topics include: installing Windows; implementing and conducting administration of resources; implementing, managing, monitoring, and troubleshooting hardware devices and drivers; configuring and troubleshooting the desktop environment; implementing, managing, and troubleshooting network protocols and services. Group 2 course.

CIT 246  Windows Server Infrastructure.............. 3.0  (3)  
Required prerequisite(s): CIT 215  
Students taking this course will learn how to setup, configure, and maintain a Windows Server Infrastructure. Topics covered include administering and troubleshooting DHCP, DNS, Network Access Protection, IPSEC, and Virtual Private Networks. System performance and reliability will also be studied. This course maps to the Microsoft 70-642 MCTS Windows Server Infrastructure Exam objectives. Group 2 course.

CIT 247  Windows Server Administration............. 3.0  (3)  
Recommended prerequisite(s): CIT 215, CIT 246  
Students taking this course will learn how to manage day-to-day server operations. Server administrators manage the infrastructure, web, and IT application servers. Students will use batch and script files to perform many administrative tasks. Tasks performed include software distribution, server updates, profiling and monitoring, and troubleshooting. Many of these tasks will be performed using remote desktop services and administrative tools. This course maps to the Microsoft MCITP Windows Server Administration test objectives. Group 2 course.

CIT 248  SQL Server Databases....................... 3.0  (3)  
Required prerequisite(s): CIT 185  
Microsoft SQL Server is used in this course to introduce students to enterprise database analysis and administration tasks. Students focus on performance, scalability, reliability, and security as they normalize database designs, enforce data integrity, create indexes and stored procedures, optimize queries, and control database access. Group 2 course.

CIT 255  .NET Object-Oriented Programming........ 3.0  (3)  
Required prerequisite(s): CIT 170, CIT 195  
The student builds on .NET programming fundamentals learned in CIT 195, focusing on object-oriented concepts throughout the course. The definition and use of classes with multiple properties, methods, and constructors is covered early. The student implements encapsulation, inheritance and polymorphism while creating several applications in Visual Studio .NET. Group 2 course.
CIT 256  Linux Administration......................... 3.0 (3)  
Required prerequisite(s): CIT 156, CIT 157, CIT 213
This is a hands on class that covers the concepts related to Linux installation and system administration. Students will install and administer a Linux operating system using removable hard drives. It is intended for students who plan to work as Linux system administrators. It is also intended for those who plan to take one or more certification tests as part of their professional preparation. Group 2 course.

CIT 260  Cisco Internetworking III...................... 4.0 (4)  
Recommended prerequisite(s): CIT 161
This course, in conjunction with CIT 160, CIT 161, and CIT 261, provides the necessary preparation to pass the Cisco CCNA Exam (Cisco Certified Network Associate). The following topics are covered in detail: VLSM, LAN switching, VLANs, VTP, EIGRP, OSPF, RIP2, and WANs. This course is part of the Cisco Systems Networking Academy Program and will integrate online curriculum, classroom activities and hands-on lab exercises. Group 2 course.

CIT 261  Cisco Internetworking IV....................... 4.0 (4)  
Recommended prerequisite(s): CIT 260
This course, in conjunction with CIT 160, CIT 161, and CIT 260, provides the necessary preparation to pass the Cisco CCNA Exam (Cisco Certified Network Associate). Topics covered in detail: WAN design, PPP, ISDN, frame relay, ATM, cable, NAT/PAT, network management and CCNA exam review. This course is part of the Cisco Systems Networking Academy Program and will integrate online curriculum, classroom activities and hands-on exercises. Group 2 course.

CIT 275  .NET Solutions Development..................... 3.0 (3)  
Required prerequisite(s): CIT 248, CIT 255
Students will create various types of computer application solutions based on the .NET framework, incorporating content from prior programming and database courses. Data access strategies are examined. Standard industry patterns and practices are emphasized. Software projects are used to demonstrate the software development life cycle. Group 2 course.

CIT 280  Systems Analysis & Design....................... 3.0 (3)  
Required prerequisite(s): CIT 233, CIT 248, CIT 255
Recommended prerequisite(s): CIT 215
This course is the capstone course in the CIT Developer and CIT General associate degree programs. It introduces the student to the phases in the systems development life cycle. Students will gain practical knowledge in systems analysis through participation in a team-based system development project. Students will conduct a feasibility study, perform requirements analysis, and model objects and data. Students will apply their knowledge of database design and programming, and they will create a user interface using elements of both traditional and modern systems analysis methodologies. Group 2 course.

CIT 290  CIT Internship.................................... 3.0 (3)  
Required prerequisite(s): CIT 280
Work experience is integral, and students are placed in settings that utilize their business and CIT skills. Students spend 10 hours per week in this paid or non-paid, supervised on-the-job training experience. In addition to the required 150 hours in a CIT site, students participate in semi-monthly seminars. Students must apply one month prior to the semester in which they will complete the internship. Group 2 course.

CIT 292  Support Specialist Internship................. 3.0 (3)  
Required prerequisite(s): 27-30 hours in the Support Specialist Certificate
Work experience is an integral part of the Support Specialist Certificate student’s program. Students are placed in settings that utilize their technical, business applications and interpersonal relations skills. Students spend 10 hours per week in this paid or non-paid, supervised on-the-job training experience. In addition to the required 150 hours in a job situation, students participate in weekly seminars. Students must apply one month prior to the semester in which they will complete the internship. Group 2 course.

CJ 101  Intro to Criminal Justice....................... 4.0 (4)  
An introduction to the criminal justice system and the criminal justice process, including history, present structure, current functions and contemporary problems of police, prosecution, courts, corrections, and security agencies. Group 2 course.

CJ 211  Criminal Law...................................... 3.0 (3)  
Recommended prerequisite(s): Placement into ENG 111
This offering will study Constitutional law and the Bill of Rights as they directly relate to the powers and the limitations of both federal and state law enforcement officers. Current judicial case histories are studied so as to better understand the changes in enforcement policies. The judicial process is reviewed from time of arrest, arraignment, pre-trial, and trial procedure to the final determination of the case. This course is offered spring semester. Group 2 course.

CJ 241  Interview & Interrogation....................... 3.0 (3)  
Recommended prerequisite(s): CJ 101, placement into ENG 111
This course will present techniques and methods of obtaining information from victims, witnesses and suspects. It also deals with the laws and court precedents relative to confessions, statements, and admissibility. Group 2 course.

CJ 242  Evidence & Criminal Procedures................ 3.0 (3)  
Recommended prerequisite(s): Placement into ENG 111
An overview of the criminal court system and the process of a criminal proceeding from incident to disposition and appeal, including the rules of evidence affecting the trial of a criminal case. It also includes an overview of the criminal procedure rules concerning arrest, search and seizure, and interrogation and confession, which regulate law enforcement and protect citizens’ rights of privacy and presumed innocence. The course includes pertinent Supreme Court decision. Group 2 course.
**CMT  Construction Management**

**CMT 103  Construction Safety** .......................... 3.0 (3)
Through structured classroom activity, students will learn the role of OSHA in job site safety, demonstrate hazard recognition and risk assessment techniques, demonstrate an understanding of assured equipment grounding conductor programs and the use of GFCIs, understand proper rigging safety procedures and demonstrate use of hand signals. Group 2 course.

**CMT 107  Construction Supervision** ...................... 3.0 (3)
Through structured classroom activity, students will learn about human relations and problem solving, safety, quality control, contract and construction documents, document control and estimating, planning and scheduling, resource control and cost awareness. Group 2 course.

**COM  Communications**

**COM 101  Introduction to Communication** ............ 4.0 (4)
Designed to introduce the student to the basic components of the communication process, this course emphasizes interpersonal communication, perception, meaning, theory, and an introduction to mass communication. The direct application of theories to the student’s individual career choice or personal life experience is stressed. Group 2 course.

**COM 111  Public Speaking** ................................ 4.0 (4)
Designed to acquaint students with the fundamentals of the discipline and to give them confidence in speech situations, this course considers voice, platform technique, message organization and audience analysis. Emphasis is upon the formal speaking situation. Group 2 course.

**COM 121  Broadcasting Practicum I** ............... 2.0 (2)
Practical experience in underwriting, announcing, script writing, “on-air” studio operations and the management of the non-profit college radio station are all part of this course. Internships with local radio stations may be arranged. Group 2 course.

**COM 122  Broadcasting Practicum II** ............... 2.0 (2)
This course continues practical experience in underwriting, announcing, script writing, “on-air” studio operations and management. Internships with local radio stations may be arranged. Group 2 course.

**COM 201  Mass Comm. & Culture** ..................... 4.0 (4)
This course presents various perspectives on the analysis, evaluation and understanding of communication in mass culture. Emphasis is on critical thinking and analysis of communication situations with relevance to the student’s individual career choice or life experience. Group 2 course.

**CUL  Culinary Arts**

**CUL 101  Today’s Hospitality Industry** ............... 3.0 (3)
This course is designed for students who wish to pursue a career in the hospitality industry. It introduces the student to segments of the industry and the different career tracks within each one. The course will acquaint the student with the rigors of hospitality and the particular nature of this people-oriented industry. A foundation course in the study of resort and resort settings, the course provides the student with an awareness of the unique problems associated with the development, management and marketing of a resort. Also, the seasonal nature of most resorts and the challenges presented by this issue are discussed. The nature and unique characteristics of the hospitality industry as a career choice are discussed. Group 2 course.

**CUL 110  Safety & Sanitation** ........................... 2.0 (2)
This course is designed for students who wish to pursue a career in culinary arts or hotel and restaurant management. With today’s complex safety and health laws, it is essential as well as required by many firms to have an indepth understanding and certification in safety and sanitation. This course provides the students with both. Students study food service safety, including fire safety. Students will earn an American Red Cross Certificate in adult CPR. Students also learn all aspects of food service sanitation and earn the NRAEF ServeSafe Certificate. Group 2 course.

**CUL 111  Professional Cookery** ......................... 6.0 (12)
Recommended prerequisite(s): CUL 110
An intensive study of foods and cooking, this course exposes the student to commercial equipment, quality food production, and professional presentation. It provides the student with the practice and theory involved in the preparation of foods in a commercial operation. Basic cooking terminology, methods and procedures are introduced. The course also includes kitchen safety and sanitation, knife and equipment identification and technique, preparation of stocks, soups and mother sauces, meats, poultry and seafood, and the presentation of a complete meal. Uniforms and knives will need to be purchased through the department for this course. Group 2 course.

For course availability, refer to [www.nmc.edu/schedule](http://www.nmc.edu/schedule) or the Schedule of Classes.
CUL 118  Introduction to Baking  .................. 4.0 (8)
This course is designed for students seeking a career in Culinary Arts. In this intensive study of fundamental baking techniques, students will become familiar with baking operation and production. This course covers fundamental pastry and dessert recipes as well as the preparation of yeast dough.  Group 2 course.

CUL 121  Purchasing and Receiving  .................. 2.0 (2)
An overview of how food is purchased, received, stored and distributed is discussed in this course. Focus is on product identification, availability, seasonality, price, quality, and freshness. The course also includes the purchasing practices and controls that help to insure a correct product specification. Proper forms for ordering, issuing, inventory, and cost controls are used. Group 2 course.

CUL 190  Culinary Internship  .................. 2.0 (2)
Recommended prerequisite(s): CUL 111, CUL 118, CUL 213 and Culinary staff approval
A culinary internship integrates academics with professional work experience. Students earn college credit while working in fine dining properties, gaining valuable hands-on experience. Students are encouraged to contact the internship coordinator at least two months prior to the semester they are requesting placement. Culinary internships are 40 hours per week for an eight-week summer session. Group 2 course.

CUL 210  Nutrition for Culinary Arts  ............. 2.0 (2)
This course is designed for students who wish to pursue a career in culinary arts. Healthy eating is attracting more attention as Americans struggle with the problems of obesity and disease prevention. In this atmosphere it is essential for prospective chefs to be aware of the needs of their customers. This course presents the principles of nutrition within the context of professional food preparation. Various ingredients and their role in good nutrition, spa cuisine, planning healthy menus and alternative eating styles are discussed. Group 2 course.

CUL 211  Menu Planning  .................. 3.0 (3)
Required prerequisite(s): CUL 110, CUL 111
No one will argue that the menu is the soul of a restaurant. This course provides the student with the understanding of the menu as the center of the food outlet, around which is built the facility. Menu theme is the driver for equipment purchases, staffing, location and floor plan. An understanding of this complex item is vital to anyone involved in food service. This course is designed to familiarize the student with all aspects of planning a modern menu - from market research to the physical layout of the document. Various types of menus are covered including A’La Carte, Table d’Hote, Institutional and Special Occasion. Menus will be analyzed for effectiveness and pricing strategies. Group 2 course.

CUL 213  World Cuisine  .................. 6.0 (12)
Required prerequisite(s): CUL 111
This course is designed for the student who wishes to be a professional chef. It comprises the study, preparation and presentation of foods and cooking methods from selected countries. These countries have been selected based on their current popularity in restaurants. In this course, students develop a knowledge and basic understanding of ethnic cooking including the cooking styles of Italy, France, Mexico, China, and various other Asian and American regions. In the process of learning these multi-national cuisines, the student develops additional technical skills in the preparation of the different foods. Group 2 course.

CUL 215  Garde Manger  .................. 4.0 (8)
Recommended prerequisite(s): CUL 111, CUL 118, CUL 213
This course is designed for students who wish to pursue a career in culinary arts. As America’s sophistication regarding food has increased, it is essential that students training to be chefs be exposed to the most up-to-date cooking and presentation techniques. Students prepare cold foods for display: pates, galantines, terrines and mousses. Decorative garnishes and other functional banquet presentations are covered in this course. Meat and seafood fabrication is also practiced. Projects made will be used and displayed at various functions and events held at the Great Lakes Campus and at other special occasions. Group 2 course.

CUL 217  Kitchen & Dining Room Mgmt  ............ 3.0 (3)
Recommended prerequisite(s): CUL 101
This course is designed for students who wish to pursue a career in the food service industry. Its focus is the control of the dynamics of the kitchen and dining room in a modern restaurant. In the highly competitive restaurant business, it is necessary for prospective food and beverage professionals to have a thorough understanding of this aspect of the industry. Many restaurants fail because of a lack of coordination between the front and back of the house. The course focuses on the basic principles of management as applied to kitchen and dining room situations. Other topics include TQM management techniques, team building, motivational techniques, stress management, production management, and styles of table service. Group 2 course.

CUL 218  Advanced Baking  .................. 4.0 (8)
Required prerequisite(s): CUL 118
This course is designed for students seeking a career in Culinary Arts. In this intensive study of advanced baking techniques, students will become familiar with baking operation and production as well as dessert and pastry finishing and plate presentation. This course covers more advanced pastry and dessert recipes as well as the preparation of yeast dough. Pastries, desserts and dessert sauces will be served to guests at Lobdell’s, the Great Lakes Culinary Institute’s teaching restaurant. Cake icing and finishing is also included as are tortes, mousses, Bavarians, tarts and other desserts. Group 2 course.
CUL 295 Contemporary Service & Cuisine ..... 12.0 (24)
Required prerequisite(s): CUL 110, CUL 111, CUL 213
Recommended competency: Basic keyboarding and computer skills
This course focuses on practical hands-on training. Students rotate through the front-of-the-house and the restaurant kitchen in this intensive semester-long course. Front-of-the-house students learn various styles of table, wine and beverage service. Menu merchandising is stressed throughout the course. Guest relations and timing of service are also emphasized as advanced students serve lunch to guests in Lobdell’s, the Great Lakes Culinary Institute's teaching restaurant. Heart-of-the-house students learn classical food preparation preparing designated menu items. Other areas covered include recipe construction and costing, the use and care of equipment, the pressure of a la carte preparation and service, and the effective handling and use of supplies. Group 2 course.

DD Drafting & Design

DD 101 Print Reading and Sketching ....................3.0 (4)
Students will learn to read engineering drawings of products and tooling used in today's manufacturing. Basic drafting format and layout are presented using product, tooling assembly, and tooling detail drawings. Students learn methods of three dimensional shape description, dimensioning, and tolerancing. Types of fasteners along with related terminology and manufacturing processes are presented. An overview of common manufacturing processes, material specifications, and welding symbols are presented. Students learn the presentation skills of orthographic projection, isometric and oblique pictorial drawings using straight line and free hand sketches. Group 2 course.

DD 110 Basic Metallurgy ..............................3.0 (3)
This course presents the making and forming of steel and the classification of steel and cast iron. Mechanical and physical properties are presented along with hardness and tensile testing labs. Principles of alloying, crystal structure, and the iron-carbon diagram help students understand how annealing, hardening, and tempering processes alter the mechanical properties of steel. Non-ferrous metallurgy is presented with an emphasis on aluminum. Group 2 course.

DD 120 Computer Aided Drafting (AutoCAD) .... 2.0 (3)
Required prerequisite(s): DD 101
Students generate two-dimensional mechanical and architectural drawings using AutoCAD LT software. Templates are created to start new drawings with pre-set configurations and styles. Drawing and editing commands are stressed as students generate work-sheets and assignments creating various types of drawing views in architectural, inch, and metric units. Drawing archives and plotting are done in a network environment simulating a business. DD 101 is highly recommended to be taken with or before this course. Group 2 course.

DD 125 Mechanical Drafting (AutoCAD) ...... 2.0 (3)
Required prerequisite(s): DD 120
Students generate two-dimensional mechanical drawings using AutoCAD LT software with an emphasis on the manufacturing/tooling industry. Drawings include multi-view orthographic projection, section views, and auxiliary views with an emphasis on dimensioning methods and practices. Students also create isometric and oblique pictorial drawings. American National Standards Institute and American Society of Mechanical Engineers standards are stressed. Group 2 course.

DD 130 Architectural Drafting I (AutoCAD) ......2.0 (3)
Required prerequisite(s): DD 120
This course is an introduction to architectural drafting using AutoCAD software. Emphasis is placed on the development of sound architectural drafting techniques while learning to apply the AutoCAD software. Students will generate a set of working drawings for a residential project including: floor plan, foundation plan, sections, elevations, etc. Group 2 course.

DD 131 Architectural Drafting II (AutoCAD) .......4.0 (6)
Required prerequisite(s): DD 130
This course is a continuation of methods and techniques presented in DD 130. Areas of major emphasis include site planning, building materials, residential structural systems, and construction techniques. AutoCAD concepts of external references and paper space will be utilized as the student generates a set of residential working drawings. Group 2 course.

DD 150 Detail Drafting ..............................4.0 (6)
Required prerequisite(s): DD 101, DD 125
Students generate detail drawings of tooling assemblies with the application of dimensioning and tolerancing. Computer aided drafting software is used to produce drawings. Students work in a network environment simulating a tool design department of a parts manufacturer. Both inch and metric projects will be completed to corporate, national, and international standards. Projects will progress from static to dynamic assemblies. Group 2 course.

DD 160 Tolerancing and GD&T ..........................3.0 (3)
Required prerequisite(s): DD 101
This course first presents conventional tolerancing terminology, expressions, and accumulations in both inch and metric formats. Next, Geometric Dimensioning and Tolerancing (GD&T) presents an international system of symbols used to dimension product or tooling components. The course is based on the current ASME Y14.5M Dimensioning and Tolerancing standard. Engineers, designers, drafters, cost estimators, machinists, and inspectors must understand this system. Students study actual product drawings and make design sketches of workholding and inspection devices. Group 2 course.
DD 170  Part and Assembly Modeling 4.0 (6)  
Required prerequisite(s): DD 125  
This course introduces SolidWorks features necessary to create, edit, analyze, and plot 3D models and 2D drawings. Upon successful completion, students will be able to construct 3D part and assembly models of moderate complexity, create animated presentations, and generate 2D detail drawings and assembly drawings with balloons and bills of materials.  
**Group 2 course.**

DD 240  Advanced Part and Assy Modeling 4.0 (6)  
Required prerequisite(s): DD 170  
This course presents advanced modeling concepts using SolidWorks software. Topics include multi-body solids, curves, 3D sweeps, lofts, surfaces, core and cavity molds, top-down assembly modeling, advanced assembly mates, configurations of assemblies, design tables, assembly editing, troubleshooting, assembly problems, and working with subassemblies. Advanced sectioning techniques, large assemblies, PhotoWorks, Toolbox, and eDrawings. Students will create part and assembly models which require the application of the concepts and techniques listed above.  
**Group 2 course.**

DD 290  Drafting Internship 3.0 (3)  
Required prerequisite(s): DD 240, a 3.0 minimum GPA in technical courses and instructor permission  
The Drafting Internship will provide on-the-job training for the student pursuing a career in Drafting. The appropriate site will be chosen based on the specific sector the student indicates as their field of choice in the manufacturing drafting industry. Students will spend 20 hours per week in this paid or unpaid internship for a full 15 week semester. In addition to the 300 hours on the job, the students will be required to attend bi-weekly seminars for additional skills training, group discussion and debriefing. Bi-weekly reports indicating job specific skills will be submitted to the intern/ship coordinator.  
**Group 2 course.**

DD 295  Advanced Manufacturing Project 4.0 (6)  
Required prerequisite(s): DD 240 and instructor permission  
This course provides a capstone experience for Advanced Manufacturing students. They will work in teams to design, fabricate, assemble, and evaluate a mechanical assembly. Teams will be assigned a specific mechanism with stated parameters. The project will require continuous documentation in the form of a project plan with assigned duties and time lines, 3D models with mechanical drawings, process sheets, CNC programs, and inspection reports.  
**Group 2 course.**

DNC 101  Beginning Dance: An Exploration 2.0 (4)  
This course will introduce the major disciplines of dance: ballet, jazz, and modern. Basic dance skills will be acquired through the practice of exercises, steps, and techniques. This course is designed for those with little or no background in dance.  
**Group 2 course.**

DNC 110  Modern Dance I 2.0 (4)  
Recommended prerequisite(s): DNC 101 or previous experience  
This course is designed to introduce students to the physical training and the creative thought process involved in executing modern dance as an art form. This course will consist of technique, improvisation, and creative problem solving through movement. Modern dance and its relationship to music and the historical development of modern dance will also be explored.  
**Group 2 course.**

DNC 111  Modern Dance II 2.0 (4)  
Recommended prerequisite(s): DNC 110 or previous experience  
This course is designed as an extension of Modern Dance I. This class will consist of increasing proficiency in modern dance through extended studies in technique, improvisation, creative problem solving, and performance. Dance history and motif writing in dance will also be explored.  
**Group 2 course.**

DNC 120  Choreography & Performance 2.0 (2)  
Recommended prerequisite(s): DNC 101 or instructor permission  
Study choreography by participating in an instructor-led choreographed dance, created through structured improvisation and creative problem-solving techniques. Students will also create and develop their own dances through the exploration of a wide range of approaches to choreography. Performance and its relationship to community and cultural values will also be explored. The culmination of the class work will be a dance performance for the public.  
**Group 2 course.**
ECO Economics

ECO 121 Basic Economics ......................3.0 (3)
This introductory course in economics will survey the principles, history, organization, and problems of the American economy. Micro and macro economic topics will be covered including: supply and demand, unemployment, inflation, the role of government, money and banking, the household and business sectors, competition and other market structures, and the labor market. Group 1 course.

ECO 201 Principles of Macroeconomics ..........3.0 (3)
Recommended prerequisite(s): MTH 23
This principles course surveys basic macroeconomic concepts and theories, and applies them to current economic problems, policies and issues. Topics include nature and scope of economics, income and wealth, public revenue and expenditures, unemployment and inflation, national income accounting and determination, money and banking, monetary policy, and fiscal policy. It is recommended that students take ECO 201 before ECO 202. Group 1 course.

ECO 202 Principles of Microeconomics ..........3.0 (3)
Recommended prerequisite(s): MTH 23
This principles course surveys basic microeconomic concepts and theories, and applies them to current economic problems, policies, and issues. Topics include supply and demand analysis, productivity and the firm’s costs of production, price and output determination under different market structures, government intervention in the market, factor pricing, and international trade. It is recommended that students take ECO 201 before ECO 202. Group 1 course.

EDU Education

EDU 101 Introduction to Teaching .................3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
This course will serve as an introduction to teaching as a career. It will provide an overview of students’ behaviors and effective teachers’ responsibilities preparatory to guided observation and participation in preparation for further study in the field of education. This course includes 30 hours of classroom observation in a K-12 classroom. Instructor permission is needed for non-high school graduates. Group 2 course.

EGR Engineering

EGR 101 Introduction to Engineering ............1.0 (1)
This is a general view of the field of engineering. Emphasis is on curricula, categories of engineering and the role of the engineer. Required for all first-year students in the engineering program. Group 2 course.

EGR 113 Engineering Graphics I ..................3.0 (4)
Recommended prerequisite(s): MTH 122 or MTH 140
This course is designed to satisfy the engineering graphics requirement for most engineering majors. Topics covered include the principles of orthographic projection, auxiliary views, sectional views, sketching; relationship of lines, planes and points in space, space vectors and force systems are discussed from an engineer’s point of view. Graphic methods are applied to problem solving and communication of ideas. Two and three dimensional computer graphics are used throughout the course to reinforce the basic concepts. Group 2 course.

EET Electronics Technology

EET 103 Electrical Studies I ....................3.0 (4)
This course examines the fundamentals of electricity, including direct current, resistive circuits, electrical terminology, units and component symbols, electrical safety, circuit conductors, wire sizes, circuit protection devices. Electrical safety will be stressed as well as the use of multi-meters and other test equipment. Group 2 course.

EET 204 Electrical Studies II ....................3.0 (4)
Required prerequisite(s): EET 103
This course is a continuation of the fundamentals of Electrical Studies, including direct current, alternating current, writing practices, inductors, capacitors, and transformers. The use of oscilloscopes and multi-meters and other test equipment. Group 2 course.

EET 221 Industrial Controls .....................3.0 (4)
Required prerequisite(s): ELE 105
This course studies control circuits, electrical schematics and line diagrams. Motor circuits utilizing motor starters, contactors, timers and counters are used to demonstrate control circuitry. Industrial control devices are examined, including solid-state control devices, electro-mechanical relays, proximity sensors, photoelectric sensing devices and programmable logic controllers. Group 2 course.

EET 232 Programmable Logic Controllers .......3.0 (4)
Required prerequisite(s): EET 221
This course studies programmable logic controllers (PLCs). Basic models and complete applications are applied to control inputs and outputs of PLCs. Ladder logic and device wiring techniques are studied, along with advanced program instructions such as counters, timers, sequencers and integer moves. Input/output devices are used to examine PLC program logic during the control process. Group 2 course.
EGR 131  Elementary Surveying .......................... 5.0 (2)
EGR 131L Elementary Surveying Lab ...................... 0.0 (3)
Recommended prerequisite(s): MTH 122 or MTH 140
Corequisite(s): EGR 131 and EGR 131L
This course is designed to satisfy the elementary surveying requirement for a student entering engineering. Students will learn the theory involved in plane and geometric surveying including both linear and angular measurement, traverse computations, stadia, topographical mapping and the design of horizontal and vertical curves as related to construction surveys. Students are expected to perform lab experiments in which they demonstrate their knowledge of concepts learned in lecture, incorporating the basic skill learned in lecture to field settings. Care, adjustment, and use of basic surveying instruments; leveling, taping, horizontal angle measurements, traverse surveys, transit stadia, method, topographic mapping with transit; fundamental surveying procedures and office computation are all included. Computer spreadsheets and mapping programs are used to facilitate the learning process. Group 2 course.

EGR 201  Statics ........................................... 3.0 (3)
Required prerequisite(s): MTH 141
Recommended prerequisite(s): ENG 111
This is the first in a three course sequence in Engineering Mechanics. This course covers those topics included in the study of statics, such as forces acting upon a particle and rigid body at rest, analysis of structures, frictional forces, centroids and moments of inertia. Vector algebra and differential calculus are used throughout the course. Group 2 course.

EGR 202  Mechanics of Materials .......................... 3.0 (3)
Required prerequisite(s): EGR 201
This is the second in a three course sequence in Engineering Mechanics. This course covers those topics included in the study of mechanics of materials. This includes stress and strain of engineering materials, torsion, Hooke’s Law, and shear and moment diagrams, combined stresses, beam deflection, columns, pressure vessels and structural connections. Vector algebra and differential calculus are used throughout the course. Group 2 course.

EGR 203  Dynamics ......................................... 4.0 (4)
Required prerequisite(s): EGR 201
This is the third in a three course sequence in Engineering Mechanics. This course includes those topics typically covered in dynamics such as kinematics, kinetics, work-energy principles, impulse-momentum, Newton’s Laws of Motion, and harmonic motion. Vector algebra and differential calculus are used throughout this course. Group 2 course.

Visit www.nmc.edu/science-math for more detailed information.

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EGY  Renewable Energy

EGY 101  Principles of Renewable Energy ............ 3.0 (3)
Recommended prerequisite(s): MTH 23 or placement into MTH 111, ENG 111
This course highlights industry and governmental perspectives on geothermal, wind, solar, biomass, fuel cells, and other energy sources. Group 2 course.

EGY 105  Sustainable Building Design ................... 3.0 (3)
Recommended prerequisite(s): MTH 23 or placement into MTH 111, ENG 111
This course provides an introduction to sustainable building practices and is for those students studying for the Environmental Design (LEED) Accredited Professional (AP) Exam. Through structured learning activities, the student will learn about the structure of matter and the material world, whole system thinking, site and natural energy mapping, water resources, building orientation, materials and resources, indoor air quality, innovation and design. Group 2 course.

EGY 115  Residential Energy Efficiency ................ 3.0 (3)
Recommended prerequisite(s): MTH 23 or placement into MTH 111, ENG 111
Through structured classroom and hands-on skill building, the student will learn about the principles of energy, building shell construction, air leakage, insulation, windows and doors, heating, lighting, cooling, water heating, health, and safety. Group 2 course.

EGY 141  Solar Photovoltaic Tech I ....................... 3.0 (4)
Required prerequisite(s): EGY 101
Recommended prerequisite(s): MTH 23 or placement into MTH 111, ENG 111
Through structured classroom and hands-on skill building, the student will learn about PV applications, solar radiation, site surveys, system components, cells, modules, arrays, batteries and charge controllers. Group 2 course.

EGY 143  Solar Thermal Tech I .......................... 3.0 (4)
Recommended prerequisite(s): MTH 23 or placement into MTH 111, ENG 111
Through structured classroom and hands-on skill building, the student will learn the history of solar thermal heating systems, components, drainback systems, glycol systems, start up and maintenance procedures, savings and performance estimates, system control, monitoring and testing and solar space heating design. Group 2 course.

EGY 145  Geothermal Technology ......................... 3.0 (4)
Recommended prerequisite(s): MTH 23 or placement into MTH 111, ENG 111
This course introduces the basic principles of geothermal energy production and technology. Essentials on how to utilize geothermal technology as an energy source will be analyzed and demonstrated. Examples of residential and commercial applications will be shown and reviewed. Group 2 course.
EGY 151 Solar Photovoltaic Tech II .................. 3.0 (4)
Recommended prerequisite(s): MTH 23 or placement into
MTH 111, ENG 111
Through structured classroom and hands-on skill building, the
student will learn about inverters, PV system sizing, mechanical
integration, electrical integration, utility interconnections,
permitting and inspection, commissioning, maintenance,
troubleshooting and economic analysis. Group 2 course.

EGY 161 Wind Power Technology .................. 3.0 (3)
Recommended prerequisite(s): MTH 23 or placement into
MTH 111, ENG 111
Through structured classroom discussion, the student will
learn about wind applications, measuring the wind, estimating
power output of various sizes, economics of wind generation,
evaluating technology, towers, interconnection with the utility,
siting, installation, operation, performance, maintenance, and
safety. Group 2 course.

ELE 101 Introduction to Electrical .................. 3.0 (4)
Recommended competencies: COMPASS placement into MTH
111 or higher, or co-enrollment in the appropriate developmental
math course. COMPASS placement in ENG 111/111 or higher,
or co-enrollment in the appropriate developmental English course.
This course provides an introduction to electrical. Through
structured classroom and hands-on skill building, the student
will learn the orientation to the trade, electrical safety, circuits,
theory and an introduction into the National Electrical Code.
Group 2 course.

ELE 105 Residential Electrical .................. 3.0 (4)
Required prerequisite(s): ELE 101
Through structured classroom and hands-on skill building,
the student will learn to identify and select various types and
sizes of raceways and fittings for a given application, perform
proper hand bending techniques, install conductors, describe
the type of information included in electrical specifications
and properly use electrical test equipment. Group 2 course.

ELE 121 Electrical Applications .................. 3.0 (4)
Required prerequisite(s): ELE 105
Through structured classroom and hands-on skill building,
the student will learn the orientation to alternating current,
motors, electric lighting, and conduit bending.
Group 2 course.

ELE 125 Electrical Components .................. 3.0 (4)
Required prerequisite(s): ELE 121
Through structured classroom and hands-on skill building,
the student will learn the orientation to conductor installa-
tions, cable trays, terminations and splices, grounding and
bonding, circuit breakers and fuses, control systems and
fundamental concepts. Group 2 course.

ELE 131 Electrical Distribution .................. 3.0 (4)
Required prerequisite(s): ELE 125
Through structured classroom and hands-on skill building,
the student will learn how to calculate loads on branch and
feeder circuits, sizing of conductors for proper load, selection
and sizing of overcurrent protection, installation of raceways,
boxes and fittings, and determine the maximum load allowed
on specific wiring devices. Group 2 course.

ELE 135 Motor Control Circuits .................. 3.0 (4)
Required prerequisite(s): ELE 131
Through structured classroom and hands-on skill building,
the student will learn how to calculate the power factor of any
given circuit, use troubleshooting checklists to troubleshoot
fluorescent and HID lamps and lighting fixtures, size motor
short circuit protectors, test motors and generators, design and
build motor control circuits. Group 2 course.

ELE 141 Commercial Electrical Systems ........ 3.0 (4)
Required prerequisite(s): ELE 135
Through structured classroom and hands-on skill building,
the student will learn to calculate loads and amperages for
single-phase and three-phase feeders, classify lighting fixtures
by layout, location, fixture type, and type of service, interpret
electronic system components and schematic diagrams and
identify power transformer connections. Group 2 course.

ELE 145 Commercial Electrical Controls ....... 3.0 (4)
Required prerequisite(s): ELE 141
Through structured classroom and hands-on skill building,
the student will learn to recognize the different types of
reduced voltage starting motor controllers, recognize com-
mon types of motor braking, test motor winding resistances,
troubleshoot and repair electric motors, complete cable tray
assemblies using terminations and splices. Group 2 course.
ENG 11  English/Writing Methods  2.0 (developmental)
Students will be placed in this course as a result of COMPASS testing or after successfully completing ENG 99. Corequisite(s): ENG 111
This course is to be taken concurrently with ENG 111, and helps facilitate the objectives of ENG 111. Special attention is given to individual student needs in the conventions of standard written prose.

ENG 12  English/Writing Methods  2.0 (developmental)
Required prerequisite(s): ENG 11/111 or ENG 111 (2)
Corequisite(s): ENG 112
This course is to be taken concurrently with ENG 112 and helps facilitate the objectives of ENG 112. Special attention is given to individual student needs in the conventions of standard written prose, argumentation and research.

ENG 97  Fundamentals of Writing  3.0 (developmental)
Students will be placed in this course as a result of COMPASS testing.
This is a developmental writing course that will help prepare students for the writing skills demanded in college. This course is based on the belief that a person learns to write for college by writing college-level essays. Therefore, students will write four full essays but will do so with lots of support and assistance. ENG 97 will work step by step through the writing process and learn how to write well. Though some grammar and punctuation issues will be addressed, the main focus is on the "big stuff" – the writing process, original and engaging ideas, clear organization and full development of paragraphs and essays. Students are required to schedule ten one-hour tutoring sessions through the Writing Center.

ENG 99  Introduction to College Reading/Writing  6.0
Students will be placed in this course as a result of COMPASS testing.
This is an integrated reading and writing course that gives students the literacy skills they need for college-level academic work. It builds on the reading and writing skills students already have and prepares them for college composition courses and reading-intensive courses. It also focuses on grammar, punctuation and sentence construction and variety. ENG 99 will cover a broad range of topics and explore a variety of readings and writings chosen to help students develop critical reading, writing and thinking skills.

ENG 107  Academic Study Methods  2.0 (2)
Students will be placed in this course as a result of COMPASS testing.
This course provides students with the opportunity to develop and improve basic college academic survival skills and study methods. Topics include: introduction to personal learning style, learning theory, active listening, time management, test taking strategies, basic study techniques such as SQ3R, note taking, improving concentration and memory, and controlling the study environment. Group 2 course.

ENG 108  Critical Reading Strategies  3.0 (3)
Students may elect this course as a helpful “entry to college” course; this course may also be required as a result of COMPASS testing. Through readings from other disciplines, the focus of this course is on improving comprehension and vocabulary. Learning strategies are introduced and then applied to coursework. Study skills taught include note-taking, test preparation, monitoring comprehension, and general techniques for effective learning. Group 2 course.

ENG 110  Grammar & Writing  3.0 (3)
Required prerequisite(s): ENG 99
This course is not a refresher but an intensive inspection of the sentence - as it gets used in academic writing. In the eight weeks, students will be invited to think strategically and deliberately about conventions they’ve either missed or acquired unconsciously. While developing/intensifying syntactical skill, they will also develop a sound and reasonable language about language. Group 2 course.

ENG 111  English Composition  4.0 (4)
Students will be placed in this course as a result of COMPASS testing.
This is a writing course in which students work to develop their sense of language as a means of shaping and ordering their experience and ideas to develop thought, organization and clarity in written work. Group 1 course.

ENG 112  English Composition  4.0 (4)
Required prerequisite(s): ENG 111 or ENG 11/111
This is a writing course based on critical reading from various fields. Writing assignments reinforce skills in summary, analysis, evaluation, and synthesis. Emphasis is on argumentation, research methods, and information literacy. Group 1 course.

ENG 210  Children's Literature  3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
Focus is on developing criteria, terminology and resources for evaluation and selection of good quality children's literature and on developing methods for sharing that literature with children. The course surveys both picture books and novels from a variety of genres and cultures, and also examines the impact of social change on children's literature. Humanities or English credit. Group 1 course.

ENG 211  Introduction to Linguistics  3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course is designed to acquaint students with modern developments in the science and philosophy of language, and to improve their understanding of culture and language in general. It addresses issues of sound, word formation, syntax, semantics, language acquisition and more. Group 2 course.

ENG 220  Technical Writing  3.0 (3)
Required prerequisite(s): ENG 111
This course introduces students to a variety of technical writing situations in business, industry, science, and education. It emphasizes audience awareness, research methods, problem formation, and drafting strategies.
solving, critical thinking, professional ethics, patterns of typical proposals, descriptions, and the requirements of formal reports used in professional writing. Group 2 course.

ENG 221 Creative Writing ................................. 3.0 (3)
Required prerequisite(s): ENG 112
Study and practice of the basic techniques of imaginative writing, focusing on short fiction but with considerable allowance for individual interests. The class emphasizes craft while giving room for creative talent to emerge in response to open-ended assignments. In this workshop seminar, students will exchange helpful commentary on each other’s writing, as well as examine professional fiction to analyze how successful authors achieve their results. The class includes close work with the elements of creative narration: concrete language, story shape and pace, characterization, point of view and setting. Individual conferences will supplement class activities. Group 2 course.

ENG 222 Advanced Creative Writing ................. 3.0 (3)
Required prerequisite(s): ENG 221
More intense and advanced study and practice of techniques of imaginative prose writing than in ENG 221, which an emphasis on narrative fiction, but offering a wide range of options for individual creativity and interest. As an advanced creative writing course, 222 places emphasis upon more fully developed narrative manuscripts, moving beyond individual scenes and exercises with individual narrative techniques to complete stories and revisions of them. Workshop activities will require more sophisticated, directed exchanges among students. Final portfolios are expected to include at least one ‘publishable’ manuscript, showing revision stages and self-appraisal of that manuscript in particular and semester’s work in general. At least one full class session is devoted to publication strategies. Group 2 course.

ENG 223 Apprentice Poetry Workshop ................ 3.0 (3)
Required prerequisite(s): ENG 112
Weekly writing exercises, peer critique, and one on one mentoring with the instructor provide the foundation for this workshop whose goal is agile, well read poets who feel comfortable working in a variety of forms, as well as reading their own work out loud. Discussion of required readings, emphasis on revision, and experiments to aid the creative process can be expected during the session. Group 2 course.

ENG 224 Journalism Fundamentals .................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
While the history and role of the press are discussed, this course primarily provides the student with theory and practice in news, editorial and feature writing. Press law and ethics will also be examined. Group 2 course.

ENG 228 Advanced Writing & Rhetoric .................. 4.0 (4)
Required prerequisite(s): ENG 112, may be taken concurrently
This course examines persuasive language of everyday life and calls on students to reveal, analyze, and critique the subtle rhetorical elements in the texts and voices around them. The course examines how everyday texts or “artifacts” (such as news programs, advertisements, church bulletins, political slogans, college textbooks, course syllabi, and other official documents) persuade audiences to believe in a particular reality. Formal written analysis will rely on working knowledge of classical rhetoric (terms and concepts discussed early in the semester). Group 2 course.

ENG 240 Introduction to Literature ...................... 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
An introduction to a variety of literary styles, themes, and forms such as fiction, drama and poetry. Intended to develop an understanding and enjoyment of reading as well as an understanding of current critical approaches to the study of literature. Humanities or English credit. Group 1 course.

ENG 241 Mythology ........................................ 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course features a study of a central and recurring patterns of human concern as revealed in the mythic content of various forms of literature. Examination of archetypal structures embedded in works of cultures ranging from ancient Babylonian to contemporary eras is central to course goals and outcomes. Areas to be investigated will include myths of the quest, of power, of origins, of love, and of art. Humanities or English credit. Group 1 course.

ENG 242 Women in Literature ............................ 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course features an examination of essays, novels, stories, and poems written primarily (but not exclusively) by 19th and 20th century European and American female authors. In addition, the course introduces students to relevant literary criticism and the historical, cultural context in which writing by and about women has emerged. Humanities or English credit. Group 1 course.
ENG 245  Native American Literature .................. 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This is a general introductory survey course that will explore various Native American literary genres, including fiction, non-fiction, biography and critical essays. Students will be encouraged to develop a critical stance toward non-Native depiction of Native literature and to look beneath the “surface” for hidden socio-economic messages. Students will evaluate past and present expectations of Native American literature and develop an understanding of new more aggressive and increasingly pervasive forms of Native fiction and non-fiction. Humanities or English credit. Group 1 course.

ENG 246  Environmental Literature .................. 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course will examine the changing perceptions and definitions of wilderness and nature in Western literature and culture. The course will examine and discuss poetry, fiction, and nonfiction by authors, including Wordsworth, Thoreau, Muir, Leopold, Stegner, Jeffers, Silko, Oliver, Abbey, Snyder, and Williams. Students will explore the interaction between literature and environmental issues and activism, and also consider the impact of nature and wilderness on music, painting, photography, and film. Group 1 course.

ENG 247  Shakespeare .................................... 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course is an introduction to representative major dramatic works of Shakespeare and the Elizabethan Age, and includes lecture, film, and discussion. Humanities or English credit. Group 1 course.

ENG 254  American Literature .................. 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course presents an intensive reading of works by American authors representing the entire span of this literary tradition and including works in various genres. It develops a sense of American literature, evolution and a facility in careful literary analysis. Humanities or English credit. Group 1 course.

ENG 255  Shakespeare .................................... 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course offers students the opportunity to examine and critique a selection of films through discussion and writing by employing techniques similar to those used in literary analysis. Humanities or English credit. Group 1 course.

ENG 256  Film as Literature ............................. 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course will examine the changing perceptions and definitions of wilderness and nature in Western literature and culture. The course will examine and discuss poetry, fiction, and nonfiction by authors, including Wordsworth, Thoreau, Muir, Leopold, Stegner, Jeffers, Silko, Oliver, Abbey, Snyder, and Williams. Students will explore the interaction between literature and environmental issues and activism, and also consider the impact of nature and wilderness on music, painting, photography, and film. Group 1 course.

ENG 257  Science Fiction & Fantasy .................. 3.0 (3)
Required prerequisite(s): ENG 112, may be taken concurrently
This course is an introductory survey course that will explore various Native American literary genres, including fiction, non-fiction, biography and critical essays. Students will be encouraged to develop a critical stance toward non-Native depiction of Native literature and to look beneath the “surface” for hidden socio-economic messages. Students will evaluate past and present expectations of Native American literature and develop an understanding of new more aggressive and increasingly pervasive forms of Native fiction and non-fiction. Humanities or English credit. Group 1 course.
ENV 103  Earth Science .......................... 4.0  (3)
ENV 103L  Earth Science Lab .................. 0.0  (2)
Recommended prerequisite(s): MTH 08 and ENG 99 or COMPASS equivalent. Students scoring below ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): ENV 103 and ENV 103L
Designed for the student who does not intend to major in a physical science. Subject matter deals with features of the planet earth, astronomy, and weather. The laboratory portion includes a practical study of rocks and minerals as well as a study of topographic, geologic and weather maps. Field trips investigate landforms in the Grand Traverse area.
Group 1 lab course.

ENV 104  Life of the Past .......................... 4.0  (3)
ENV 104L  Life of the Past Lab ................. 0.0  (2)
Recommended prerequisite(s): MTH 08 and ENG 99 or COMPASS equivalent. Students scoring below ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): ENV 104 and ENV 104L
This course introduces students to the record of life on Earth. The roles of global change, origin, evolution, and extinction in life history are examined. Great Lakes and North American fossil records with Pre-Paleozoic micro-organisms and Paleozoic invertebrates and vertebrates are highlighted. Appearance, evolution, and disappearance of dinosaurs during the Mesozoic Era, human evolution, and the recent demise of the giant Ice Age mammals are analyzed in depth. Laboratory and class activities are included. Group 1 lab course.

ENV 105  Intro to Freshwater Studies .......... 2.0  (2)
Recommended prerequisite(s): MTH 23, ENG 111, may be taken concurrently
This course is designed to provide an orientation to the field of water studies, with specific focus on freshwater. The students will engage in the field of water studies and explore different career pathways. Invited lecturers from business, education, and community organizations will introduce different topics in the field of water studies with a specific emphasis on our Great Lakes. Topics include: policy, law, sustainable development, history, engineering, global issues, health, and commerce. Group 2 course.

ENV 111  Physical Geology ....................... 4.0  (3)
ENV 111L  Physical Geology Lab ............... 0.0  (2)
Recommended prerequisite(s): MTH 111
Corequisite(s): ENV 111 and ENV 111L
This course explores processes which transform planet Earth. Landforms, minerals, rocks, and geologic structures are examined in classroom, laboratory, and field studies which focus on these geologic processes and on the techniques of geology. Lab studies apply the methodology and techniques of geology by introduction of map reading, field and map study, study of surficial processes, and study of minerals and rocks.
Group 1 lab course.

ENV 112  Historical Geology .................... 4.0  (3)
ENV 112L  Historical Geology Lab ............. 0.0  (2)
Recommended prerequisite(s): ENV 103 or ENV 111 or GEO 105, MTH 111 and placement into ENG 111
Corequisite(s): ENV 112, ENV 112L
Rocks and fossils of North America, the Great Lakes and the Grand Traverse region which reveal the physical, chemical, and biological evolution of the planet earth are explored in classroom, laboratory, and field studies (including a field required 4-day field excursion to Elliot Lake, Ontario).
Group 1 lab course.

ENV 115  Intro to GIS ............................ 2.0  (2)
Recommended prerequisite(s): MTH 23
Minimum of 6 cr. hrs from either ENV, GEO, BIO, EGR or instructor permission.
This course explores fundamental principles of Geographic Information Systems (GIS) and its applications including hardware, software, fundamentals of map reading and interpretation. Topics covered include: database concepts, algorithms to manage spatial data, cost benefit analysis, GIS project management, and digital data dissemination methods using Internet technologies. Group 2 course.

ENV 117  Meteorology & Climatology .......... 4.0  (3)
ENV 117L  Meteorology & Climatology Lab ..... 0.0  (2)
Required prerequisite(s): MTH 23
Corequisite(s): ENV 117 and ENV 117L
Recommended prerequisite(s): Students scoring below ENG 111 levels on the COMPASS placement test should plan on additional study time.
Designed to acquaint the student with the science and art of weather analysis, this course includes studies of the basic properties of gases, organization and composition of the atmosphere, basic energy flow, and general weather phenomena that result. Global climates are also investigated. The laboratory portion presents the function and effect of selected physical processes, and includes the use of weather instruments and weather maps. Group 1 lab course.

ENV 131  Oceanography .......................... 4.0  (3)
ENV 131L  Oceanography Lab .................. 0.0  (2)
Recommended prerequisite(s): MTH 23 or COMPASS equivalent. Students scoring below ENG 111 levels on the COMPASS placement test should plan on additional study time.
Corequisite(s): ENV 131 and ENV 131L
This course explores the origins, structure, and evolution of ocean basins and their role in global climate dynamics. It shall include an investigation of the physical properties that govern waves, currents, tides, air-sea interactions as well as the physical and chemical properties of seawater. It also explores plant and animal life within the oceans including impacts of human activities on the marine environment. Group 1 lab course.
ENV 140  Watershed Science .......................... 4.0 (3)  
ENV 140L  Watershed Science Lab .................... 0.0 (2)  
Recommended prerequisite(s): MTH 111. Students scoring below ENG 111 levels on the placement test should plan on additional study time.  
Corequisite(s):  ENV 140 and ENV 140L  
This course is designed for the learner who wishes to gain an in-depth understanding of watersheds. It will focus on the physical and biological systems that are responsible for the quality and characteristics of a watershed. Human interactions, stewardship, management and impacts on our local water resources will also be explored. The laboratory portion of the course will place emphasis on field investigations and the analysis of data and water samples collected. Throughout the course basic scientific principles will be incorporated.  
Group 1 lab course.

ENV 210  Fundamentals of Soil Science .......... 4.0 (3)  
ENV 210L  Fundamentals of Soil Science Lab ...... 0.0 (2)  
Recommended prerequisite(s): ENG 111, MTH 23  
Corequisite(s):  ENV 210 and ENV 210L  
This course will explain the fundamental principles of soil science emphasizing soil as a natural resource. The many interactions between the soil and other components of forest, range, agricultural, wetland and constructed ecosystems are highlighted. In addition to the physical properties; soil chemistry, water interactions, and biological process will be investigated. Soil taxonomy, management, and human interaction with soil will also be covered. The laboratory portion of the course focuses on mapping and identification of soils in the field and lab analysis of soil properties.  
Group 1 lab course.

ENV 231  Environmental Science ........................ 4.0 (3)  
ENV 231L  Environmental Science Lab .............. 0.0 (2)  
Recommended prerequisite(s): ENG 111, MTH 111  
Corequisite(s):  ENV 231 and ENV 231L  
Environmental Science is an interdisciplinary course investigating scientific aspects of the outstanding environmental concerns: air, water, and earth alteration; industrial, agricultural and residential/commercial pollution; and ecological changes. Included are the basics of the chemical cycles and societal factors which complicate problem solving. Laboratory incorporates problem solving from data accumulated from field trips, lab activities, and research.  
Group 1 lab course.

ENV 290A-E Environmental Internships ............ 1.0-4.0 (1-4)  
Recommended prerequisite(s): MTH 23 or COMPASS equivalent, ENG 111, and a minimum of 8 hours of ENV, BIO, or GEO courses with a GPA of 2.5 or higher and instructor permission.  
Students are placed in a work-related setting with an environmental or conservation focus. The experience will allow them to apply and expand upon previous courses taken at Northwestern Michigan College. An end result of the field experience is the synthesis of knowledge acquired to gain a broader understanding of environmental and conservation-related issues.  
Group 2 course.

Visit www.nmc.edu/science-math for more detailed information.

NMC. Find it here.
This course emphasizes both the physical and the cultural aspects of geography. Physical factors such as weather, climate, soil, vegetation, and landforms are considered as they determine the natural resources of a region. Various aspects of human culture such as religion, language, and economic systems are studied to gain understanding of the ways in which people have used and misused their resources. **Group 1 course.**

**GEO 105 Physical Geography** ................................. 3.0 (3)

Recommended prerequisite(s): MTH 08
Corequisite(s): GEO 105L

Physical geography studies, selected elements of the physical environment: weather and climate, landforms, soil, and vegetation. Particular emphasis is placed upon the nature and distribution of physical features throughout Michigan with respect to humankind. The lab includes field trips and emphasizes the application of physical principles through hands-on study of minerals, rocks, and soils; in conjunction with map and aerial photo interpretation. The lab emphasizes the application of selected physical elements through means of field work, map and aerial photo interpretation. **Group 1 course.**

**GEO 108 Geography of U.S. & Canada** ........... 3.0 (3)

The diverse regions of Anglo-America will be investigated in this course. We will consider the relationship between the natural environment, the cultural background, economic conditions, and local problems of the U.S. and Canada. **Group 1 course.**

**GEO 109 World Regional Geography** ............ 3.0 (3)

This course is a study of world regions. For each region we will consider the relationship between the natural environment, cultural background, economic conditions, and local problems that relate to world issues. **Group 1 course.**

**GEO 110 Economic Geography** ...................... 3.0 (3)

An examination of the location of various economic activities in the United States and elsewhere and a discussion of the different ways of accounting for that location. Various elements of the natural, economic, social and political environments are considered and their relative importance analyzed, with reference to primary, secondary, and tertiary production. **Group 1 course.**

**GEO 115 Intro to GIS** .................................................. 2.0 (2)

Recommended prerequisite(s): Minimum of 6 credit hours from either ENV, GEO, BIO, EGR or instructor permission.

This course explores fundamental principles of Geographic Information Systems (GIS) and its applications including hardware, software, fundamentals of map reading and interpretation. Topics covered include: database concepts, algorithms to manage spatial data, cost benefit analysis, GIS project management, and digital data dissemination methods using Internet technologies. **Group 2 course.**

**HAH 100C Informatics Essentials** ......................... 1.0 (1)

Recommended prerequisite(s): HNR 102, may be taken concurrently

This course will introduce students to informatics in health care and, in particular, nursing. Students will enhance their ability to use modern informatics such as computer and Internet resources as well as Electronic Medical Record (EMR) software, in the health care environment. This course is offered in a hybrid online and face-to-face format. **Group 2 course.**

**HAH 101 Medical Terminology** ......................... 3.0 (3)

The student will learn the basic construction of medical words through the use of medical prefixes, suffixes, combining vowels and root words. This foundation will facilitate the understanding of new medical vocabulary encountered in other course work or work situations. **Group 2 course.**

**HAH 120 Infection Control** ................................. 2.0 (2)

This course details the structure of infectious organisms and mechanisms of disease transmission, including host defenses against disease and specific diseases of concern to dental and medical personnel. In addition, the course provides an overview of MIOSHA (Michigan Occupational Safety and Health Act) regulations and occupational safety measures as they relate to the dental and medical fields. **Group 2 course.**

**HAH 200 Emergency Assessment & Intervention** 3.0 (4)

A comprehensive study of the concepts and practices of first aid techniques. The course provides training for emergency care through assessment, critical thinking, implementation, documentation, and evaluation. It also addresses situations when injury or sudden illness becomes a threat to life, or problems develop that endanger physical or psychological well-being. Certification for CPR for the Professional Rescuer, HAZMAT, and Medical First Responder may be earned in cooperation with state and/or national agencies. Must be able to meet patient lifting and equipment requirements. Required for MCOLES Police Academy. Signature required to register. **Group 2 course.**
HDA 101  Introduction to Dentistry ......................2.0 (2)
Students are introduced to the role of the dental assistant and the dental team and opportunities for employment. Students will be informed of the requirements for certification and registration and the various organizations and associations within dentistry and dental assisting. Other areas studied will include dental specialties, dental terminology, applied psychology in the dental office, instrument and equipment identification and charting. The student will have an opportunity to view a dental office to see the set-up and to observe the roles of each person on the dental team. Group 2 course.

HDA 112  Dental Materials ...............................2.0 (2)
Recommended prerequisite(s): HDA 120, HAH 120
Corequisite(s): HDA 113
Students learn the preparation, manipulation, and use of dental materials commonly found in the dental office. There will be discussion regarding the equipment needed, mixing techniques, and proper usage of waxes, restorative materials, impression materials, gypsum products, cements, metals and therapeutic materials. Preparation of each material will be demonstrated. Group 2 course.

HDA 113  Dental Materials Lab ...........................1.0 (2)
Corequisite(s): HDA 112
This course familiarizes the student with the handling of dental materials commonly used in the dental office. Opportunities are provided in the laboratory to develop skills in mixing techniques, impression taking, construction of study models, bleaching, and acrylic trays. Group 2 course.

HDA 120  Dental Anatomy .................................3.0 (3)
The student will learn the anatomy and physiology of the oral cavity, teeth and head. Students will learn the histology of the teeth and surrounding structures, the bones of the skull, the nerves and blood supply of the head and neck, the muscles of mastication, and the names and functions of the teeth and oral structures. This class will also provide detailed information on the anatomy of the individual teeth. Group 2 course.

HDA 140  Oral Pathology/Pharmacology ...............2.0 (2)
Recommended prerequisite(s): HDA 120
The purpose of this course is to familiarize the student with disease processes related to the oral cavity and to enable the student to identify these diseases. The student will become familiar with various drugs and their uses in dentistry, prescription writing and documentation, the sources of drugs, routes of administration, and the conditions that modify the reactions of drugs. Group 2 course.

HDA 150  Dental Office Management ....................2.0 (2)
Students are acquainted with the procedures necessary for efficient dental office management. Topics include appointment book control, accounts receivable and payable, dental record keeping, third party payment, patient recall, inventory control, telephone techniques, and use of computer hardware and software unique to the dental office. This course is offered in the self-paced format. Group 2 course.

HDA 160  Dental Emergencies ............................1.0 (1)
This course acquaints the student with the types of emergencies that may arise in the dental office. The students will learn the procedures to follow when medical and dental emergencies occur, the importance and significance of obtaining accurate and complete patient histories, the proper emergency equipment necessary in a dental office and the maintenance of that equipment, the taking and recording of vital signs, basic first aid rules, and fire safety. Group 2 course.

HDA 170  Preventive Dentistry ............................2.0 (2)
This course deals with educating dental patients in proper oral hygiene and nutrition. The topics of discussion will include vitamins, minerals, fats, carbohydrates, proteins, food groups, fluoride treatments, oral examinations, pit and fissure sealants, public health dentistry, and oral hygiene instructions. Student demonstration and participation is emphasized. Fluoride treatments and a dietary analysis will be learned and demonstrated by students. Two community presentations will be designed and presented by each student. Group 2 course.

HDA 240  Chairside Procedures .........................5.0 (5)
Recommended prerequisite(s): HDA 101, HDA 120, HAH 120, HDA 160, HDA 242, HDA 243
Corequisite(s): HDA 241
This course provides the foundation for dental assistant clinical procedures performed in both general and specialty dental offices. Topics include theory and application of four-handed dentistry; application of infection control procedures; an overview of procedures and techniques unique to dental specialties; and background information and technical skills performed by the Registered Dental Assistant. In addition, local dental specialists serve as guest speakers. Group 2 course.
HDA 241  Chairside Procedures Lab ......................... 2.0 (4)  
Corequisite(s): HDA 240  
This is the clinical component of Chairside Procedures. Students learn and practice operative and specialty chairside techniques in a fully equipped dental clinic. Students assist visiting dentists during simulated dental procedures. Expanded duties for dental assistants are also introduced in this course.  
Group 2 course.

HDA 242  Dental Radiography ............................. 2.0 (2)  
Recommended prerequisite(s): HAH 120, HDA 120, HDA 160, HDA 243  
The fundamentals of radiology as applied to dentistry will be presented. Special consideration will be given to radiation physics, hazards, biological effects, protection and quality control methods. Basic interpretation and radiographic anatomy will also be included. While extraoral techniques are discussed, emphasis will be given to the proper techniques for exposing, processing, and mounting traditional and digital intraoral radiographs of diagnostic quality. Group 2 course.

HDA 243  Dental Radiography Lab ........................ 1.5 (3)  
Corequisite(s): HDA 242  
Clinical component of Dental Radiography. Students will be introduced to a variety of radiography techniques and will learn how to expose, process and mount radiographs of diagnostic quality. Requirements include three sets on dental manikins and four sets on dental patients. Group 2 course.

HDA 251  Dental Assistant Internship I ............... 4.0 (4)  
Recommended prerequisite(s): HDA 240, HDA 241  
Students are assigned to dental offices in the community. 180 hours of hands-on experience includes chairside assisting; office management; laboratory techniques and expanded functions. May take any semester with instructor permission. Included is a one-hour, bi-weekly seminar session. Group 2 course.

HDA 252  Dental Assistant Internship II .............. 4.0 (4)  
Recommended prerequisite(s): HDA 251  
A continuation of Internship I providing an additional 180 hours of hands-on experience. In addition to placement in a general dental practice, students observe four specialty settings: oral surgery, orthodontics, periodontics, and endodontics. May take any semester with instructor permission. Included is a one hour, bi-weekly seminar session. Group 2 course.

HDA 282  CDA/RDA Written Exam Prep ............... 2.0 (2)  
Recommended prerequisite(s): HAH 120, HDA 101, HDA 120, HDA 150, HDA 160, HDA 242, HDA 243, HDA 112, HDA 113, HDA 140, HDA 170, HDA 240, HDA 241, may be taken concurrently  
The purpose of this course is to prepare students and working dental assistants for the CDA and RDA written exams. Included are review sessions covering General Chairside, Infection Control, and Radiography for both exams and additional specific topics that relate directly to Michigan’s expanded functions for dental assistants. Group 2 course.

HDA 286  RDA Clinical Exam Prep ................... 1.0 (1)  
Recommended prerequisite(s): HDA 282  
This course will provide dental assisting students with study/application sessions for the clinical portion of the state licensure exam. Expanded functions of special interest are dental amalgams, temporary crowns, and dental dams. Must be a current dental assisting student or a graduate of a post-secondary dental assisting program approved by the State Board of Dentistry. Group 2 course.

HF  Health and Fitness

HF 101  Fitness Circuit I ................................. 0.5 (1)  
Introduction to beginning aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction includes an orientation session, aerobic fitness, strength training, flexibility, and endurance. This self-directed course meets in the NMC Health and Fitness Center using strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week on a flexible schedule. Offered summers only. Group 2 course.

HF 102  Fitness Circuit II .............................. 0.5 (1)  
Recommended prerequisite(s): HF 101  
Continuing beginning aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction includes aerobic fitness, strength training, flexibility, and endurance. This self-directed course meets in the NMC Health and Fitness Center using strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week on a flexible schedule. Offered summers only. Group 2 course.

HF 105  Personal Trainer Certification .............. 3.0 (4)  
Recommended prerequisite(s): HF 101  
This course is designed to provide theoretical knowledge and practical skills in preparation for a national certification exam in personal training. Topics include guidelines for instructing safe, effective, and purposeful exercise, essentials of the client-trainer relationship, conducting health and fitness assessments, and designing and implementing appropriate exercise programming. Group 2 course.

HF 111  Fitness Circuit I ................................. 1.0 (2)  
Introduction to aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction includes an orientation session, strength training, flexibility, and endurance with an emphasis on aerobic conditioning. This self-directed course meets in the NMC Health and Fitness Center using strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week on a flexible schedule. Group 2 course.

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
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HF 112  Fitness Circuit II ................................. 1.0 (2)  
Recommended prerequisite(s): HF 111  
Continuation of aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction emphasizes individual strength training and flexibility. This self-directed course meets in the NMC Health and Fitness Center utilizing strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week on a flexible schedule. Group 2 course.

HF 113  Fitness Circuit III ................................. 1.0 (2)  
Recommended prerequisite(s): HF 112  
Continuation of aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction emphasizes individual aerobic fitness options and the reduction of stress. This self-directed course meets in NMC Health and Fitness Center utilizing strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week on a flexible schedule. Group 2 course.

HF 114  Fitness Circuit IV ................................. 1.0 (2)  
Recommended prerequisite(s): HF 113  
Continuation of aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction emphasizes individual fitness evaluation/workout, weight control, and nutrition. This self-directed course meets in NMC Health and Fitness Center utilizing strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week on a flexible schedule. Group 2 course.

HF 116  Yoga ................................................. 1.0 (2)  
Yoga is postural work emphasizing precise, careful body alignment and maximum spinal extension. Yoga works through the concreteness of the body to teach balance and integration. It is an effective way to stretch and strengthen the body. Using movement and breath, yoga brings a therapeutic calm to the body and mind, releasing stress and bringing relaxation. Group 2 course.

HF 118  Continuing Yoga ................................. 1.0 (2)  
Recommended prerequisite(s): HF 116 or instructor permission  
Yoga techniques focus on understanding and controlling the body, the breath, and the mind through exercises (asanas), breathing techniques (pranayamas), and meditation training (quieting the mind and body). Yoga poses are designed to develop strength and give maximum flexibility to the muscular, skeletal, and nervous systems with special emphasis on building a strong, supple spine. Benefits include improved circulation, hormonal balance, poise, and a more stable emotional nature. Learning proper breathing will help you cope with stress and increase your energy level. Wear loose, comfortable, layered clothing and plan to work barefooted. Bring two blankets, a mat, and bath towel. Group 2 course.

HF 118A  Bikram Yoga I ................................. 1.0 (2)  
Recommended prerequisite(s): Good heart health, not pregnant  
This is the original hot yoga, 105 degrees, pure, powerful, authentic, unchanged, taught exactly as Hatha Yoga Master Bikram Choudhury intends it to be taught. 26 poses, 2 breathing exercises, 90 minutes, plus heat. Meets three times per week on a flexible schedule. Group 2 course.

HF 118B  Bikram Yoga II ................................. 1.0 (2)  
Required prerequisite(s): HF 118A  
Recommended prerequisite(s): Good heart health, not pregnant  
A continuation of the original Hot Yoga, 105 degrees, pure, powerful, authentic, unchanged, taught exactly as Hatha Yoga Master Bikram Choudhury intends it to be taught. Twenty-six poses, two breathing exercises, 90 minutes, plus heat. Meets three times per week on a flexible schedule. Group 2 course.

HF 119  Aerobic Workout ................................. 0.5 (1)  
Easy to follow choreographed conditioning routines are set to motivating contemporary music. Get a good workout, release tension, gain energy, and have fun. Offered summers only. Group 2 course.

HF 120  Aerobic Workout I ............................... 1.0 (2)  
Easy to follow choreographed conditioning routines are set to motivating contemporary music and taught for all fitness levels. Students will improve their fitness level through cardiovascular endurance, muscle strengthening, flexibility and coordination. Group 2 course.

HF 121  Aerobic Dance I ................................. 1.0 (2)  
Through choreographed dance movements and contemporary music, cardiovascular endurance, flexibility, strength and coordination is promoted. Group 2 course.

HF 122  Step Aerobics I ................................. 1.0 (2)  
This body sculpting and fat burning program provides a unique blend of exercise, bench and resistance training by combining Vertifirm (hips & thighs), hand held weights (upper body) and low impact, high-energy step routines. Group 2 course.

HF 123  Step Aerobics ................................. 0.5 (1)  
This body sculpting and fat burning program provides a unique blend of exercise, bench and resistance training by combining Vertifirm (hips & thighs), hand held weights (upper body) and low impact, high-energy step routines. Offered summers only. Group 2 course.

HF 124  Aerobic Dance ................................. 0.5 (1)  
Through choreographed dance movements and contemporary music, cardiovascular endurance, flexibility, strength and coordination is promoted. Offered summers only. Group 2 course.

HF 126  Lap Swim ................................. 1.0 (2)  
Recommended prerequisite(s): Ability to swim repeated laps across a pool  
This self-directed course meets twice per week on a flexible schedule. Use of basic strokes for fitness is reviewed. Emphasis is on aerobic and muscular endurance through swimming a variety of laps. Group 2 course.
HF 127 Lap Swim II ........................................ 1.0 (2)  
Recommended prerequisite(s): HF 126  
This self-directed course meets twice per week on a flexible schedule. A continuation of the Lap Swim program. Emphasis is on increasing aerobic and muscular endurance through swimming a variety of laps. Group 2 course.

HF 131 Aerobic Dance II ................................................ 1.0 (2)  
Recommended prerequisite(s): HF 121  
A continuation of the Aerobic Dance fitness program. Through choreographed dance movements and contemporary music cardiovascular endurance, flexibility, strength, and coordination is promoted. Group 2 course.

HF 132 Step Aerobics II ................................................... 1.0 (2)  
Recommended prerequisite(s): HF 122  
A continuation of the Step Aerobics fitness program. This body sculpting and fat burning program provides a unique blend of exercise, bench and resistance training by combining Vertifirm (hips & thighs), hand held weights (upper body) and low impact, high-energy step routines. Group 2 course.

HF 133 Pilates ............................................................... 1.0 (2)  
The Pilates method of body conditioning is a unique system of stretching and strengthening exercises used to develop long, lean bodies. This program uses floor exercises to strengthen and tone muscles, flatten abdominals, improve posture, flexibility, balance, agility, and coordination. Group 2 course.

HNR 100 Introduction to Nursing .................................... 1.0 (1)  
Required prerequisite(s): ENG 111, MTH 111  
Presents the history of nursing & nursing education. Introduces professional nursing values and the attitudes and behaviors desired in nurses. Discusses nursing roles, career opportunities, and types of health care delivery settings. Introduces the student to legal and ethical issues related to the role and scope of practice of the licensed practical nurse and the registered nurse. Introduces basic concepts related to professionalism, patient-centered care, health, spirituality, culture, holism, and the impact of illness on the individual and his/her significant others. Covers beginning professional communication skills, collaboration, teamwork, and basic teaching/learning principles. Group 2 course.

HNR 101 Fundamentals of Nursing–Lecture .................... 4.0 (4)  
Required prerequisite(s): BIO 228 w/grade of 2.5 or higher  
Corequisite(s): HNR 102, HNR 108  
Recommended prerequisite(s): HNR 100, CIT 122A, may be taken concurrently  
Introduces the student to the principles and skills necessary to provide safe, basic nursing care. Presents the nursing process, beginning assessment skills, and documentation. Introduces concepts related to the environment, maintenance of safety, hygiene, asepsis, skin integrity, mobility, comfort, rest, nutrition, elimination, stress, adaptation, and peri-operative nursing. Group 2 course.

HNR 102 Fundamentals of Nursing–Clinical .................... 4.0 (12)  
Corequisite(s): HAH 100C, HNR 101, HNR 108  
Laboratory and/or hospital experience providing opportunities to practice and apply the concepts presented in HNR 100 and 101. Includes laboratory demonstration, practice, and evaluation of selected skills related to assessment, hygiene and comfort, transfer techniques, mobility, infection control, insertion and care of urinary catheters, enemas, nasogastric tube insertion, tube feedings, and wound care. Emphasis on basic information necessary for the safe administration of medications. Group 2 course.

HNR 108 Pharmacology .................................................. 3.0 (3)  
Corequisite(s): HNR 101, HNR 102  
Students learn safe and effective preparation and administration principles for all drug categories. Principles of biochemical drug mechanisms of oral, intravenous, and parenteral prescription drug therapy. Drug interactions, side effects and treatment of adverse drug reactions are included. Legal statutes regulating drug administration within the scope of the licensed practical nurse and registered professional nurse are presented. Group 2 course.

HNR 125 Lifespan Nursing Lecture ................................ 5.0 (5)  
Required prerequisite(s): HNR 100, HNR 101, HNR 102, HNR 108, HAH 100C  
Corequisite(s): HNR 126  
Presentation of nursing management of health care issues related to uncomplicated pregnancy, birth, and neonatal period. Introduction of nursing management of common health alterations found in both chronically and acutely ill clients across the lifespan. Emphasis will be made on utilizing evidence-based practice to identify appropriate nursing interventions to achieve the desired outcome for the client based on their developmental level across the lifespan. Group 2 course.

HNR 126 Lifespan Nursing–Clinical ................................. 5.0 (15)  
Required prerequisite(s): HAH 100C, HNR 100, HNR 101, HNR 102, HNR 108  
Corequisite(s): HNR 125  
Clinical experiences providing opportunities to apply principles studied in HNR 125. Clinical learning environments will include the opportunity to apply medical-surgical, pediatric, and obstetric nursing interventions in a variety of settings, including acute care and simulation experiences. Group 2 course.
HNR 145 Practical Nursing Roles & Issues .......... 1.0 (1)  
Recommended prerequisite(s): HNR 125, HNR 126  
Reviews ethical/legal responsibilities of the LPN. Presents issues and trends related to LPN practice, nursing organizations, continuing education; and licensure. Discusses occupational opportunities and provides information on employment search, job-seeking skills and transition issues.  
Group 2 course.

HNR 241 Adv. Maternal Child Nursing-Lec.......... 3.0 (3)  
Required prerequisite(s): HNR 247, HNR 248  
Corequisite(s): HNR 242  
This course will expose the student to the complex problems facing families coping with complications during the childbearing/child-rearing process. Characteristics of the at-risk family will be explored. These concepts will be applied to a review of complications occurring during the prenatal, intrapartal, and postpartal periods. The course will then deal with complex health problems during childhood and will include a discussion on perinatal loss and childhood death. A major theme throughout the course will be the use of the nursing process to promote optimal functioning for at-risk families. Community resources will be explored. Previous content on growth and development and cultural considerations will be reviewed briefly and concepts applied through class discussions and case scenarios.  
Group 2 course.

HNR 242 Adv. Maternal Child Nursing-Clinical ... 2.0 (6)  
Required prerequisite(s): HNR 247, HNR 248  
Corequisite(s): HNR 241  
This course provides for the clinical application of the principles presented in the corequisite: HNR 241. Students will spend clinical time on the maternity inpatient unit at Munson Medical Center. A clinical instructor will guide and support the student through observational experiences in labor and delivery and all students will have the opportunity to do postpartum and newborn assessments and care. In addition, four of these hours will be spent in the NICU (Neonatal Intensive Care) setting where the student will observe and participate in the care of premature and ill neonates. Students will also spend clinical time in a precepted pediatric clinical. 16 hours will be spent in an acute pediatric setting (pediatric inpatient unit at Munson Medical Center, Urgent Care or Emergency department) setting observing and caring for pediatric patients. Clinical time will also be spent doing an assessment on a family, assessing growth and development and community resources. Students will also be involved in clinical simulations and case studies. Students will participate in the above experiences by observing and/or directly providing care to at-risk families coping with childbearing and/or childrearing stressors/issues. Risk factors for these families may include developmental and psychosocial factors as well as physical alterations or complications. Students will apply concepts of growth and development and cultural diversity learned in their prior nursing courses.  
Group 2 course.

HNR 247 Nursing Management of Complex Patients I-Lec ........................................ 3.0 (3)  
Required prerequisite(s): HNR 125, HNR 126, BIO 240, HAH 100C  
Corequisite(s): HNR 248  
Presentation of nursing interventions and management concepts required for adult patients with complex medical and/or surgical disorders. Emphasizes advanced assessment, analysis, nursing judgment, and nursing accountability. The focus is on adult patients with multiple complex requirements. Geriatric considerations are presented and integrated throughout.  
Group 2 course.

HNR 248 Nursing Management of Complex Patients I-Clinical ....................................... 4.0 (12)  
Required prerequisite(s): BIO 240, HAH 100C, HNR 125, HNR 126, or admission to the Nursing program and successful completion of prerequisite nursing courses with 2.0 or better.  
Corequisite(s): HNR 247  
Clinical experience providing opportunities to apply principles presented in HNR 247. Emphasis is upon refinement of organization, decision-making, critical thinking, and priority-setting skills in the care of multiple clients with complex medical/surgical disorders.  
Group 2 course.

HNR 251 Mental Health Nursing-Lec ............... 2.0 (2)  
Required prerequisite(s): HNR 241, HNR 242  
Corequisite(s): HNR 252  
This course is designed to enable the student to better understand behavior exhibited by persons with mental disorders. Classifications, causes, and symptoms of mental diseases are presented and treatments such as individual, group, and activity therapies are explored. Emphasis is placed on the ways by which the nurse determines, develops, implements, and evaluates a therapeutic environment for the client. The implementing of theories of human behavior is the scientific aspect of mental health-psychiatric nursing; the purposeful use of the self in the performance of care is the artful aspect. The goal is preventative and corrective impact upon mental illness and the restoration of optimal mental health.  
Group 2 course.

HNR 252 Mental Health Nursing-Clinical .......... 1.0 (3)  
Required prerequisite(s): HNR 241, HNR 242  
Corequisite(s): HNR 251  
This course is designed for implementation in selected local agencies where the mental health nursing principles taught in HNR 251 may be applied.  
Group 2 course.

HNR 261 Nsg Mgmt Complex Patients II-Lec ........ 3.0 (3)  
Required prerequisite(s): HNR 251, HNR 252  
Corequisite(s): HNR 262  
This course builds upon the context of HNR 247 with the presentation of nursing management of adult patients with complex endocrine, hepatic, and autoimmune disorders. Additionally, the course introduces principles of leadership and management as these relate to the delivery of nursing care to a group of patients. The principles of delegation, communication, and priority-setting are reviewed. The course discusses...
a variety of nursing management challenges related to team building, managing change, conflict resolution, power and authority, politics and political action, current economic aspects of health care, legal/ethical issues, and emergency preparedness. Career opportunities, job-seeking skills, NCLEX-RN preparation, and issues related to role transition are discussed in reference to the graduates’ move into the work force. The quality improvement process and evidence-based practice are considered as students research and deliver a group presentation related to a current issue or trend in nursing management. Group 2 course.

HNR 262 Nursing Management Clinical ............... 4.0 (12)
Required prerequisite(s): HNR 251, HNR 252
Corequisite(s): HNR 261
Clinical experience providing opportunities to apply principles presented in HNR 261. A variety of clinical units in acute care and extended care settings are utilized. Emphasis is placed upon organizational skills, including time management, and the exercise of critical judgment in managing the care for a normal caseload of clients. The process of critical thinking is the nucleus necessary to achieve the course objectives. Students perform care in the clinical area 24 hours per week for 7.5 weeks during the semester. The course is designed to promote a successful role transition from student to entry-level professional nurse. Group 2 course.

HPD 110 Basic Life Support for Health...................0.5 (.5)
Care Providers
Provides basic life support training and certification for nursing students interested in becoming health care providers to provide them with life support skills needed for clinical practice. Group 2 course.

HPD 120 Basic Life Support for Professional ....0.2 (.2)
Providers: Recertification
Required prerequisite(s): Current American Heart Association or American Red Cross Life Support for Professional Provider certification.
Provides recertification in Basic Life Support for Professional Provider for students interested in becoming health care providers who can show previous certification through the American Red Cross or American Heart Association. Group 2 course.

HST 101 Western Civilization to 1500..............4.0 (4)
Recommended prerequisite(s): Placement into ENG 111
This is the first course in a year-long study of western civilizations from the birth of civilization to the Early Middle Ages. The main instructional goal is to have students demonstrate an understanding of the diverse societies and culture of the western world. It’s important that students recognize that western civilization includes many diverse cultures and has interacted with many other diverse cultures throughout its development. In addition, students will analyze the distinctive characteristics of western civilizations, identify the achievements and limitations of western civilizations, and develop an awareness of how contemporary problems were caused by past forces. As students achieve these goals, they will develop skills in communication and critical thinking. Group 1 course.

HST 102 Western Civilization Since 1500........4.0 (4)
Recommended prerequisite(s): Placement into ENG 111
This is the second course in a year-long study of western civilizations from the early Middle Ages to the Age of Nation States in the 19th Century. The main instructional goal is to have students demonstrate an understanding of the diverse societies and culture of the western world. It’s important that students recognize that western civilization includes many diverse cultures and has interacted with many other diverse cultures throughout its development. In addition, students will analyze the distinctive characteristics of western civilizations, identify the achievements and limitations of western civilizations, and develop an awareness of how contemporary problems were caused by past forces. As students achieve these goals, they will develop skills in communication and critical thinking. Group 1 course.

HST 111 U.S. History to 1865 ......................4.0 (4)
Recommended prerequisite(s): Placement into ENG 111
This is the first course in a year-long study of U.S. History from Native American origins to the modern world. The main instructional goal is to have students demonstrate an understanding of how diverse societies and cultures have contributed to the development of the United States, identify the achievements and limitations of these developments, and develop an awareness of how contemporary problems were caused by past forces. As students achieve this goal, they will develop skills in communication and critical thinking. Students will learn how American society developed from Native American origins through Reconstruction, and how society has impacted both individuals and groups in America. Group 1 course.
HST 112  U.S. History Since 1865 ....................... 4.0 (4)
Recommended prerequisite(s): Placement into ENG 111
This is the first course in a year-long study of U.S. History from Native American origins to the modern world. A main instructional goal is to have students demonstrate an understanding of how diverse societies and cultures have contributed to the development of the United States. In addition, students will analyze the distinctive characteristics of the development of the US, identify the achievements and limitations of these developments, and develop an awareness of how contemporary problems were caused by past forces. As students achieve these goals, they will develop skills in communication and critical thinking. Students will learn how American society developed from Reconstruction to the post-Vietnam era, and how society has impacted individuals and groups. Group 1 course.

HST 211  Native American History ..................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
A history of the Native American experience from the pre-Columbian period to the post World War II era. Major emphasis is placed upon the social, political, and economic role of the Native American community in American society and its unique role as a part of that society. Students will also demonstrate an awareness of how contemporary problems were caused by past forces. Students will develop skills in analysis, critical thinking, historical reasoning and writing. Group 1 course.

HST 212  African-American History .................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
A history of the African American experience from the African origins to the modern era. Major emphasis is placed upon the social, political, and economic role of the African American community in American society and its unique role as a part of that society. Students will also demonstrate an awareness of how contemporary problems were caused by past forces. Students will develop skills in analysis, critical thinking, historical reasoning and writing. Group 1 course.

HST 213  American Women's History .................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
A history of American Women's experience from Native American origins to the Modern Era. Major emphasis is placed upon the social, political and economic role of American women in American society and their unique role as a part of that society. Students will also demonstrate an awareness of how contemporary problems were caused by past forces. Students will develop skills in analysis, critical thinking, historical reasoning and writing. Group 1 course.

HST 225  American Civil War ............................ 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
This course is a study of the American Civil War. The instructional goal is to have students demonstrate through discussions and essays the causes of the Civil War in antebellum America, how the war was waged, why the North won and the South lost the war, how the war affected American society, and how the war led to Reconstruction. Students will demonstrate an awareness of how contemporary problems were caused by past forces. Students will develop skills in analysis, critical thinking, historical reasoning and writing. Group 1 course.

HST 228  The Vietnam War .............................. 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
This course is a study of the history of the Vietnam War. The instructional goal of this course is to have students demonstrate through discussions and essays how America became involved in Vietnam, how the war was waged, the war’s effect on American society, and how the war affected Vietnam. Students will also demonstrate an awareness of how Vietnamese culture affected the war and how Vietnam has affected America’s contemporary society. Students develop skills in analysis, critical thinking, historical reasoning and writing. Group 1 course.

HST 230  A History of Michigan ......................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
The instructional goal of this course is to have students demonstrate through discussion and essays the distinctive characteristics of Michigan history, the common characteristics of Michigan history as compared to other states, the identification of achievements and limitations of Native American societies within Michigan, and an awareness of how contemporary problems were caused by past forces. This course covers the period from the “earliest beginnings” to the “recent past.” Students will develop skills in analysis, critical thinking, historical reasoning and writing. Group 1 course.

HST 235  20th Century Europe ......................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
This course is a study of the history of Europe in the 20th Century with emphasis on Germany, England, France, and Russia. The instructional goal of this course is to have students demonstrate through discussions and essays the distinctive characteristics of European civilizations, the common characteristics of European civilizations, the identification of achievements and limitations of European civilizations, and how Europe has affected America and America affected Europe. Students will demonstrate an awareness of how contemporary problems were caused by past forces. Students will develop skills in analysis, critical thinking, historical reasoning and writing. Group 1 course.

HUM  Humanities

HUM 101  Introduction to Humanities ................ 3.0 (3)
An interdisciplinary study of Western Culture focusing on the interrelationships of art, literature, and philosophy as they reveal the major ideas and values of Classical Greek, Roman, Medieval, and Renaissance civilizations. Group 1 course.

HUM 102  Introduction to Humanities ................ 3.0 (3)
An interdisciplinary study of Western Civilization focusing on the interrelationships of art, literature, and philosophy as they reveal the major ideas and values of the Reformation, Baroque, Neo-Classic, Romantic, 19th Century and Modern periods. Group 1 course.
HUM 116 World Cultures................................. 4.0 (4)
This course explores the arts and culture of Asia, Africa, Oceania, and the Americas utilizing an interdisciplinary and thematic approach which focuses on painting, sculpture, architecture, textiles, body art, masks, costumes, cultural rituals and social customs of each region. Group 1 course.

HVA Heating, Ventilation, Air Conditioning

HVA 101 Introduction to HVAC/R....................... 3.0 (4)
Recommended competencies: COMPASS placement in MTH 111 or higher and ENG 11/111 or higher, or co-enrollment in the appropriate developmental Math and English course.
This course provides an introduction to heating, ventilation, air conditioning, and refrigeration. Through structured classroom and hands-on skill building, the student will learn the tools of the trade, how to solder and braze copper tubing, piping skills and trade mathematics. Group 2 course.

HVA 105 Thermodynamics of HVAC/R .................. 3.0 (4)
Required prerequisite(s): HVA 101 or its equivalency
This course provides an introduction to heating, ventilation, air conditioning and refrigeration. Through structured classroom and hands-on skill building, the student will learn the thermodynamics of refrigeration. Students will also learn proper charging procedures and a basic approach to system troubleshooting using electrical meters and refrigeration gauges. Group 2 course.

HVA 121 Fundamentals of Heating..................... 3.0 (4)
Required prerequisite(s): HVA 105 or its equivalency
Through structured classroom and hands-on skill building, the student will learn air distribution systems, how to calculate proper sizing of chimneys, vents and flues, and alternating current. Group 2 course.

HVA 125 A/C Applications .............................. 3.0 (4)
Required prerequisite(s): HVA 121 or its equivalency
Through structured classroom and hands-on skill building, the student will learn about metering devices, accessories and option equipment, compressors, heat pumps, leak detection equipment, evacuation methods, recovery requirements and how to properly charge air conditioning and refrigeration equipment. Group 2 course.

HVA 131 Gas Heating Diagnostics...................... 3.0 (4)
Required prerequisite(s): HVA 125
Through structured classroom and hands-on skill building, the student will learn troubleshooting techniques with oil heat, gas heat, and electric heat. Students will also learn how to troubleshoot cooling, heat pumps, and accessories. Group 2 course.

HVA 135 Commercial HVAC/R.......................... 3.0 (4)
Required prerequisite(s): HVA 131
Through structured classroom and hands-on skill building, the student will learn advanced troubleshooting techniques with cooling and heat pumps. Students will also learn about hydronic heating systems and air properties and system balancing. Group 2 course.

LWE Law Enforcement

Students must be registered with LWE coordinator prior to enrolling in LWE courses.

LWE 102 Police Operations............................... 4.0 (4)
The student is introduced to educational and training requirements for employment in law enforcement, police community relations, the functions and objectives of a police department and the police response and responsibilities to the community. Group 2 course.

LWE 195 Police Practicum................................. 4.0 (4)
This course will provide Law Enforcement students with the practical experience of observing five various shifts with officers. This should insure that candidates will understand what law enforcement officers actually do. Recording the experiences will also assist the student in report writing. Group 2 course.

LWE 201 Cultural Awareness/Diversity............... 2.0 (2)
Students explore ethics, cultural diversity, interpersonal skills and the laws as they apply to today’s modern policing. Title VII or the 1964 Civil Rights Act, Elliot Larson Civil Rights Act, Americans with Disabilities Act, ethnic intimidation, and sexual harassment will also be addressed. Group 2 course.

LWE 212 Criminal Investigation.......................... 3.0 (3)
Students will be introduced to criminal investigation procedures including theory of an investigation, conduct at crime scenes, collection and preservation of physical evidence, methods used in police science laboratory, fingerprints, ballistics, documents, serology, photography, and related forensic sciences. Group 2 course.

LWE 214 Firearms.......................................... 4.0 (8)
This course will assist the students in the development of safety skills and the appropriate use of firearms in completing the Michigan Commission on Law Enforcement Standards basic firearms course. Included will be an orientation to firearms, policies, procedures, and liability of firearms use and hands-on firearms range techniques. Group 2 course.

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
LWE 215 Defensive Driving ........................................ 3.0 (6)
Defensive Driving will cover motor vehicle law, its application and jurisdiction and vehicle stops. This course will also include the teaching of driving skills needed by a law officer. Group 2 course.

LWE 216 Traffic Enforcement & Invest ............................. 3.0 (3)
Traffic Enforcement and Investigation will include traffic control enforcement, the law and prosecution of operating under the influence of alcohol, accident investigation, and traffic accident evidence collection. Group 2 course.

LWE 218 Physical Training/Wellness ................................. 4.0 (5)
This course is designed to give the students a complete understanding of wellness/physical fitness. The goal of the class is to develop a mentality that fitness is long term. Includes course lectures on the following topics: fitness and wellness, benefits and guidelines for exercise, coronary risk factors, stress management, nutrition, weight control, low back care, motivation and behavior change, and various ways to perform fitness tasks. This class also includes workouts, and testing students against Cooper Standards. Group 2 course.

LWE 225 Defensive Tactics ............................................ 4.0 (5)
Required prerequisite(s): Students must also be in excellent physical condition.

LWE 226 Michigan Criminal Law .................................... 3.0 (3)
The study of substantive criminal law as a means of defining and preserving social order. Sources of criminal law; classification of crimes against persons, property and public welfare; principles of criminal liability; elements necessary to establish crime and criminal intent; specific crimes and defenses; and constitutional limitations are examined. Group 2 course.

LWE 227 Criminal Procedures ....................................... 3.0 (3)
Recommended prerequisite(s): LWE 226
Criminal Procedures will study the administration of criminal justice, the nature and scope of police power, the concept of exclusion, laws of arrest, search and seizure and interrogation, the acquisition of evidence, and judicial protection of the accused. Group 2 course.

LWE 228 Speed Measurement/PBT .................................. 3.0 (3)
This course will teach the legal and practical aspects of speed measurement and PBT (preliminary breath tester) operations. Class discussions will primarily be based on relationship between excessive speed, drinking and highway crashes. The course will also explore departmental policies and procedures concerning speed measurement and PBT use. Students will understand and demonstrate basic accident investigation and related accident evidence collection. Group 2 course.

MDK 100 Survival at Sea .............................................. 1.0 (2)
This course of instruction covers the following: concentrated instruction and training for the U.S. Coast Guard certification as LIFEBOATMAN; including the fundamentals of seamanship, small boat handling with power and sail; construction equipment, and marking of the standard lifeboat; construction, equipment, and operation of inflatable life rafts; abandon ship procedures, man overboard procedures, and survival swimming; the launching and retrieval of lifeboats; sailboat nomenclature and operation. STCW 95. Group 2 course.

MDK 104 Rigging & Ship Maintenance Lab ...................... 1.0 (2)
The purpose of this course is to provide the cadet an opportunity to acquire practical experience in general seamanship: including marlinespike seamanship, line handling; splicing line, splicing wire rope; rigging, block and tackle nomenclature and use; vessel maintenance, the practical application of the procedures and equipment used in vessel upkeep. Group 2 course.

MDK 106 Watchstanding I .............................................. 1.0 (2)
Required prerequisite(s): MDK 100
The purpose of this course is to provide an opportunity for the cadet to acquire practical experience in shiphandling with vessels sufficiently large to duplicate shiphandling problems encountered with much larger vessels. Topics covered include the general principles of ship control for both single and twin propeller vessels. Cadets are exercised in line handling, towing, anchoring techniques, landing techniques, and shipboard safety. Cadets will then advance through the use of simulation to shiphandling exercises dealing with the general principles of vessel control and the problems of handling a vessel in narrow channels. STCW 95. Group 2 course.

MDK 111 Marine Communications .................................. 2.0 (2)
This course is designed to acquaint the student with the Global Maritime and Distress Safety System. It includes the basic layout of the GMDSS, communication equipment requirements, licensing requirements, principles and procedures for marine communications, the characteristics of radio wave propagation, frequencies, and modulation. Included also is the Morse Code, Flashing Light and general Distress Signals. STCW 95. Group 2 course.

MDK 112 Rules of the Nautical Road ............................... 2.0 (2)
Required prerequisite(s): MDK 100
Comprehensive study of the international rules of the road-COLREGS-including their origin, purpose, history, technical provisions, and application. Included is a comparative study of both international and inland rules, their interpretation and practical application as well as a study of case histories and legal interpretations resulting from collisions at sea. STCW 95. Group 2 course.
MDK 121 Navigation I ................................. 3.0 (3)
Required prerequisite(s): MATH 122 (FSU)
Corequisite(s): MDK 122
An introduction to principles of piloting and marine navigation. Includes chart projection, the magnetic compass, chart usage, buoyage systems, aids to navigation, fixes, running fixes, and the use of standard tablets. STCW '95. Group 2 course.

MDK 122 Navigation I Lab ............................. 1.0 (2)
Required prerequisite(s): MATH 122 (FSU)
Corequisite(s): MDK 121
This lab is taken concurrently with MDK 121 and concentrates on applying the principles of piloting to plotting on the chart. Chart projection and use will be introduced. Dead reckoning, terrestrial fixes, set and drift, lines of position, and the use of navigational instruments will be covered. STCW '95. Group 2 course.

MDK 149 Damage Control & Safety ................. 2.0 (2)
Required prerequisite(s): MDK 100
This course is designed to give the cadet a comprehensive knowledge of shipboard safety with particular emphasis on fire fighting and damage control. Subject areas include: personal safety, pollution, U.S. Coast Guard rules and regulations, temporary damage repair, shoring principles, and practical shoring problems. STCW '95. Group 2 course.

MDK 200 Ship Business & Labor Relations .......... 3.0 (3)
This course provides instruction in the organization, administrative functions, and management of a merchant vessel as well as the systems of operation of ship's business. It includes the study of union contracts, grievance procedures and labor management relations. Group 2 course.

MDK 204 Marine Supervisory Lab .................... 1.0 (2)
This course will provide senior cadets with the experience of supervising subordinate cadets. This experience will include job planning, sequencing of tasks, tools and equipment needed, and personnel required to complete the job. The student will experience what it will be like to be responsible for the crew both in terms of safety and output. Group 2 course.

MDK 206 Watchstanding II ........................... 1.0 (2)
Required prerequisite(s): MDK 210
The purpose of this course is to begin to develop a cadet's piloting and watch management skills. The use of the Shiphandling Simulator/Academy Vessels will allow the development of the Bridge Team Concept through piloting exercises. Group 2 course.

MDK 210 Sea Project Deck ............................ 6.0 (6)
Required prerequisite(s): Must complete first academic year with a 2.0 or better in all required courses.
During this course the cadet is on board a Great Lakes commercial vessel, an ocean vessel or the Academy training ship. The cadet follows a prescribed course of study of vessel operations, safety and navigation equipment and techniques. In addition, the cadet spends a minimum of eight hours per day under supervision of licensed officers gaining experience in various duties and responsibilities. Group 2 course.

MDK 221 Lakes Piloting ............................... 2.0 (2)
Required prerequisite(s): MDK 121, MDK 210
Study of the Great Lakes and principal ports; this includes currents, depths, aids to navigation, prevailing winds and their effects, recommended courses, shoals, reefs and high traffic areas. Historic analysis will explain current practices. Group 2 course.

MDK 222 River Piloting ............................... 3.0 (3)
Required prerequisite(s): MDK 121, MDK 210
An in-depth study of the rivers, channels, and the aids to navigation in these rivers and channels. The focus will be on the rivers that make up the Great Lakes connecting bodies, such as the St. Mary’s, St. Clair, Detroit Rivers and the Welland Canal. Group 2 course.

MDK 224 Navigation III ............................... 3.0 (3)
Required prerequisite(s): MDK 221, MATH 122 (FSU)
An introduction to nautical astronomy concerned with the practical application of celestial navigation, the solving of the spherical triangle, star identification, measurement of time and use of instruments. This course will cover plane, mid-latitude, and mercator sailings and how to apply them to navigational problems through the various time zones. Sunrise, sunset, twilight, moonrise, and moonset calculations for a moving vessel will be covered. STCW '95. Group 2 course.
MDK 231  Electronic Navigation ..................... 3.0 (3)
Required prerequisite(s): MDK 210
Corequisite(s): MDK 232
An in-depth study of various electronic navigation systems with emphasis on radar and covering the theory, operation, use and general maintenance of each system. Required course, must be successfully completed before student may receive Radar Observer Certificate. STCW ’95. Group 2 course.

MDK 232  Electronic Navigation Lab ................ 1.0 (2)
Required prerequisite(s): MDK 210
Corequisite(s): MDK 231
A practical course to understand the use and operation of a Marine Radar, how to avoid collision situations (Rapid Radar Plotting), use and operation of Automatic Collision Avoidance System, Gyrocompass theory, Loran “C” theory and operation, GPS theory and operation, depth sounder theory and operation. Required course, must be successfully completed before student may receive Radar Observer Certificate. STCW ’95. Group 2 course.

MDK 233  Automatic Radar Plotting Aids ............ 1.0 (2)
Corequisite(s): MDK 231, MDK 232
This course presents the principles and operation of automatic radar plotting aids. It includes the legal aspects of ARPA including IMO and USCG standards, the theory of input and processing characteristics of ARPA, the theory of operation, control functions and adjustments, the acquisition and tracking of contacts, the limitations of and potential errors of ARPA, and special ARPA related features. The cadet will demonstrate the setup and practical use of two actual automatic collision avoidance radars. STCW ’95. Group 2 course.

MDK 241  Ship Construction ....................... 2.0 (2)
Required prerequisite(s): MATH 122 (FSU), completion of first academic year with a 2.0 or higher in all required courses.
A study of the principles of hull construction as applied to all types of vessels. Includes construction nomenclature, criteria of design, methods of construction, materials used in construction, and the forces acting on the hull. STCW ’95. Group 2 course.

MDK 242  Ship Stability .............................. 3.0 (3)
Required prerequisite(s): MDK 210, MATH 122 (FSU)
A study of the principles of stability; righting moment and righting arm; calculation of metacentric height; inclining experiment; stability computers and tables; practical stability and trim considerations. STCW ’95. Group 2 course.

MDK 244  Dry Cargo Stowage ....................... 3.0 (3)
Required prerequisite(s): MDK 210, MDK 242
Principles and problems of the stowage and carriage of cargo: bulk cargo, container cargo, refrigerated cargo, grain cargo and dangerous cargo; cargo handling operations, both loading and unloading equipment. Cargo stowage plans will be developed and reviewed. Students will critique loads they were involved with during their time aboard ship. STCW ’95. Group 2 course.

MDK 245  Liquid Cargo Stowage ..................... 2.0 (2)
Required prerequisite(s): MDK 210, MDK 242
A study of the tanker industry, and the operational aspects of the tank vessel; pollution prevention, precautions and procedures; layouts of different types of tankers; operations sequence and oil tanker construction and terminology. USCG and OPA ‘90 regulations will be covered. STCW ’95. Group 2 course.

MDK 250  Stability for the Engineer ................ 1.0 (1)
Required prerequisite(s): MATH 122 (FSU), MNG 100, MNG 104, MNG 106
Principles, terms and procedures used in the determination of transverse, longitudinal, and damage stability of ships. Investigation of the physical laws affecting a floating body. Effects of cargo operation, free surface, fuel consumption, and flooding on vessel stability. Scrutiny of case studies involving both partial or total loss of stability. Group 2 course.

MDK 311  Sea Project Deck ......................... 6.0 (6)
Required prerequisite(s): Completion of second academic year with a 2.0 or higher in all required courses.
This course is a continuation of MDK 210 and is designed to provide the cadet with advanced knowledge and sailing time to meet the licensing requirements prescribed by the U.S. Coast Guard and the criteria established by the Maritime Administration. STCW ’95. Group 2 course.

MDK 312  Sea Project Deck ......................... 6.0 (6)
Required prerequisite(s): MDK 311
This course is a continuation of MDK 311 and is designed to further enhance the cadet’s professional knowledge and sailing time to meet licensing requirements of the U.S. Coast Guard and the criteria established by the Maritime Administration. STCW ’95. Group 2 course.

MDK 330  STCW Elementary First Aid ............... 2.0 (2)
This course meets the mandatory minimum requirements specified under STCW as related to medical first aid and basic safety training for all merchant mariners. This course is part of the STCW certification process. Cadets will learn to take immediate action upon encountering an accident or other medical emergency. STCW ’95. Group 2 course.

MDK 344  Cargo Systems ......................... 2.0 (2)
Required prerequisite(s): MDK 210, MDK 242
An in-depth study of the Great Lakes self-unloading vessel, container vessels, tankers, passenger vessels, regulations concerning hazardous materials, government regulations and the relationship between vessel and shore side operations. Group 2 course.

MDK 346  Bridge Team Management ............... 2.0 (3)
Required prerequisite(s): MDK 206
The purpose of this course is to further develop through the use of the Shiphandling Simulator, the cadet’s watch management and watch standing skills, bridge team problem solving, and piloting procedures for various confined waterways on the Great Lakes and other waterways. The cadet will be required
to operate the normal pilot house equipment, manage bridge personnel, and be familiar with the paperwork required in the operation of a vessel. STCW ’95. **Group 2 course.**

**MDK 348 Pilot/Mate License Prep** ......................... 2.0 (2)  
*Required prerequisite(s): MDK 312*  
A complete review of all professional subjects studied in the Maritime program pragmatically developed to reflect the essentials of the U.S. Coast Guard examinations. The final grade for this course is dependent on taking the U.S. Coast Guard exam. Cadets must complete all MDK courses with a 2.0 or better. (This class is for GLMA cadets only.) **Group 2 course.**

**MFG**  
**Manufacturing Technology**

**MFG 111 Math for Manufacturing** ......................... 3.0 (3)  
*Required prerequisite(s): MTH 23 or COMPASS placement into MTH 111.*  
This course will apply principles of mathematics, geometry, and basic trigonometry to applications in manufacturing. Topics will include proportions, calculation of machine speed and feed and geometric relationships of triangles and circles. Problem solving will require the use of the Pythagorean Theorem and the sine, cosine, and tangent functions to solve right triangles. The Law of Sines and Law of Cosines will be used to solve oblique triangle applications. **Group 2 course.**

**MFG 113 Machining I** ............................................ 3.0 (5)  
The student will be introduced to measurement and the safe use of layout and bench tools, drill press operations, and basic lathe facing and turning operations. Basic vertical milling operations will also be included. **Group 2 course.**

**MFG 114 Machining II** ........................................... 3.0 (6)  
*Required prerequisite(s): MFG 113*  
This course will introduce students to machining procedures beyond the basic operations. The student should have previously acquired basic machining knowledge and skills. Lathe procedures will include threading, boring, and cutting tapers. Milling operations will include the offset boring head, indexing, and keyseats. Students will perform precision grinding of parallel and angular surfaces using gauge blocks and a sine bar. Electrical discharge machining (EDM) will be introduced. Students will study the processes and perform hands on operations. **Group 2 course.**

**MFG 211 CNC Programming** ............................... 3.0 (4)  
*Required prerequisite(s): MFG 113 or instructor permission*  
This course will introduce the student to CNC machine programming, set-up and operation. Instruction will include coordinate systems, process planning, cutter compensation, and canned cycles. Students will write and edit programs for the CNC lathe and mill using conventional G and M code. In addition to programming, lab exercises will include set-up and operation of the CNC lathe and milling machine. **Group 2 course.**

**MFG 212 Computer-Aided Machining (CAM)** .......... 3.0 (4)  
*Required prerequisite(s): MFG 211 or instructor permission*  
This course introduces the student to the concepts of computer aided machining (CAM). Students will use CAM software to generate programs for the CNC lathe and milling machine. The programs will be created using drawings produced in the CAM system as well as drawings produced in the CAM system system as well as drawings imported from third party CAD or solid modeling software. The tool path is verified using the CAM software graphic simulation prior to running selected programs on the CNC machines. **Group 2 course.**

**MFG 215 Machining III, Lathe** ............................. 3.0 (6)  
*Required prerequisite(s): MFG 114*  
This course offers machining lab experience for students who want to enhance skills obtained in previous courses. The assignments will focus on lathe work which will include threads, tapers, boring, the use of carbide tooling and the four-jaw chuck. The student will continue to develop efficient methods and work to closer tolerances. **Group 2 course.**

**MFG 216 Machining IV, Mill and Grind** ............... 3.0 (6)  
*Required prerequisite(s): MFG 114*  
This course offers milling and precision grinding lab experience for students who want to enhance the skills obtained in previous courses. The assignments will include milling operations, rotary table, OD grinding, and precision surface grinding. The student will continue to develop efficient methods and work to closer tolerances. **Group 2 course.**

**MGT**  
**Management**

**MGT 241 Principles of Management** .................... 3.0 (3)  
*Recommended prerequisite(s): BUS 101, placement into ENG 111*  
What do managers actually do? This applications-oriented course will teach you the basics of day-to-day managerial work-planning, organization, leading, and controlling. Special emphasis with realistic scenarios are explored in leadership, communication, planning, conflict, change, strategy, problem solving, teams and work groups. **Group 2 course.**

**MGT 245 Principles of Entrepreneurship** ............. 3.0 (3)  
*Recommended prerequisite(s): BUS 101*  
This course provides practical knowledge needed for entrepreneurs with special attention focusing on creativity, opportunity, and feasibility of a new start up. Sources of funding and resources for small ventures are addressed in depth in this course to prepare the learner for practical application. This course primarily focuses on idea generation and start-up of the business including risk, funding sources, cash-flow, and awareness of external environmental factors that impact the business. The course project is the development of a feasibility study or related project. Feasibility studies include the extent to which an idea is viable, realistic and the extent to which the entrepreneur is aware of internal and external forces that could affect the business. **Group 2 course.**
MGT 246 Entrepreneur Marketing & Finance ...... 3.0 (3)
Recommended prerequisite(s): BUS 101
This course is an in-depth focus on the marketing and finance issues unique to entrepreneurs. Marketing topics include niche markets, guerilla marketing, strategic partnerships, social media, and e-marketing access to international markets. Finance topics include capital resource options, financial relationship management, cash flow, pro-forma planning, and strategic ownership models. Group 2 course.

MGT 251 Human Resources Management........... 3.0 (3)
Recommended prerequisite(s): BUS 101, placement into ENG 111
Human Resource managers are especially challenged today navigating employment waters that require expertise in employment legislation, recruitment, selection, training and development, compensation, employee appraisal, labor relations, safety and health. Theory and practice of these topics are explored with special emphasis on day-to-day applications in the workplace. Group 2 course.

MKT  Marketing

MKT 201 Principles of Marketing ..................... 3.0 (3)
Recommended prerequisite(s): BUS 101, placement into ENG 111
This course surveys the wide scope of marketing as it influences both profit and nonprofit firms with emphasis on the marketing concept as a business philosophy. Ethics in marketing will be discussed. Elements of the marketing mix and the elements of the promotional mix will be studied and incorporated into a marketing plan or a related project. Target marketing and segmentation of consumer markets along with consumer buying behavior will be studied. Group 2 course.

MKT 210 Principles of Selling .......................... 3.0 (3)
Recommended prerequisite(s): BUS 101, placement into ENG 111
This course will prepare the learner with an understanding of consumer buying behavior and the role of personal selling as a relationship marketing tool and the importance of the sales function to the organization's success. Ethical and legal issues in selling, psychological influences of consumer buying, and the relationship selling process will be discussed in this course. Students will give selling presentations to the class. Students will also learn about technology automation used in selling, servicing prospects, and gain an understanding of selling in the global environment. Group 2 course.

MKT 241 Principles of Advertising .................... 3.0 (3)
Recommended prerequisite(s): BUS 101, placement into ENG 111
This course will prepare the learner with an understanding of the real economic, social and cultural role of advertising and conversely, the impact of society's values on advertising. The strategic function of advertising within the broader context of business and marketing will be discussed in this course. The creative aspects of advertising will be studied, and students will develop an advertising campaign or related project. The global effect of marketing and advertising on business and national economics will be addressed along with ethical issues related to truth in advertising in today's society. Group 2 course.

MLA  Modern Language - American Sign Language

MLA 161 American Sign Language I .................. 4.0 (4)
A comprehensive introduction to American Sign Language (ASL), used by members of the Deaf community in the United States and parts of Canada. Focuses on conversation in signs, basic rules of grammar, and cultural aspects of the Deaf community with emphasis on use of signing space; use of non-manual components, including facial expressions and body language/posture and an introduction to finger-spelling. Through acquisition of basic vocabulary and knowledge of basic syntax, this first course will lay the foundation for students to go on to achieve a more thorough knowledge of American Sign Language. (No previous knowledge of the topic or fluency in ASL is required.) Group 2 course.

MLA 162 American Sign Language II .................. 4.0 (4)
Recommended prerequisite(s): MLA 161, or instructor permission Continuation of basic American Sign Language (ASL) and cultural study, with emphasis on further development of receptive and expressive skills, fingerspelling, vocabulary building, and grammatical structures. Introduces sign variations (regional and ethnic) and encourages more creative use of expression, descriptive adjectives, body language/postures, and the signing space. Group 2 course.

MLA 163 American Sign Language III .................. 4.0 (4)
Note: Minimum enrollment of ten (10) students is required.
Recommended prerequisite(s): MLA 161 and MLA 162, or instructor permission
This course is designed to further increase your expressive and receptive ASL abilities. The technical aspects of this course include proper voicing, code of ethics, analysis of transliteration vs. interpreting, as well as the accurate translation of idiomatic phrases from English to American Sign Language and American Sign Language to English. Group 2 course.

MLA 164 American Sign Language IV .................. 4.0 (4)
Note: Minimum enrollment of ten (10) students is required.
Recommended prerequisite(s): MLA 163
Students will further develop their use of intermediate level receptive and expressive American Sign Language (ASL) vocabulary, grammar, fingerspelling, conversational behavior, deaf culture and ASL linguistics. Group 2 course.
MLF  Modern Language  - French

MLF 101  Elementary French I ............................ 4.0  (4)
Note: Minimum enrollment of ten (10) students is required.
A comprehensive introduction to the French language through development of the four skills of listening, speaking, reading and writing, while acquiring cultural knowledge and understanding of French-speaking peoples of the world. Students will learn communicative strategies to help them speak and write in French and interpretive strategies to help them comprehend spoken and written language, all within the context of cultural concepts and themes. Course is designed as an entry point for students approaching the formal study of French for the first time. Group 2 course.

MLF 102  Elementary French II............................. 4.0  (4)
Note: Minimum enrollment of ten (10) students is required.
Recommended prerequisite(s): MLF 101, one year of high school French, or instructor permission.
See course description for MLF 101. Group 2 course.

MLF 201  Intermediate French I ......................... 4.0  (4)
Note: Minimum enrollment of ten (10) students is required.
Recommended prerequisite(s): Entry requires MLF 102, or two years high school French, or instructor permission.
Review of language skills and cultural knowledge already acquired in the elementary level coursework. Further development of language proficiency with expansion of oral and written communication skills and reading and listening skills. Continuation and deepening of cultural studies through exposure to and study of a variety of cultural expressions such as literature, film, music, art, online newspapers and other foreign language websites. Group 1 course.

MLF 202  Intermediate French II ....................... 4.0  (4)
Note: Minimum enrollment of ten (10) students is required.
Recommended prerequisite(s): MLF 201, or instructor permission.
See course description for MLF 201. Group 1 course.

MLS  Modern Language  - Spanish

MLS 121  Elementary Spanish I .......................... 4.0  (4)
A comprehensive introduction to the Spanish language through development of the four skills of listening, speaking, reading and writing, while acquiring cultural knowledge and understanding of Spanish-speaking peoples of the world. Students will learn communicative strategies to help them speak and write in Spanish and interpretive strategies to help them comprehend spoken and written language, all within the context of cultural concepts and themes. Course is designed as an entry point for students approaching the formal study of Spanish for the first time. Group 2 course.

MLS 122  Elementary Spanish II ........................ 4.0  (4)
Recommended prerequisite(s): MLS 121, one year of high school Spanish, or instructor permission.
This is a continuation of MLS 121 and focuses on the expansion of vocabulary and the further comprehension and application of grammar and idiomatic usage. Group 2 course.

MLS 221  Intermediate Spanish I .......................... 4.0  (4)
Prerequisite(s): MLS 122, two years high school Spanish, or instructor permission.
Review of language skills and cultural knowledge already acquired in the elementary level coursework. Further development of language proficiency with expansion of oral and written communication skills and reading and listening skills. Continuation and deepening of cultural studies through exposure to and study of a variety of cultural expressions such as literature, film, music, art, online newspapers and other foreign language websites. Group 1 course.

MLS 222  Intermediate Spanish II ...................... 4.0  (4)
Recommended prerequisite(s): MLS 221 or instructor permission
See course description for MLS 221. Group 1 course.

NMC. Find it here.

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
MNG  Maritime Engineering

MNG 100  Intro to Marine Engineering .................. 1.0 (2)
This course is a general introduction to the shipboard Engine Room. The duties and responsibilities of the engine room personnel will be covered. The course will include an introduction to the engine room propulsion systems (Diesel and Steam), and a study of the operation of the ship’s steering gear and deck machinery. This course provides a foundation for the deck and engineering cadet to build upon in his/her program of study. Group 2 course.

MNG 104  Engine Systems Graphics .................. 2.0 (3)
Required prerequisite(s): MNG 100
Corequisite(s): MNG 110
The course will introduce the student to the proper use of measuring systems and drafting equipment. The course will develop the correct techniques used in the production of multiview projection, orthographic representation, auxiliary views, section views, and dimensioning. The student will be familiar with the correct (ANSI) symbols used in piping, electrical, and fluid power schematics. The student will be instructed in the use of AutoCAD LT to produce the listed topics. STCW ’95. Group 2 course.

MNG 105  Shipboard Information Systems .......... 3.0 (3)
This course will introduce the student to techniques in brain storming, consensus building, and decision making. Building flow charts for process flow and control will be covered. Using the PC aboard ship and in the marine environment will be covered. Maritime specific software such as NS5 will be demonstrated. The effective use of simulation as part of training and upgrading will be covered. Group 2 course.

MNG 110  Engineering Mechanics .................. 3.0 (4)
Required prerequisite(s): MNG 100
Corequisite(s): MNG 104
Survey of the construction, operation, and maintenance of shipboard systems. The major emphasis will be on piping, valves, control valves, and pumps. Practical application of the above items will be supported in the lab portion of this course. STCW ’95. Group 2 course.

MNG 175  Refrigeration .................................. 3.0 (3)
Required prerequisite(s): PHY 105, CHM 101
This course provides instruction in the operation and maintenance of refrigeration and air conditioning equipment used on merchant vessels. It covers the theory of refrigeration and the practical operation of refrigeration plants. Lecture is reinforced with the use of hands-on labs. STCW ’95. Group 2 course.

MNG 210  Diesel Engineering .................. 7.0 (10)
Required prerequisite(s): MNG 110
A comprehensive course dealing with the development of the diesel engine as it applies to marine propulsion. This course is designed to cover the construction, operation, and maintenance of the marine diesel engine and its support systems.

Lecture is reinforced with extensive use of hands-on labs and computerized simulations. STCW ’95. Group 2 course.

MNG 221  Marine Boilers .......................... 3.5 (5)
Required prerequisite(s): MNG 104, MNG 105, MNG 110
This is an intensive study of marine boilers and covers all types of water tube boilers. Emphasis is placed on construction, operation and maintenance of equipment. Sub systems such as fuel handling and combustion chemistry; air handling; water preparation and chemistry; automated combustion systems; and water regulation systems are covered in detail. Special emphasis is placed on USCG regulations and STCW competencies. STCW ’95. Group 2 course.

MNG 222  Marine Turbines .......................... 2.5 (3)
Required prerequisite(s): MNG 104, MNG 105, MNG 110
This course is an in-depth study of marine turbine propulsion plants. It covers theory, construction, operation, maintenance and inspection procedures typically associated with marine use. Associated systems such as lubrication, exhaust and condensate systems are also covered. Drive trains, reduction gear, stern tubes shafting and propellers are also discussed. STCW ’95. Group 2 course.

MNG 223  Steam Lab .................................. 1.0 (2)
Required prerequisite(s): MNG 104, MNG 105, MNG 110
This is a hands on course intended to reinforce MNG 221 and MNG 222. Students will disassemble, inspect, and reassemble machinery typical of what is found aboard ship. Machinery condition will be noted and recommendations made. Machinery records will be updated. STCW ’95. Group 2 course.

MNG 234  Electronic Fundamentals ............. 4.0 (4)
Required prerequisite(s): MNG 104
This course bridges the gap between theoretical physics and practical hands-on technology. Industrial electrical safety, shock hazards, and emergency procedures are stressed. The cadet receives practical hands-on practice with both digital, analog meters and oscilloscopes. Digital and analog circuits are constructed and examined both in the lab and with computer simulations. Practical considerations of circuit construction in the field are discussed in terms of ABS, USCG, and IEEE regulations and requirements. The cadet is also introduced to concepts of logic with emphasis being placed on the understanding and construction of ladder diagrams and the use of truth tables for troubleshooting electronic circuits. STCW ’95. Group 2 course.

MNG 235  Electric Machines and Controls .... 4.0 (4)
Required prerequisite(s): MNG 234
Corequisite(s): MNG 236
This course covers the theory, application, operation, and maintenance of rotating machines as typically found aboard U.S. Merchant Ships and related industrial applications. Generators (DC and AC) motors (DC, multiple and single phase AC) transformers and related equipment are covered. Special attention is given to magnet relay and electronic logic control circuits. Regulations specific to CFR title 46 and IEEE are reviewed. STCW ’95. Group 2 course.
MNG 236 Electric Machines & Controls Lab…….. 2.0 (4)
Corequisite(s): MNG 235
This course is a companion class to MNG 235. Course material is reinforced with practical hands-on experience with universal electrical lab machinery. The operating characteristics of typical rotating machines are studied. Special attention is given to problems associated with multiple generator AC distribution. Safe and effective troubleshooting techniques are practiced on live 110/208 volt electrical control systems. STCW ’95. Group 2 course.

MNG 250 Unloading Systems…………………….. 3.0 (4)
Required prerequisite(s): MNG 110
This course will introduce the cadet to the shipboard Unloading Systems used aboard Great Lakes Bulk Carriers. The cadet will study the operation and maintenance of this unloading equipment. This instruction is supported by work in the lab. A review of Pollution Regulations will also be covered. STCW ’95. Group 2 course.

MNG 315 Engineering Sea Project I .................. 6.0 (6)
Required prerequisite(s): Completion of first academic year with a 2.0 or higher in all required courses.
During this course the cadet is on board a Great Lakes commercial vessel. The cadet follows a prescribed course of study of vessel operations with particular emphasis on the engine room and auxiliary equipment, including safety requirements. In addition, the cadet spends a minimum of eight hours a day under the supervision of a licensed officer gaining experience in various engineering duties and responsibilities. STCW ’95. Group 2 course.

MNG 316 Engineering Sea Project II……………….. 9.0 (9)
Required prerequisite(s): Completion of second academic year with a 2.0 or higher in all required courses.
During this course, the cadet is on board a Great Lakes commercial vessel. The cadet follows a prescribed course of study of vessel operations with particular emphasis on the engine room and auxiliary equipment, including safety requirements. In addition, the cadet spends a minimum of eight hours a day under the supervision of a licensed officer gaining experience in the various engineering duties and responsibilities. This course is a continuation of MNG 315 and is designed to enhance the cadet’s professional knowledge and sailing time to meet the licensing requirements of the U.S. Coast Guard, STCW and the criteria established by the Maritime Administration. STCW ’95. Group 2 course.

MNG 317 Engineering Sea Project I……………….. 3.0 (3)
Required prerequisite(s): MDK 149, MNG 210 or instructor permission
During this course the cadet is on board the TS State of Michigan. The cadet follows a prescribed course of study in vessel operations with particular emphasis on engine room and auxiliary equipment, including safety requirements. In addition, the cadet spends eight hours a day under the supervision of a licensed officer gaining experience in various engineering duties and responsibilities. STCW ’95. Group 2 course.

MNG 318 Engineering Sea Project II……………… 6.0 (6)
Required prerequisite(s): MNG 221, MNG 222, MNG 223, MNG 317
This course is a continuation of MNG 317 and is designed to provide the cadet with advanced knowledge and sailing time to meet the licensing requirements of the U.S. Coast Guard, STCW and the criteria established by the Maritime Administration. STCW ’95. Group 2 course.

MNG 319 Engineering Sea Project III……………….. 6.0 (6)
Required prerequisite(s): MNG 318
This course is a continuation of MNG 318 and is designed to provide the cadet with advanced knowledge and sailing time to meet the licensing requirements of the U.S. Coast Guard, STCW and the criteria established by the Maritime Administration. STCW ’95. Group 2 course.

MNG 355 Watchstanding ……………………….. 2.0 (2)
Corequisite(s): MNG 355, MNG 396
Engineering simulators are used to strengthen the watchstanding skills of the engineering cadet. The cadet will be required to operate shipboard systems, manage engine room personnel, and become familiar with the paper work required in the operation of a modern engine room. Group 2 course.

MNG 366 Engine Room Business ………………….. 2.0 (2)
Corequisite(s): MNG 355, MNG 396
Cadets are introduced to the every day management and administrative activities confronting the Marine Engineer. The cadet will be introduced to management and personnel skills necessary to deal with people problems peculiar to the marine environment. General issues of alcohol, drug abuse, and sexual harassment in the marine environment will be discussed and placed in perspective with USCG and STCW protocols. Other necessary skills such as program planning, flow-charting, recordkeeping, etc., will be introduced and practiced in scenarios. Legal considerations for the ship’s officer such as log books, union contracts, certificates, evaluations, inspections, regulations, etc., will be introduced and discussed. Group 2 course.

MNG 396 License Preparation Engine……………… 2.0 (2)
Corequisite(s): MNG 355, MNG 396
A complete review of all professional subjects studied in the Maritime Engineering program. This course is designed to cover the essentials of the Third Assistant Engineer’s examination administered by the U.S. Coast Guard. The final grade for this course is dependent on taking the U.S. Coast Guard license exam. Group 2 course.
MNS  Naval Science

MNS 100  Naval Science ........................................ 2.0 (2)
This course is required of all Maritime Academy cadets and is an introduction to Naval Science specifically oriented toward Merchant Marine officers. It is intended to familiarize students with the role of the Merchant Marine in national defense and policy and with the various concepts of cooperation between the Navy and the Merchant Marine industry.
Group 2 course.

MNS 200  Naval Science II ..................................... 2.0 (2)
Required prerequisite(s): MNS 100
This course is required of all Maritime Academy cadets who are Midshipmen in the Merchant Marine Reserve/U.S. Naval Reserve program. It familiarizes the student with the naval missions and heritage and assists the Merchant Marine officer in making the transition from civilian to sailor.
Group 2 course.

MNS 250  Leadership and Ethics .............................. 2.0 (2)
Required prerequisite(s): MNS 200 or instructor permission
This course is required of all Maritime Academy cadets who are midshipmen in the Merchant Marine Reserve/U.S. Naval Reserve program. It introduces students to western moral traditions and ethical philosophy with a variety of topics, such as military leadership, core values, and professional ethics that will prepare them for their role and responsibilities as a leader in the U.S. Navy of the 21st century. Group 2 course.

MTH  Mathematics

MTH 06  Basic Numerical Skills ................................. 2.0 (non-credit) (2)
Required prerequisite(s): COMPASS placement
Corequisite(s): MTH 08
This course is taken along with MTH 08. This course is designed to emphasize the thorough development of arithmetic concepts and basic numerical skill mastery. Hands-on activities applied and real-world applications will be stressed.

MTH 08  Pre-Algebra ............................................. 4.0 (non-credit) (4)
Required prerequisite(s): COMPASS placement
Small study groups work in write-in texts in guided discovery format, along with short lectures. Significant use and instruction of TI-84 calculator. This course covers all basic operations with fractions and decimal fractions. There is good coverage of special denominator fractions such as percent, ppm, and ppb. Proportions and ratios are used to introduce rational numbers. There is a survey of metric and English measurement systems with thorough treatment of dimensional analysis in each. Conversion factors and proportions are both used for expanding fractions and for dimensional analysis. Other topics integrated throughout the course include: scientific notation and large number nomenclature, prime number theory and prime factorization, integers, basic geometry of angles, area and perimeter of rectangles, triangles and circles, volume and surface area of cubes and rectangular prisms. Metric and English mass units are introduced as are related topics such as density. Variables are used in order to introduce algebraic concepts. An algebraic approach is used for solving proportions and other equations. The function concept is used in each course unit using the graph and table utilities of graphing calculator.

MTH 10  Beginning .............................................. 2.0 (non-credit) (2)
Algebra Skills
Required prerequisite(s): MTH 08 with a 2.0 grade or higher or appropriate placement score.
Corequisite(s): MTH 23
This course is taken along with MTH 23 and is designed to emphasize the thorough development of the arithmetic of fractions and integers along with fraction thinking and problem solving. Other topics that are integrated throughout the course include: rational numbers, the properties of integral exponents, addition, subtraction, and multiplication of polynomials and factoring of polynomials. Solving linear equations, quadratic equations, and proportions are also covered. Function notation is introduced and used throughout the course and basic graphing of linear functions is covered, including slope, x- and y-intercepts. Problem solving is stressed, including unit conversions and mixture problems.

MTH 11  Intermediate ......................................... 2.0 (non-credit) (2)
Algebra Skills
Required prerequisite(s): MTH 08 with a 2.0 grade or higher or appropriate placement score.
Corequisite(s): MTH 111
This course is taken along with MTH 111 and is designed to review fraction thinking and problem solving. Other topics integrated throughout the course include: elementary set notation, a description of the Real number system and its major subsets, and an introduction to the Complex number system. Solving linear, quadratic, and rational equations and inequalities, as well as radical equations and systems of equations are also covered. Matrices are introduced; properties of integral exponents are reviewed and extended to rational exponents. Pre-Intermediate Algebra also covers simplifying, adding, subtracting, and multiplying radicals. Problem solving and the function concept are integrated throughout.

MTH 23  Beginning .............................................. 4.0 (non-credit) (4)
Required prerequisite(s): MTH 08 with a 2.0 grade or higher or appropriate placement score.
The course covers the arithmetic of integers and rational numbers, the properties of integral exponents, addition, subtraction, and multiplication of polynomials and factoring of polynomials. Solving linear equations, quadratic equations, and proportions is also covered. Function notation is introduced and used throughout the course and basic graphing of linear functions is covered, including slope, x and y-intercepts. Problem solving is stressed, including unit conversions.
MTH 106  Math for Elementary Teachers I .......... 4.0 (4)
Required prerequisite(s): MTH 111 or higher (excluding MTH 131 and MTH 206) or appropriate placement score.
This course places an emphasis on the structure of elementary mathematics. Content includes problem solving and critical thinking using Polya's four-step process, sets and set operations, relations, whole numbers, integers, rational numbers, irrational numbers, arithmetic algorithms in base ten and in other bases, properties of numbers, least common multiples, greatest common factors, fractions, ratios and proportions, percents, and elementary number theory. The course also includes the use of manipulatives, like Cuisenaire Rods, base pieces and Pattern Blocks, to investigate arithmetic concepts. Calculator labs are incorporated into the course to give students calculator experience. Group 2 course.

MTH 111  Intermediate Algebra ............................. 4.0 (4)
Required prerequisite(s): MTH 23 with a 2.0 grade or higher or appropriate placement score.
Intermediate Algebra covers elementary set notation, a description of the Real number system and its major subsets, and an introduction to the Complex number system. Solving linear, quadratic and rational equations and inequalities, as well as radical equations and systems of equations is also covered. The course includes an investigation of graphical, numerical, and symbolic representations and manipulations of various functions including linear, rational and quadratic. Matrices are introduced; properties of integral exponents are reviewed and extended to rational exponents. Intermediate algebra also covers simplifying, adding, subtracting and multiplying radicals. Problem solving and the function concept are integrated throughout. This course is offered in multiple formats such as online or traditional; consult an advisor before enrolling. Group 2 course.

MTH 116  Intro. to Computer Science..................... 4.0 (4)
Prerequisite(s): MTH 111 or appropriate placement score.
The Java Programming language (Java Programming) will be used to provide a thorough introduction to computer science, object-oriented programming, problem solving, and algorithm and data structure development. Many illustrative applications and programming assignments will be given. Group 1 course.

MTH 121  College Algebra.................................... 4.0 (4)
Required prerequisite(s): MTH 111 or higher (excluding MTH 131 and MTH 206) or appropriate placement score.
This course continues the development of algebraic skills begun in MTH 111. Topics include: functions, mathematical models, solving equations algebraically and graphically, polynomial, logarithmic, exponential functions, inverse functions, linear and nonlinear systems of equations. Group 1 course.

MTH 122  Trigonometry ...................................... 3.0 (3)
Required prerequisite(s): MTH 121 or higher (excluding MTH 131 and MTH 206) or appropriate placement score.
This course covers the definition and graphic representation of the trigonometric functions. Triangles, angle measure, equations, identities, and inverse functions are discussed in detail.

Law of Sines, Law of Cosines, and equations of the conic sections will also be covered. Group 1 course.

MTH 131  Intro to Probability and Statistics............ 3.0 (3)
Required prerequisite(s): MTH 111 or higher (excluding MTH 206) or appropriate placement score.
Descriptive statistics, experimental design, an introduction to probability concepts and inferential statistics are included in this course. Descriptive statistics includes graphical representations such as histograms, bar charts, pie charts, boxplots, stemplots, scatterplots, and the normal curve. Measures of central tendency such as the mean and median, and measures of variation such as the standard deviation and quartiles are studied. The normal density function and linear regression are included. One and two sample problems involving confidence intervals and significance tests are studied for the sample mean and the sample proportion. This course is offered in multiple formats such as online or traditional; consult an advisor before enrolling. Group 1 course.

MTH 140  College Algebra & Trigonometry.............. 5.0 (5)
Required prerequisite(s): COMPASS placement and a high school trigonometry class. Students receiving credit for MTH 121 and/or MTH 122 will not receive credit for MTH 140.
This course is designed to provide the student with the necessary maturity and skills to begin the calculus sequence. The topics covered include elementary set theory, equations of the conic sections, polynomial, logarithmic, exponential, trigonometric functions, inverse functions, linear and nonlinear systems of equations. Group 1 course.

MTH 141  Calculus I ........................................... 5.0 (5)
Required prerequisite(s): MTH 121, MTH 122 or MTH 140 or higher (excluding MTH 206) or appropriate placement score.
This is the first course in a traditional calculus sequence, emphasizing the development of the mathematical thought process. The topics covered include limits (definitions and limit proofs), continuity, derivatives of algebraic and trigonometric functions, applications of the derivative, the indefinite and definite integral, the fundamental theorem of calculus, and applications of integration. Group 1 course.

MTH 142  Calculus II ......................................... 5.0 (5)
Required prerequisite(s): MTH 141
This course is a continuation of Calculus I. The topics include differentiation and integration involving exponential, logarithmic and inverse trigonometric function. There is an introduction of various integration methods. L’Hôpital’s Rule, improper integrals, parametric equations, polar coordinates, and infinite sequences and series are also investigated. Group 1 course.

Find it here.

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
MTH 206  Math for Elem. Teachers II ....................... 4.0 (4)
Required prerequisite(s): MTH 106, MTH 111 or higher (excluding MTH 131) or appropriate placement score.
This course is a continuation of MTH 106. Content includes problem solving and critical thinking using Polya’s four-step process; basic statistics including mean, median, mode, range, standard deviation, graphical representations of data, linear regression, and weighted averages; probability including the fundamental counting principal, permutation, combination, partitions, experimental probability, theoretical probability, compound probability, probability tree diagrams, expected value and the concept of fair games. The course also explores the fundamental ideas of planar and spatial geometry which includes the analysis and classification of polygons, polyhedra, circles, spheres, cones and cylinders, area, perimeter, surface area and congruence, similarity, measurement, both direct and indirect, and dimensional analysis. This course also includes an introduction to the use of computer and/or graphing calculator software as learning tools for understanding concepts of informal geometry. Group 2 course.

MTH 241  Calculus III ............................................ 4.0 (4)
Required prerequisite(s): MTH 142
The course covers multivariable calculus including three-dimensional analytical geometry, vector valued functions, partial differentiation, and multiple integration (with applications of each). Also an introduction to linear algebra will be covered.
Group 1 course.

MTH 251  Differential Equations ................................ 4.0 (4)
Required prerequisite(s): MTH 142 or MTH 241
Introduces the concepts of differential equations and of linear algebra. Topics include: solving linear and systems of linear differential equations, Laplace transformations and their physical applications. Solutions are found using analytical, numerical, or graphical techniques relating to quantitative modeling and Laplace transforms. Linear algebraic topics include: vector spaces, subspaces, spanning sets, linear dependence and independence, basis and dimensions, eigenvalues, eigenvectors, and linear transformations. Group 1 course.

Visit www.nmc.edu/science-math for detailed information.

MUS 90  Applied Music-Remedial ....................... 1.0-2.0 (1-2)
Instruction
MUS 90 is remedial instruction for students wanting to take 100 level applied instruction in voice, piano, organ, guitar, or any of the traditional wind, percussion or string instruments, but lack either music reading, technical skills, artistic skills or tone production skills. An audition and interview, or, if no music is prepared, only an interview will take place to determine the competency levels of a student. Goals will be established to address those competencies required for 100-level instruction. This course does not apply toward graduation. MUS 90 level instruction can be repeated until remediation is complete. Students will meet with an assigned faculty member for weekly instruction at a pre-arranged time and place. Materials specific to the students needs will be assigned. The Applied Faculty will recommend to the acting Department chair when the competencies have been met.

MUS 101  Theory of Music........................................... 3.0 (3)
Recommended prerequisite(s): An understanding of music fundamentals.
Corequisite(s): MUS 103
Theory of Music course work is designed for students who are pursuing music as an academic major or minor. The first year includes the basic materials of music: the structures of tonality, harmonic progression, and the technique of harmonization. Students are required to complete and analyze music using practices listed above. Group 2 course.

MUS 102  Theory of Music........................................... 3.0 (3)
Required prerequisite(s): MUS 101
Corequisite(s): MUS 104
This course in Theory of Music is the second semester of a two-semester/one-year sequence of coursework designed for students who are pursuing music as an academic major or minor. This course includes the basic materials of music: the structures of tonality, harmonic progression, and the technique of harmonization. Students are required to complete and analyze music using practices listed above. Group 2 course.

MUS 103  Sight Singing and Ear Training............... 1.0 (2)
Recommended prerequisite(s): An understanding of music fundamentals.
Corequisite(s): MUS 101, MUS 106 or Applied Piano Instruction
Course work is designed for students pursuing music as an academic major or minor. The content includes the building of skills in reading music, and developing aural competency in interval relationships, scales, and triads, through a variety of musical practices, principally the voice. Group 2 course.

MUS 104  Sight Singing and Ear Training............... 1.0 (2)
Recommended prerequisite(s): MUS 103 or equivalent competency
Corequisite(s): MUS 102
This is the second of a two-semester/one-year sequence of coursework designed for students who are pursuing music as an academic major or minor. This course is a continued building of skills as listed in MUS 103 through a variety of musical practices, principally the voice. Group 2 course.

MUS 106  Class Piano I ....................................... 2.0 (2)
Piano study for the beginning or near-beginning student. Cultivation of technical-musical awareness and keyboard playing ability, individually and in ensemble. Group 2 course.

MUS 107  Class Piano II ....................................... 2.0 (2)
Recommended prerequisite(s): MUS 106 or instructor permission
This course is the second of a four-semester, two-year sequence of the study of piano. Objectives are the cultivation of technical-musical awareness and keyboard playing ability. Group 2 course.
MUS 110   Music Appreciation Stand. Lit.............. 3.0 (3)
This course is a survey of the history of Western music from Middle Ages to the present. The music of world cultures will be examined as an introduction to the study of composers, compositions, and period compositional conventions of music of our Western Culture.  
Group 1 course.

MUS 111   Music Appreciation Jazz ....................... 3.0 (3)
This course will cover an historical survey of jazz styles from its earliest beginnings and influences through contemporary.  
Group 1 course.

MUS 112   Class Guitar I ................................. 2.0 (2)
This course is designed for the student who wishes to acquire basic knowledge and techniques for guitar playing. The instruction introduces the basic information of music notation, as well as mechanical skills for the development of individual playing ability. The format is a structured approach covering hand position, fundamentals of reading music and chord knowledge. Repertoire will include Folk music, popular music and the Blues, and will utilize both strumming and picking techniques.  
Group 2 course.

MUS 113   Class Guitar II ................................. 2.0 (2)
Recommended prerequisite(s): MUS 112
This course is a continuation of MUS 112. Emphasis is placed on developing music reading skills for the guitar, along with further development of Folk picking techniques and understanding of the Blues. An introduction to Jazz chords along with fundamentals of music theory will also be presented.  
Group 2 course.

MUS 114   NMC Grand Traverse Chorale ............. 1.0 (2)
Recommended prerequisite(s): Choral experience or instructor permission
Performances are presented on campus and in the community. The choir provides its members with the educational experience and personal enrichment made possible through the singing of choral literature. Music to be performed is from all periods from the Early Masters to the 20th Century.  
Group 2 course.

MUS 115   NMC Grand Traverse Chorale ............. 1.0 (2)
Recommended prerequisite(s): MUS 114 or instructor permission
Open to all students with past choral experience or with instructor permission. MUS 115 is a continuation of rehearsal and performance as begun in MUS 114. Performances are presented on campus and in the community. The choir provides its members with an educational experience and personal enrichment made possible through the singing of quality choral literature. Music to be performed is selected from all periods from the Early Masters to the 20th century.  
Group 2 course.

MUS 116   NMC Chamber Singers ...................... 1.0 (3)
Required prerequisite(s): Audition by instructor
Open by audition to all students. Performances are presented on campus and in the community. Music to be performed ranges from the Renaissance to 20th century contemporary literature.  
Group 2 course.

MUS 117   NMC Chamber Singers ...................... 1.0 (3)
Recommended prerequisite(s): MUS 116 or equivalent or audition by instructor.
A continuation of skills begun in MUS 116.  
Group 2 course.

MUS 118   NMC Concert Band ........................... 1.0 (2)
Recommended prerequisite(s): A high school level competency on a wind or percussion instrument. Passing an initial competency/Chair placement performance audition on a wind or percussion instrument.
This course will provide a survey of significant concert and symphonic band repertoire. Students will learn performance techniques on their instrument as are relevant to the concert band medium. Students will also learn the role that their instrument plays within the context of a concert band. Generally, two to four concerts will be performed each semester.  
Group 2 course.

MUS 119   NMC Concert Band ........................... 1.0 (2)
Recommended prerequisite(s): MUS 118 or instructor permission
This course will provide a survey of significant concert and symphonic band repertoire. Students will continue to learn performance techniques on their instrument as relevant to the concert band medium. Students will continue to learn the role that their instrument plays within the context of a concert band. Generally, two to four concerts will be performed each semester.  
Group 2 course.

MUS 120   NMC Jazz Band ............................... 1.0 (2)
A course for the performer with a focus on big band jazz ensemble techniques and styles. A wide range of jazz styles are covered including swing, be-bop, ballads, rock/fusion and Latin. Some improvisation is briefly explored and always encouraged, although it is not the main focus of this course. Two to four performances may be given each semester and all members are required to attend and participate in all performances.  
Group 2 course.
MUS 121 NMC Jazz Band ............................... 1.0 (2)
Recommended prerequisite(s): MUS 120
A course for the performer with a focus on big band jazz
ensemble techniques and styles. A wide range of jazz styles
are covered including swing, be-bop, ballads, rock/fusion
and Latin. Some improvisation is briefly explored and always
encouraged, although it is not the main focus of this course.
Two to four performances may be given each semester and all
members are required to attend and participate in all perfor-
mances. Group 2 course.

MUS 127 Traverse Symphony Orchestra .......... 1.0 (2)
The study and performance of orchestral literature, both stan-
dard and contemporary. Performance is required for credit.
Course is designed to give students basic knowledge of music
fundamentals, styles and performance history. The TSO is
open by audition in the late summer and early fall of the year,
and gives 8-10 public concerts per year. Audition, rehearsal,
and performance information is available through the music
department. Group 2 course.

MUS 128 Traverse Symphony Orchestra .......... 1.0 (2)
Recommended prerequisite(s): MUS 127
The study and performance of orchestral literature, both stan-
dard and contemporary. Performance is required for credit.
Course is designed to give students basic knowledge of music
fundamentals, styles and performance history. The TSO is
open by audition in the late summer and early fall of the year,
and gives 8-10 public concerts per year. Audition, rehearsal,
and performance information is available through the music
department. Group 2 course.

MUS 130A Ensemble-Sound Recording Tech....... 2.0 (2)
Students will learn the correct use of analog and digital recording
equipment, the theory of sound and sound waves, the use
of recording software, how to create different types of sound
files, which is best for a given application, and how to create
a sound file from a live recording session. Group 2 course.

MUS 130B Ensemble-Sound Recording II ........... 2.0 (2)
Recommended prerequisite(s): MUS 130A or
instructor permission
Students will learn the application of dynamic processing
to raw audio channels, demonstrating a mastery of editing
and mixing. The capstone project from MUS 130A will be
utilized. Group 2 course.

MUS 131-139 A,B,C Ensembles in .................. 1.0 (2)
Applied Music I
Required prerequisite(s): Instructor permission
This course prepares students for public performance and
develops abilities in ensemble techniques. Students study in
small ensembles (duets, trios, quartets, quintets, and octets)
under faculty direction. Students are to keep 12:30-1:30
on Wednesdays clear from scheduling conflict to be able to
perform in Convocation, a performance venue at Milliken
Auditorium. Students are expected to perform at least one
Convocation each semester. Group 2 course.

MUS 140-166 A,B,C Applied Music- .......... 1-2 (1-2)
Private Lesson
Note: 100 and 200 level courses may be taken three times.
Private lessons in guitar, classical guitar, organ, piano, voice,
percussion, traditional string, and wind instruments are of-
erred. A pre-arranged lesson time with the assigned instruc-
tor is arranged and studies/compositions, as appropriate
are prepared for continuing musical development. A jury
examination will be given at the conclusion of each semester
of 100-level instruction. Students are to keep 12:30-1:30 on
Wednesdays clear to participate as audience and soloists in
Convocation. Group 2 course.

MUS 206 Class Piano III ................................ 2.0 (2)
Recommended prerequisite(s): MUS 107 or instructor permission
This is the third of a four-semester, two-year sequence of
the study of piano. Objectives are the cultivation of technical-mu-
sical awareness and keyboard playing ability. Group 2 course.

MUS 207 Class Piano IV ............................... 2.0 (2)
Recommended prerequisite(s): MUS 206 or instructor permission
This is the fourth of a four semester, two year sequence of
the study of piano. Objectives are the cultivation of technical-mu-
sical awareness and keyboard playing ability. A continuation of
MUS 206. Group 2 course.

MUS 214 NMC Grand Traverse Chorale .......... 1.0 (2)
Recommended prerequisite(s): MUS 115 or instructor permission
A continuation of study from MUS 115, the Grand Traverse
Chorale is a mixed (SATB) choral ensemble that presents con-
certs on the College campus and off campus when performing
choral/orchestral compositions. A minimum of two concerts
are given each semester. The GT Chorale provides its members
with educational experience and personal enrichment made
possible through the singing of quality choral literature.
Emphasis is made on tonal and ensemble artistry.
Group 2 course.

MUS 215 NMC Grand Traverse Chorale .......... 1.0 (2)
Recommended prerequisite(s): MUS 214 or instructor permission
A continuation of study from MUS 214, the Grand Traverse
Chorale is a mixed (SATB) choral ensemble that presents con-
certs on the College campus and off campus when performing
choral/orchestral compositions. A minimum of two concerts
are given each semester. The GT Chorale provides its members
with an educational experience and personal enrichment made
possible through the singing of quality choral literature.
Choral literature is selected from the commonly accepted historical
periods from Antiquity through the 20th Century. Emphasis is
placed on tonal and ensemble artistry. Group 2 course.

MUS 216 NMC Chamber Singers .................... 1.0 (3)
Recommended prerequisite(s): MUS 117 or instructor permission
A continuation of study from MUS 117, the NMC Chamber
Singers is a mixed (SATB) choral ensemble that presents con-
certs on the College campus and off campus when performing
choral/orchestral compositions. Membership is comprised of
music majors, college students representing the various disci-
plines across campus and community members serious about choral performance and continued vocal study. A minimum of two concerts are given each semester. The Chamber Singers provides its members with an educational experience and personal enrichment made possible through singing of quality choral literature selected from the commonly accepted historical periods from Antiquity through the 20th Century. Performance excellence is principal to the purpose of the ensemble. Group 2 course.

MUS 217  NMC Chamber Singers .................. 1.0 (3) Recommended prerequisite(s): MUS 216 or instructor permission A continuation of study from MUS 216, the NMC Chamber Singers is a mixed (SATB) choral ensemble that presents concerts on the College campus and off campus when performing choral/orchestral compositions. Membership is comprised of music majors, college students representing the various disciplines across campus and community members serious about choral performance and continued vocal study. A minimum of two concerts are given each semester. The Chamber Singers provides its members with an educational experience and personal enrichment made possible through singing of quality choral literature selected from the commonly accepted historical periods from Antiquity through the 20th Century. Performance excellence is principal to the purpose of the ensemble. Group 2 course.

MUS 218  NMC Concert Band .................. 1.0 (2) Recommended prerequisite(s): MUS 119 or instructor permission Open to students who have completed a year of Concert Band. See MUS 118 for course description. Group 2 course.

MUS 219  NMC Concert Band .................. 1.0 (2) Recommended prerequisite(s): MUS 218 or instructor permission Open to students who have completed a year of Concert Band. See MUS 119 for course description. Group 2 course.

MUS 220  NMC Jazz Band .................. 1.0 (2) Recommended prerequisite(s): MUS 121 or MUS 120 or instructor permission A course for the performer with a focus on big band jazz ensemble techniques and styles. A wide range of jazz styles are covered including swing, be-bop, ballads, rock/fusion and Latin. Some improvisation is briefly explored and always encouraged, although it is not the main focus of this course. Two to four performances may be given each semester and all members are required to attend and participate in all performances. Group 2 course.

MUS 221  NMC Jazz Band .................. 1.0 (2) Recommended prerequisite(s): MUS 220 or instructor permission A course for the performer with a continued focus on big band jazz ensemble techniques and styles. A wide range of jazz styles are covered including swing, be-bop, ballads, rock/fusion and Latin. Some improvisation is briefly explored and always encouraged, although it is not the main focus of this course. Two to four performances may be given each semester and all members are required to attend and participate in all performances. Group 2 course.
OUT 户外运动

**Outdoor Pursuits**

**Prerequisite for all Outdoor Pursuits courses:** Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. These are high-participation courses in which most material is learned through experience on off-campus weekend field trips. Students with disabilities who need accommodations in order to complete these courses should contact the instructor prior to the first class meeting.

**OUT 112 Winter Travel and Camping** .......................... 1.0 (2)

This course introduces the three-season backcountry traveler to safe and enjoyable winter outings. The focus is on winter safety, travel techniques (primarily Nordic skiing and snowshoeing), camping, menu planning, clothing and gear selection, navigation, and shelter building. **Group 2 course.**

**OUT 125 Backpacking I** ............................................. 1.0 (2)

The course is for novice backpackers. Information discussed and practiced includes basic backpacking skills, selecting of equipment, food planning and preparation, map and compass navigation, backcountry first aid and minimal impact camping. **Group 2 course.**

**OUT 126 Backpacking II** ............................................. 1.0 (2)

Recommended prerequisite(s): OUT 125 or three-day backpacking experience

This course is for backpackers with prior experience. Its purpose is to broaden the student’s knowledge of backpacking techniques with special attention given to lightweight equipment, menu planning, itinerary planning, map and compass navigation, site selection, and other minimal impact considerations. **Group 2 course.**

**OUT 130 Caving I** ....................................................... 1.0 (2)

An introduction to the geology of cave formation and cave ecology. Additionally, by exploring non-commercial cave systems, students are introduced to the equipment, techniques, and safety systems associated with the sport of caving. **Group 2 course.**

**OUT 131 Caving II** ....................................................... 1.0 (2)

Recommended prerequisite(s): OUT 130 or instructor permission

This course focuses on safe and appropriate techniques for exploring caves, with an emphasis on selecting and using equipment, as well as implementing climbing/rappelling safety systems for cave exploration. **Group 2 course.**

**OUT 132 Rock Climbing I** ............................................. 1.0 (2)

This course is a beginning rock climbing course to introduce students to climbing techniques, belaying, and safety practices related to class five climbing. **Group 2 course.**

**OUT 133 Rock Climbing II** ............................................. 1.0 (2)

Recommended prerequisite(s): OUT 132 or instructor permission

Students will learn anchor selection, active and passive gear placement, and advanced belaying techniques, with an introduction to lead climbing. **Group 2 course.**

**OUT 140 Snowshoeing** ............................................. 1.0 (2)

Students will learn how to dress for winter activities, orienteer, winter camp, adjust for emergency situations and explore a variety of locations off campus. Participants will become educated snowshoe consumers and best of all, HAVE FUN! Snowshoes provided. **Group 2 course.**

**OUT 160 Canoeing I** ............................................. 1.0 (2)

Instruction in various techniques of canoeing are introduced in flat water (lake) and moving water (river). Two one-day trips are planned. **Group 2 course.**

**OUT 161 Canoeing II** ............................................. 1.0 (2)

Recommended prerequisite(s): OUT 160 or instructor permission

This course is for canoers with prior experience in river canoeing. Wilderness travel by canoe with an over-night camping trip is planned. **Group 2 course.**

**OUT 162 Kayaking** ............................................. 1.0 (2)

An introduction to the sport of kayaking. This course is designed to teach students the basic skills and adventure of recreational kayaking. Focus will include paddling techniques, safety, and forms of rescue. Care, construction, and selection will be reviewed. Field trips are planned. **Group 2 course.**

**PAR 法律助理**

**Legal Assistant**

PLEASE REFER TO PAGE 83 OF THIS CATALOG FOR AN IMPORTANT NOTICE REGARDING THE DISCONTINUANCE OF NMC’S LEGAL ASSISTANT PROGRAM.

**PAR 102 Legal Research & Writing I** ................................. 3.0 (3)

Required prerequisite(s): ENG 111, PAR 101

This course instructs students in the fundamentals of effective legal research and writing. Students are taught how to use a law library and analyze the relevant laws. Students will learn about the primary sources of law, including judicial decisions, statutes, and administrative regulations. Students will also learn about secondary resources, such as legal encyclopedias and digests. There will be various legal research assignments and students will be required to prepare a legal memorandum. This is a fall semester offering. **Group 2 course.**

**PAR 103 Legal Research & Writing II** ................................. 3.0 (3)

Required prerequisite(s): PAR 102

This advanced course enhances the skills that students learned in Legal Research and Writing I, with particular emphasis being placed upon the improvement of legal writing skills. There will be various legal research assignments and each student will be required to prepare a brief. This is a spring semester offering. **Group 2 course.**

**PAR 106 Litigation** ................................................... 2.0 (2)

Required prerequisite(s): PAR 101

This course presents an introduction to the legal system, with
an emphasis being placed on civil litigation procedure. It includes a study of pleadings, pre-trial procedures, discovery, court rules, and the law of evidence. This is a fall semester offering. **Group 2 course.**

**PAR 210**  **Probate** ......................................................... 2.0 (2)

*Required prerequisite(s): PAR 101*
The course familiarizes students with probate procedures and the administration of estates. This course will also cover the preparation and interpretation of wills and trusts. This is a fall semester offering. **Group 2 course.**

**PAR 211**  **Real Estate Law** ........................................... 2.0 (2)

*Required prerequisite(s): PAR 101*
This course covers the basics of real estate law. Topics will include deeds, land contracts, mortgages, easements, types of ownership, title insurance, and real estate closings. This is a fall semester offering. **Group 2 course.**

**PAR 222**  **Legal Drafting** ............................................ 2.0 (2)

*Required prerequisite(s): PAR 101*
This course focuses on the drafting of contracts and litigation documents. Students will learn about the steps in drafting, the architecture of legal documents, the avoidance of ambiguities, the importance of “plain English,” and the general factors affecting readability. This is a fall semester offering. **Group 2 course.**

**PAR 230**  **Legal Assistant Internship** .......................... 2.0 (2)

*Note: Permission of instructor and a minimum of 2.0 GPA in PAR courses required. This course is to be taken at the end of the Legal Assistant Program.*

This course provides an opportunity for students to receive practical, hands-on-experience working for 150 hours in one of the area’s law firms or government offices. Progress is monitored and the experiences of the student are discussed. Samples of work assignments are submitted and the student’s performance is evaluated. This is a spring semester offering. **Group 2 course.**

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**PE 101**  **Swing, Latin & Slow Dancing I** ...................... 1.0 (2)

This course will introduce students to a fun form of exercise and recreation you can do for the rest of your life through swing and social dancing. Many styles of dancing will be covered including swing, jitterbug, tango, cha cha, waltz, slow dancing, two-step, Latin dancing, salsa, lambada, and many swing moves that can be incorporated into any dance situation. Please wear slippery-soled shoes. **Group 2 course.**

**PE 101A**  **Swing, Latin & Slow Dancing II** ...................... 1.0 (2)

*Recommended prerequisite(s): PE 101*
Take each style of dance learned at the beginning level to a more advanced level. Learn swing improvisation and aerials safety and spotting, advanced waltz and slow dancing techniques including lifts, more advanced moves in each of the Latin dances and a new dance, and we will explore the depths of Argentine Tango. Learn to keep partner dancing an integral part of your life and enjoy as a form of exercise. **Group 2 course.**

**PE 102**  **Hip-Hop Dance** ............................................ 1.0 (2)

Learn dance combinations used in the Hip-Hop dance style. Develops the strength, flexibility, rhythm, balance, and safe body mechanics to dance confidently in a social atmosphere to popular Hip-Hop music. A great way to exercise and have fun at the same time. Please wear clean, dry gym shoes. **Group 2 course.**

**PE 102B**  **Hip-Hop Dance II** ....................................... 1.0 (2)

*Recommended prerequisite(s): PE 102*
Learn advanced dance combinations building upon those used in Hip Hop Dance I. Further develops the strength, flexibility, rhythm, balance, and safe body mechanics to dance confidently in a social atmosphere to popular hip hop music. **Group 2 course.**

**PE 105**  **Volleyball I** ................................................. 1.0 (2)

Introduction to volleyball with emphasis on developing individual ball-handling skills. Team play, basic strategy, and rules of play will also be covered. **Group 2 course.**

**PE 106**  **Volleyball II** ............................................... 1.0 (2)

*Recommended prerequisite(s): PE 105*
A continuation for students who already have good basic skills and understand the game. Emphasis is on team play, offensive and defensive alignments, and advanced volleyball skills. **Group 2 course.**

**PE 107**  **Basketball I** ................................................. 1.0 (2)

Introduction to the fundamental skills, rules, offensive and defensive team strategies of basketball. Designed for beginners through advanced levels. Drill practice and team play. **Group 2 course.**
For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.

PE 108 Basketball II ........................................... 1.0 (2)
Recommended prerequisite(s): PE 107
A continuation for students who already have good basic skills and understand the game. Emphasis is on advanced offensive and defensive strategies as applied to a practical team play experience. Group 2 course.

PE 109 Softball ............................................... 1.0 (2)
Designed for students of all ability levels. Emphasis is on individual skills, team play, and strategy as well as rules of the game. The style is slow pitch. Group 2 course.

PE 111 Soccer .................................................. 1.0 (2)
Introduction to fundamental skills, rules, offensive and defensive strategies of soccer. Drill practice, team play, and indoor/outdoor application. Group 2 course.

PE 135 Weightlifting I ......................................... 1.0 (2)
In this self-directed workout class, students will implement a weightlifting/fitness regime utilizing free weights, weight machines, and cardio machines to expand their strength and fitness. Students should have a basic working knowledge of the use of weights and fitness equipment including safety. Students should be without current exercise-limiting injuries or illnesses. Group 2 course.

PE 136A Weightlifting II ..................................... 1.0 (2)
Recommended prerequisite(s): PE 135
Designed for students who wish to continue to build body size and muscular strength. This self-directed class uses free weights and fitness machines, as related to an advanced strength training and conditioning program. Group 2 course.

PE 138 Weightlifting With Machines ................... 1.0 (2)
This on-campus weightlifting course enables the student to expand knowledge and use of weight machines. Course includes cardiovascular and strength training, with opportunity for questions and answers. Group 2 course.

PE 139 Beginning Aikido ................................... 5 (1)
Aikido is Budo - an art based on the philosophy and fighting techniques of the Japanese samurai. “The way of harmony with the forces of nature,” Aikido is excellent physical training and effective self-defense. Yoshinkai-style Aikido classes include stretching, exercises to improve balance and focus, learning to fall safely, throwing techniques, controls, and pins, in a setting of traditional Japanese etiquette. Group 2 course.

PE 141 Aikido ..................................................... 1.0 (2)
Aikido is Budo - an art based on the philosophy and fighting techniques of the Japanese samurai. “The way of harmony with the forces of nature,” Aikido is excellent physical training and effective self-defense. This course introduces Yoshokai-style Aikido warmup exercises, basic movements, back breakfall, and 8th kyu level techniques. The emphasis is on improving balance and focus, learning to fall safely, and performing basic techniques with a partner, while learning about Aikido history, principles, and terminology in a setting of traditional etiquette and discipline. Group 2 course.

PE 142 Intermediate Aikido ................................ 1.0 (2)
Recommended prerequisite(s): PE 141
Refinement of Yoshokai-style Beginning Aikido skills with emphasis on mastering techniques and the introduction of bukiwaza, techniques using wooden sword, staff, knife. Group 2 course.

PE 143 Continuing Aikido .................................. 1.0 (2)
Recommended prerequisite(s): PE 142
Training at this level emulates regular Aikido practice in a private dojo (training facility). Focus is on mastery of advanced techniques, weapons, and philosophy. Group 2 course.

PE 144 Tae Kwon Do (Karate) I ......................... 1.0 (2)
Introduction to the proper etiquette and philosophy of the Korean art of Tae Kwon Do (Karate). Training includes basic blocks, punches, kicks, stances, self-defense and the four-directional punch, the first pattern of Tae Kwon Do. Group 2 course.

PE 145 Tae Kwon Do (Karate) II ....................... 1.0 (2)
Recommended prerequisite(s): PE 144 or instructor permission
Refinement of basic skills and techniques of Tae Kwon Do. Training includes introduction of intermediate skills of blocking, kicking, punching, and Chon-ji, the second pattern of Tae Kwon Do. Group 2 course.

PE 146 Tae Kwon Do (Karate) III ...................... 1.0 (2)
Recommended prerequisite(s): PE 145 or instructor permission
Continuing refinement of basic and intermediate skills and techniques. Introduction to advanced foot techniques, semi- and free sparring, and the methods of attack and defense against opponents. Training includes the patterns of Dan-Gun, Do-San and Won-Hyo. Group 2 course.

PE 147 Tae Kwon Do (Karate) IV ....................... 1.0 (2)
Recommended prerequisite(s): PE 146 or instructor permission
Introduction to jumping kicks and refinement of basic, intermediate and semi-advanced skills and techniques. Introduction to jumping kicks and the patterns of Yul-Guk, Joong-Gun, Hwa-Rang, and Choong-Moo. Advanced flying kicks and additional patterns are introduced to those prepared to obtain Kick Belt ranks and to instruct lower rank students. Group 2 course.

PE 148 Kuntaw I ............................................... 1.0 (2)
Introduction to the history and philosophy of the Filipino martial art form Maharihka Kuntaw. Kuntaw emphasizes flexibility and agility rather than power or strength and is based on the use of flowing circular strike/counter defense. Training includes use of arnis (sticks), basic strikes, blocks, kicks, anyos (forms) and self-defense. Group 2 course.

PE 149 Kuntaw II .............................................. 1.0 (2)
Recommended prerequisite(s): PE 148 or instructor permission
This course provides the student with the continuation of beginning I. The student will learn the application of the six anyos (forms), stick drills, hand techniques, basic blocks, kicks, stalls and traps. Group 2 course.
PE 150  Kuntaw III ........................................ 1.0 (2)
Recommended prerequisite(s): PE 149
Continuation of beginning course work with the addition of advanced blocks, parries, kicks, stalls, traps, take downs, stick/weapon drills, and self-defense. Training includes the five H-forms, the six stick anyos (forms) and the applications. Group 2 course.

PE 151  Kuntaw IV ........................................ 1.0 (2)
Recommended prerequisite(s): PE 150
Refinement of intermediate skills and techniques with additional advanced blocks, parries, traps, take downs, ground fighting, two-on-one fighting, and stick/weapon drills. Includes applications of advanced skills/techniques and the six saiawans and five combats (forms.) Group 2 course.

PE 164 Judo .................................................. 1.0 (2)
This class will introduce the basics of the sport of Judo as well as Jujutsu based self defense. Judo is recognized as one of the best forms of exercise. Actual combat (randori) is a big part of Judo though safety is not compromised. Please wear loose, comfortable clothing and come to have fun! Group 2 course.

PE 169 Continuing Judo .................................. 1.0 (2)
Recommended prerequisite(s): PE 164
A continuation of Judo for intermediate and advanced levels. Students will continue to improve skills and abilities and advance through belt testing. Group 2 course.

PHL 101  Introduction to Philosophy .............. 3.0 (3)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
This course is an introduction to some of the major areas, ideas, and thinkers of philosophy. Students will read a number of major philosophers in Western Philosophy, such as Socrates, Plato, Aquinas, Descartes, Berkeley, James, Russell, and Sartre, as well as from texts representing non-traditional or non-Western sources, such as Native American and Asian thought. Students will also be introduced to some of the main problems and concepts in the areas of Epistemology, Metaphysics, Ethics, and Aesthetics, as well as investigate other issues or movements, such as Existentialism or Feminism, in more depth. Group 1 course.

PHL 105  Critical Thinking .......................... 3.0 (3)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
This course is about listening and reading and writing more effectively. Students learn ways to assess information and to form sound evaluative judgments about what is seen, heard, and read. Critical questions provide a structure for critical thinking that supports a continuing search for better opinions, decisions, or judgments. Exercises in understanding and composing logically-sound arguments are emphasized as well as knowing what is fair and reasonable in the argument's structure. Examples are taken from professional situations such as law, medicine, and politics, as well as everyday life. Fallacies in rhetoric, such as name calling and begging the question, are identified and understood. Group 1 course.

PHL 121  Western Religions ......................... 4.0 (4)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
A study of the historical development, main religious teachings, leading personalities, ethical values and worship practices of the major religious traditions of the Western world: Judaism, Christianity, and Islam. Group 1 course.

PHL 122  Eastern Religions .......................... 4.0 (4)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
A study of the historical development, main religious teachings, leading personalities, ethical values and worship practices of the major religious traditions of India, China, and Japan: Hinduism, Buddhism, Confucianism, Taoism. Group 1 course.

PHL 181  Old Testament .............................. 4.0 (4)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
An introduction to the history, literature, and religious ideas of Ancient Israel through a critical examination of the Hebrew Bible and relevant non-canonical materials from the time of the Patriarchs to the Babylonian Exile set in the cultural context in which ancient Israel developed. Group 1 course.

PHL 182  New Testament ............................. 4.0 (4)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
An introduction to the history, literature, and religious ideas of first century Christianity conducted through a critical examination of the New Testament and relevant non-canonical materials set in the cultural and historical context in which early Christianity developed. Group 1 course.

PHL 201  Ethics ......................................... 3.0 (3)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
Ethics is a thoughtful analysis of a variety of value systems found in societies today. It explores the nature and meaning of good and evil and how these concepts relate to concepts of right and wrong. It considers how the good is known and how it is promoted in societies. The course combines primary source readings of philosophers and religious writers with explanatory secondary source material and it encourages student discussion of the issues. Through the use of critical judgement and philosophical thought, the course explores ethical theories from classical to modern times and includes consideration of ethics that are part of Eastern philosophical traditions, as well as sources from Native American, African, African American, Feminist, and other non-traditional frameworks and paradigms. Group 1 course.
PHL 202 Contemporary Ethical Dilemmas........ 3.0 (3)
Recommended prerequisite(s): Completion of ENG 11/111 or placement into ENG 111
This course examines the moral and ethical issues confronting modern societies locally and globally. It examines issues regarding the natural environment, the ethical treatment of animals, biomedical ethics; abortion and issues of human reproduction such as stem-cell research and cloning; business ethics; criminal justice and capital punishment; racism, sexism, and other forms of discrimination, welfare and economic distribution. This course relies on the discipline of philosophy for its methods of inquiry. Incorporated throughout the course is the examination of several approaches to ethics as developed Aristotle, Kant, Mill, and contemporary philosophies of gender and race. Approaches of Eastern/Asian and Native American philosophy are also considered for contrast with standard Western approaches to ethical and social issues. The course considers various topics and specific cases in order to provide an overall view of how ethical reasoning might be applied to current issues. Group 1 course.

PHL 222 The World of Jesus......................... 4.0 (4)
Recommended prerequisite(s):Completion of ENG 11/111 or placement into ENG 111
Using historical, social scientific, and literary critical methods, this course introduces the socio-economic, political, religious and cultural world in which Jesus of Nazareth lived through a study of the surviving religious and secular texts of Second Temple Judaism and the Greco-Roman culture in which it existed. This course covers events and literature from the Babylonian Exile to the Jewish War. Group 1 course.

PHY Physics

PHY 105 Physics of the World Around Us........ 4.0 (3)
PHY 105L Physics of the World Around Us Lab... 0.0 (2)
Required prerequisite(s): MTH 23
Recommended prerequisite(s): Students scoring below ENG 111 level on the placement test should plan on additional study time.
Corequisite(s): PHY 105 and PHY 105L
Studies of the Laws of Physics and their application to the world around us. Covers and provides laboratory experience in areas of mechanics, heat, electricity, waves, magnetism, optics, and fluids. Computers are used for data collection and analysis. Offered in multiple formats such as online or traditional. Consult an advisor before enrolling. Group 1 lab course.

PHY 121 General Physics I......................... 4.0 (4)
PHY 121L General Physics I Lab.................. 0.0 (2)
Required prerequisite(s): MTH 122 or MTH 140
Corequisite(s): PHY 121 and PHY 121L
This is the first in a two-semester sequential course intended to meet the needs of the prospective pre-medical, pre-dental, technical, maritime, architecture, or any other student who has a keen interest in examining some of the basic laws and applications of physics, using college algebra and trigonom-
PLS 101 Intro to American Politics................. 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
This course is an introduction to the study of politics and political institutions in America. Emphasis is given to the constitutional framework, federalism, political participation, the electoral system, the presidency, Congress, the Supreme Court, and the bureaucracy. Civil rights and civil liberties are a theme throughout. This course includes an examination of the politics of race, and ethnic and cultural diversity in America.
Group 1 course.

PLS 125 Intro to Political Theory ....................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
This course examines basic questions of normative political theory as developed by political philosophers of the ancient through contemporary periods. This course focuses on a wide array of political issues. Topics of consideration include: individual rights v. community rights; analysis of the equality of individuals; different conceptions of justice put forth by various philosophers; and questions of what it means to achieve freedom in one's social and political life. Students can expect to read almost exclusively from primary sources. Examples of thinkers often studied in this course include Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Kant, Marx, Mill, Nietzsche, and Berlin.
Group 1 course.

PLS 132 Comparative Politics ...................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
This course provides a comparative analysis of political systems in developed and developing countries. Students learn about different forms of political organization as instituted and practiced in various countries. Students examine different methods of comparing political systems and learn to apply these methods in causal theories of political change. This course combines a focus on the basic structures of political systems with a thought-provoking analysis of the causes that give birth to those systems - thereby giving shape to the world in which we find ourselves today. Issues related to democracy, civil liberties, political rights, human rights, and economic development are analyzed throughout the course.
Group 1 course.

PLS 211 International Relations .................... 3.0 (3)
Recommended prerequisite(s): Placement into ENG 111
Students analyze the nature of international relations in the world today. This course offers a broad overview of political and economic issues in the international arena. Course includes an analysis of American foreign policy since World War II. Other topics include such things as conflict in the Middle East, ethnic conflict and nationalism the world over, and the increasing importance of organizations such as the United Nations and the World Trade Organization. Students assess the dynamics of conflict and cooperation on the international scene. Course includes an examination of the basic analytical approaches to the study of international relations.
Group 1 course.

PLU 101 Introduction to Plumbing .................... 3.0 (4)
Recommended competencies: COMPASS placement into MTH 23 and ENG 11/111 or co-enrollment in the recommended developmental Math and English course.
This course provides an introduction to plumbing. Through structured classroom and hands-on skill building, the student will learn the tools of the trade, plumbing safety, how to solder and braze copper tubing, piping skills and trade mathematics.
Group 2 course.

PLU 105 Plumbing Components ...................... 3.0 (4)
Required prerequisite(s): PLU 101
Through structured classroom and hands-on skill building, the student will learn to work with copper pipe and fittings, cast-iron pipe and fittings, carbon steel pipe and fittings, corrugated stainless steel tubing, fixtures and faucets, drain waste and vent systems and water distribution systems.
Group 2 course.

PLU 121 Commercial Plumbing ..................... 3.0 (4)
Required prerequisite(s): PLU 105
Through structured classroom and hands-on skill building, the student will learn to read commercial drawings, hangers, supports, structural penetrations, and fire stopping, installation and testing DWV piping.
Group 2 course.

PLU 125 Plumbing Installation ...................... 3.0 (4)
Required prerequisite(s): PLU 121
Through structured classroom and hands-on skill building, the student will learn installation of roof, floor, and drain areas, types of valves, installing and testing water supply piping, installing fixtures, valves, and faucets, basic electricity, installing water heaters, fuel gas systems and servicing plumbing fixtures.
Group 2 course.

PLU 131 Advanced Plumbing Practices .............. 3.0 (4)
Required prerequisite(s): PLU 125
Through structured classroom and hands-on skill building, the student will learn to use applied math, size water supply piping, potable water treatment, backflow preventers and types of venting.
Group 2 course.

PLU 135 Plumbing Systems and Pumps .............. 3.0 (4)
Required prerequisite(s): PLU 131
Through structured classroom and hands-on skill building, the student will learn sizing DWV and storm systems, sewage pumps and sump pumps, corrosive-resistant waste piping and compressed air.
Group 2 course.
PSY 100  Career Exploration & Planning ............... 1.0 (1)
This course is designed to introduce the student to career and life planning theories and concepts and assist in applying these principles to their own lives. A variety of techniques will be used to accomplish this including activities on self-assessment of skills, values, interests, personality, and preferences; small group discussions; and written assignments. Development of goal-setting and decision-making skills will be included to enable the student to take charge of their career direction with known information. Group 1 course.

PSY 101  Introduction to Psychology ................. 3.0 (3)
This course provides a broad, general introduction to psychology, its basic subject matter, and its approaches to gathering and evaluating evidence about the causes and correlates of behavior. It includes: a) awareness of major psychological approaches to the study of the behavior of organisms; b) knowledge of its important contributors; c) knowledge of research findings, and concepts; and d) understanding of its methodology and limitations. Group 1 course.

PSY 211  Developmental Psychology ................. 3.0 (3)
Required prerequisite(s): PSY 101
This course presents human development from conception to death including the historical and anthropological bases for studying development. The course includes hereditary factors as well as physical, social and emotional, linguistic, intellectual, and personality development. Group 1 course.

PSY 212  Psychology/Exceptional Child .............. 3.0 (3)
Required prerequisite(s): CD 202 or PSY 101
Recommended prerequisite(s): Placement into ENG 111
This course will provide an examination of the atypical child and his or her developmental needs, including the family. Areas covered will include characteristics, identification processes, methods for contributing to the child's healthy development and educational needs, community resources and referral procedures. The course will include the child with sensory, physical and speech impairments. The gifted child's development will also be explored. Group 1 course.

PSY 223  Intro to Social Psychology ................. 3.0 (3)
Required prerequisite(s): PSY 101 or SOC 101
This course is an introduction to social psychology theory and research. It covers the individual in the social context includ-
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<tr>
<th>SOC 101 Introduction to Sociology</th>
<th>Sociology</th>
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<tr>
<td>3.0 (3)</td>
<td>Recommended prerequisite(s): Placement into ENG 111</td>
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<tr>
<td>This course is an introduction to the study of human group behavior through social interaction with special emphasis on culture, the socialization process, social stratification, collective behavior, social institutions, and social change. Group 1 course.</td>
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<tr>
<th>SOC 201 Modern Social Problems</th>
<th>Sociology</th>
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<tr>
<td>3.0 (3)</td>
<td>Recommended prerequisite(s): SOC 101, placement into ENG 111</td>
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<tr>
<td>This course presents an introductory sociological analysis of causes, changes in, and attempts to effectively treat some of the major problems in contemporary American society. These include: hunger, environmental problems, poverty, crime and delinquency, family problems, and homelessness. Community involvement projects are encouraged. Group 1 course.</td>
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<tr>
<th>SOC 211 Marriage &amp; the Family</th>
<th>Sociology</th>
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<tr>
<td>3.0 (3)</td>
<td>Recommended prerequisite(s): SOC 101, placement into ENG 111</td>
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<tr>
<td>This course covers topics such as traditional and non-traditional families, love and intimacy, sexuality, marriage, parenting, family problems and aging. The concept of healthy human relationships in a partnership, and how to build and maintain them, is stressed. Group 1 course.</td>
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<tr>
<th>SOC 220 Gender &amp; Society</th>
<th>Sociology</th>
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<tr>
<td>3.0 (3)</td>
<td>Recommended prerequisite(s): PSY 101 or SOC 101</td>
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<tr>
<td>This course examines gender as a system of stratification. It approaches issues of gender in society from both a social, structural, and a social psychological perspective. Issues related to gender inequality in selected institutions such as economy, family, media, education, and politics are studied. Group 1 course.</td>
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<tr>
<th>SOC 231 Deviance &amp; Criminal Behavior</th>
<th>Sociology</th>
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<tr>
<td>3.0 (3)</td>
<td>Recommended prerequisite(s): SOC 101</td>
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<tr>
<td>This course examines the sociology of crime and criminal law; the social psychology of criminal behavior; the sociology of punishment and correction. Social, economic, political and biological factors are considered while exploring classical, contemporary, and critical thought. Prevention and intervention of criminal behavior are emphasized as well as punishment and correction. Group 1 course.</td>
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<tr>
<th>SWK 121 Introduction to Social Work</th>
<th>Social Work</th>
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<tr>
<td>2.0 (2)</td>
<td>Recommended prerequisite(s): SWK 170, placement into ENG 111</td>
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<tr>
<td>This course provides the student with an overview of programs and institutions in social work. This would include private and public agencies, public school services, community development agencies and specific organizations working with specialized persons or age groupings. The students will also explore varying types of job opportunities within these services as well as personal dimensions of people who are intending to enter the social work field. Group 2 course.</td>
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<tr>
<th>SWK 170 Service Internship Orientation</th>
<th>Social Work</th>
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<tr>
<td>1.0 (1)</td>
<td>Recommended prerequisite(s): SWK 170, placement into ENG 111</td>
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<tr>
<td>Orientation and preparation for introductory internship experiences in social work areas. For example, introduction to use of supervision, supervisory evaluation, self-evaluation and varying agency structures and functions. Opportunities for internships will also be introduced. This course is done in class and seminar format, meeting one hour a week for five sessions, plus one eight hour seminar. Group 2 course.</td>
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<tr>
<th>SWK 211 Social Interviewing Skills</th>
<th>Social Work</th>
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<tr>
<td>3.0 (3)</td>
<td>Required prerequisite(s): PSY 101 or SOC 101 or SWK 121</td>
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<tr>
<td>Introduction to types, purposes and stages of interviewing. Basic empathy training. Skill development for observation, listening, non-verbal communication rapport building, information giving and information gathering. Beginning training in recording and documentation. Emphases on self-monitoring and working with culturally diverse, oppressed or psychologically maladaptive clients. Group 2 course.</td>
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<tr>
<th>SWK 221 Introduction to Social Welfare</th>
<th>Social Work</th>
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<tr>
<td>3.0 (3)</td>
<td>Recommended prerequisite(s): PSY 101 or SOC 101 or SWK 121, placement into ENG 111</td>
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<tr>
<td>This course reviews the historical perspectives of social welfare, how these translate into services and the implications of these on society today. It then moves into modern social work systems and the existing attitudes, philosophies and the implications of economic, political, and cultural conditions. Varying major theories of behavior are also explored as they relate to social work and clients in need of services. Group 2 course.</td>
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<tr>
<th>SWK 290 Social Work Internship</th>
<th>Social Work</th>
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<tr>
<td>3.0 (3)</td>
<td>Recommended prerequisite(s): SWK 170, SWK 121</td>
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<tr>
<td>This course helps to prepare students for the generalist practice in the field of social work. This is a field instruction course that students will engage in direct practice of social work education. In this course, you will complete 120 clock hours in a human service agency. This placement will provide an opportunity to observe social workers while they work, as well as assisting in general service delivery under very close supervision. Students must complete 40 internship hours per credit, and finish the full 120 hours in one semester. Group 2 course.</td>
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NMC. Find it here.
THR 151  Basic Acting.............................................. 4.0 (4)
This course is an introduction to basic acting technique. The human voice as the actor's tool is explored through basic vocal and physical warm ups, and basic stage improvisational techniques are introduced. The course further emphasizes an introduction to basic auditioning rules and approaches; stage monologues are selected and performed, and students select and perform two person scenes.

THR 152  Acting II.............................................. 4.0 (4)
Recommended prerequisite(s): THR 151
This course further emphasizes warm-ups, both vocal and physical, as well as advanced stage improvisation to hone the actor's skill level. The course focuses on advanced scene work through the study and performance of two Shakespearean scenes. Each student will leave the course with two prepared monologues; one serious and one comic. The audition process and monologue preparation are further emphasized, as well as the director's art and the craft of playwriting.

THR 211  Play Production.............................................. 4.0 (4)
Recommended prerequisite(s): THR 151, THR 152, may be taken concurrently
This course emphasizes theory and practice of dramatic production demonstrated through the public presentation of a play. All students enrolled in the class will have the opportunity to act, as well as the chance to fill vital roles backstage in the areas of technical theater and stagecraft, as that semester's play is auditioned, cast, blocked, produced, and eventually performed. Students may enroll in play production four times for credit under numbers 211, 212, 213, and 214. To assure proper credit is received, please verify the 200 level theater course for which you are registering.

VCA 100  Materials and Techniques .......................... 3.0 (4)
Recommended prerequisite(s): ART 121
This course introduces students to commercial drawing techniques, with an emphasis on perspective, pen and ink, and color techniques in marker and pencil when illustrating a variety of different products and illustration formats. Creative media experimentation is encouraged. Group 2 course.

VCA 123  Photoshop I .............................................. 2.0 (2)
Required prerequisite(s): VCA 123
In this course you will learn and practice the basics of Adobe Photoshop, a rasterized image manipulation tool used to create and modify images for both print and the web. You will learn basic selection techniques, color and blending modes, type creation and effects, how to use layers, masks and filters, how to create animated gifs and roll overs and more. Digital cameras and scanner skills are also learned. Group 2 course.

VCA 124  Photoshop II .............................................. 2.0 (2)
Required prerequisite(s): VCA 123
Students will learn advanced features of Adobe Photoshop, a rasterized image manipulation tool used to create images for both print and interactive environments. You will learn more complex color management, how to restore damaged images, how to manipulate type, automate tasks, prepare files for print and more. Students will apply their composition and layout skills to projects using Adobe Photoshop. Group 2 course.

VCA 125  Typography I.............................................. 3.0 (4)
Required prerequisite(s): VCA 150
Recommended prerequisite(s): VCA 123
This class serves as an introduction to typographic history, letterforms, mechanics, terminology, and usage. Students will complete projects that lead them to an understanding of the fundamental and technical aspects of this abstract art as it relates to the field of visual communications as well as print and electronic media. Group 2 course.

VCA 126  Typography II.............................................. 3.0 (4)
Required prerequisite(s): VCA 125
This class serves as continuation to typographic history, trends, display faces and grids with an emphasis on book typography, binding and structuring methods. Students will complete projects that lead them to an understanding of intermediate typogrophy, current typographic trends and comparative analysis of typefaces that relate to the field of Visual Communications as well as print and electronic media. Group 2 course.

VCA 146  Interactive Animation .......................... 3.0 (4)
Required prerequisite(s): VCA 123, VCA 150
This course will focus on the exploration of interactive navigation, animation and storytelling that are created for and exist on the web. Programming skills, design theory, rendering, file management, organization, animation history and the introduction of Adobe Flash, Soundtrack and Fireworks software.
will emphasize creative and narrative web language using Action Script 2.0. Group 2 course.

VCA 147 Web Design I ............................................. 3.0 (4)
Required prerequisite(s): VCA 123 and VCA 150 or instructor permission
This course will focus on creative website development and design. Site planning, interactive navigation, design theory, file management, organization and the introduction of Macromedia Dreamweaver and Fireworks software will emphasize creative and utilitarian website construction. Group 2 course.

VCA 150 Digital Graphic Design I ............................ 4.0 (4)
In this course you will learn and practice the basics of Adobe InDesign, a desktop publishing tool used to create layouts for print. You will learn how to create, format, manipulate and link text, use style sheets, create single and multipage documents, use frames, color management, import and create graphics, use tables and prepare files for production. In this course you will also learn the basics of Adobe Illustrator, a vector based tool used to create images and layouts for both print and interactive environments. You will learn how to create and manipulate basic shapes with the pen and pencil tools, create gradients, work with type, use layers, create shapes, use fill and stroke, use transform tools, use text tools, use the pen tool, print and choose appropriate color tools for correlating applications. Group 2 course.

VCA 200 Visual Communications II ............................... 3.0 (4)
Required prerequisite(s): ART 122, ART 131, VCA 100, VCA 123, VCA 125, VCA 150
Corequisite(s): VCA 220
Through this course you will gain insight and an introduction to the theory of graphic design through practice in researching, brainstorming, creative problem solving, comping and production of two and three dimensional graphic designs, logo marks, and three dimensional packaging while embracing traditional and digital techniques and receiving constructive criticism of your work and practice. Group 2 course.

VCA 220 Visual Communications III ............................. 3.0 (4)
Required prerequisite(s): ART 131, VCA 100, VCA 123, VCA 150
Corequisite(s): VCA 200
Through this course, students will gain insight and introduction to the theory of advertising design and art direction through practice in researching, brainstorming, creative problem solving, comping and production of print advertising, advertising campaigns, television story boards and product branding, while embracing traditional and digital techniques and receiving constructive criticism of work and practice. Group 2 course.

VCA 225 Visual Communications Studio ....................... 3.0 (4)
Required prerequisite(s): VCA 200, VCA 220
Corequisite(s): VCA 230, VCA 235
By the end of this course, students will have participated in two hands-on “real world” design projects in which you will act as writer, art director, designer, photographer or illustrator. Projects are for various local not-for-profit clients. You will learn all aspects of pre-press work, production and printing via field trips while also learning to work with clients and the self-driven responsibilities of independent work. Group 2 course.

VCA 230 Visual Communications V ............................. 3.0 (4)
Required prerequisite(s): VCA 200, VCA 220 or instructor permission
Corequisite(s): VCA 225, VCA 235
In this course students will excel in setting occupational/educational aspirations and offering and receiving constructive criticism of work. Students will design and produce a body of work for their portfolio, tailored to their individual goals, be it in Illustration, Graphic Design, Motion Graphics, or Art Direction. Progressive visual communications theory and practice will also be studied. Group 2 course.

VCA 235 Visual Communications Portfolio ..................... 3.0 (4)
Required prerequisite(s): ENG 112, VCA 200, VCA 220
Corequisite(s): VCA 225, VCA 230
Students explore various methods of preparing professional portfolios, as well as the packaging and marketing of their portfolio works in preparation for further education and/or job interviews related to their career goals in visual communications. Along with the portfolio, each student prepares a resume, digital portfolio and considers other self-promotional pieces to complete the portfolio package. The emphasis of this course is that each student compiles a professional looking and complete portfolio based on his/her occupational and educational goals. Group 2 course.

VCA 246 Interactive Animation II ............................. 3.0 (4)
Required prerequisite(s): VCA 146
This course will focus on the advanced exploration of interactive navigation, animation and storytelling that is created for and exists on the web. Advanced Design theory, greater interactivity, file architecture, web loading, hosting and uploading for Flash and more exposure to Adobe Flash software focusing and learning Action Script 3.0 will emphasize creative and narrative language, leading into web site building and basic game development. Students should be self-motivated since this advanced section involves independent projects. Group 2 course.

VCA 250 Time Based Media I ................................. 3.0 (4)
Required prerequisite(s): VCA 150
Recommended prerequisite(s): ART 171
This is a multisensory, theory driven exploration of time-based visual communication environments in individual and team projects. The role of typography, image, sound, space, luminosity, nonlinear concepts and narrative are assessed and used to create sequences of film and moving image. Students are exposed to tools, theories, history of the medium, aesthetics and techniques used in time-base with Final Cut Pro 6, Motion 3, LiveType 2, Soundtrack Pro 2, Compressor 3, Color and DVD Studio Pro 4. Group 2 course.

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
**WPT 100 Combined Welding (GAS) .................................. 2.0 (3)**
This course provides the student with the opportunity to learn the theory and application of safe oxy-acetylene welding and cutting techniques in the flat and horizontal positions on mild steel. Group 2 course.

**WPT 102 Combined Welding (ARC) .................................. 2.0 (3)**
This course provides the student an opportunity to learn theory and application of safe Shielded Metal Arc Welding (SMAW) techniques in the flat and horizontal positions using “fast freeze” electrodes. Group 2 course.

**WPT 110 Oxy-Fuel Process ........................................... 3.0 (5)**
This course is designed for Welding students pursuing job skills or transferring into a Welding degree program. Topics include oxyacetylene welding in the flat, horizontal and vertical positions; oxyacetylene cutting, and oxyacetylene brazing. Students learn safety and theory as well as develop proficiency in these operations. Group 2 course.

**WPT 120 GTAW (TIG) Welding I ................................. 2.0 (3)**
Required prerequisite(s): WPT 100 or WPT 110
This course provides the student with the opportunity to learn and apply the theory of basic Gas Tungsten Arc Welding (GTAW) welding techniques on ferrous and non-ferrous metals in the flat and horizontal positions. Group 2 course.

**WPT 121 GTAW (TIG) Welding II ............................... 2.0 (3)**
Required prerequisite(s): WPT 120
This course provides students the opportunity to learn and apply welding techniques using the Gas Tungsten Arc Welding (GTAW) process on ferrous and non-ferrous metals on advanced joint designs and in the vertical position. Group 2 course.

**WPT 130 SMAW (Arc) Welding I .................................. 3.0 (5)**
This course is designed for students pursuing job skills or transfer into a Welding degree program. Students learn theory and application of safe Shielded Metal Arc Welding (SMAW) in the flat and horizontal positions. They develop skills with “fast freeze” and “low hydrogen” type electrodes. Topics include welding terminology, electrical theory as it relates to SMAW, weld defects and quality, and the American Welding Society SMAW filter material numbering system. Group 2 course.

**WPT 131 SMAW (Arc) Welding II ............................... 2.0 (3)**
Required prerequisite(s): WPT 130
This course provides the student with advanced theory and application of Shielded Metal Arc Welding (SMAW) techniques in the flat, horizontal and vertical positions using “fast freeze” and “low hydrogen” electrodes. Topics include weld quality, inspection, power sources, and trouble shooting. Group 2 course.

**WPT 140 GMAW (MIG) Welding I .................................. 2.0 (3)**
This course provides the student an opportunity to learn the theory and application of basic Gas Metal Arc Welding (GMAW) techniques on ferrous metals. Group 2 course.

**WPT 141 GMAW (MIG) Welding II .................................. 2.0 (3)**
Required prerequisite(s): WPT 140
This course provides students the opportunity to learn and apply safe welding techniques using the Gas Metal Arc Welding (GMAW) process on ferrous and non-ferrous metals on advanced joints designs and welding positions. Group 2 course.

**WPT 142 Flux Cored Arc Welding .................................. 2.0 (3)**
Required prerequisite(s): WPT 140
This course provides students the opportunity to learn and apply safe welding techniques using the Flux Cored Arc Welding (FCAW) process. Group 2 course.

**WPT 160 Welding Qualification Prep .............................. 2.0 (3)**
Required prerequisite(s): WPT 121, or WPT 131, or WPT 141
This course provides experienced welders/students the opportunity to take the AWS welder qualification tests in specified processes on specified materials in specified positions. Group 2 course.
1. General Statement of Student Rights and Responsibilities
   a. The purpose of the Student Rights and Responsibilities statement is to define a student's basic rights within the college community, state what actions students may expect from the college to protect those rights, and explain the college's expectations of its student members, including the standards by which student behavior is measured. This statement describes unacceptable student behavior and outlines the procedures by which students are disciplined if they engage in unacceptable conduct.
   b. Students have the right to be treated fairly by the college and to be informed of college policies and/or regulations affecting them. Any student accused of violating college policies and/or regulations is entitled to fair and balanced procedural protection.

2. General Jurisdiction
   Application to Academic Students: A person must be officially admitted and/or currently registered for an academic credit course to be considered a student under this policy.

3. Student Code of Conduct
   a. Jurisdiction
      i. The jurisdiction of the college shall extend to personal behavior and conduct which occurs on Northwestern Michigan College property, or at any official college function or activity whether those activities are social, professional, or academic.
      ii. The Dean of Enrollment Management and Student Services shall have original jurisdiction over all complaints involving Section 3.
   b. (Prohibited Behavior). The College Review Board shall have exclusive jurisdiction over all appeals under Section 3.

b. Prohibited Behavior: The following behavior and conduct is prohibited. This list is not intended to be exhaustive and the college reserves the right to impose discipline for personal behavior and conduct that may not be expressly identified in Section 3. b. if the student knew or should have known that the conduct was not appropriate under the circumstances.
   i. Interference with the teaching and learning process, including the use of profanity toward another student or faculty/staff member.
   ii. Physical abuse, verbal abuse, threats, intimidation, harassment, coercion, and/or other conduct which threatens or endangers the health or safety of any person, including sexual assault against any student, faculty, staff, or guest of the college.
   iii. Discrimination based on age, color, disability/handicap, height, marital status, national origin, political affiliation, race, religion, gender, sexual orientation, veteran's status, or weight.
   iv. Interference by force, threat, harassment, or duress with an individual's personal safety, academic efforts, employment, or participation in college-sponsored activities and/or creating a reasonable apprehension that such interference is about to occur. This includes stalking.
   v. Disruption of college activities and college business, including, but not limited to, classes, convocations, and student services.
   vi. Continued occupation of a college facility after being requested to leave by any person acting as an authorized agent of the college.
   vii. Defacement, damage to, or theft of college property and/or that of another student, faculty, staff, or guest of the college.
   viii. Tampering with fire alarms, safety systems, or the unauthorized setting of fires.
   ix. Dishonesty, including, but not limited to, cheating, furnishing false information to the college, forgery, misuse or alteration of any college document, or misuse of the college computer system. Academic dishonesty is covered in the Academic Code of Behavior as set forth in Section 5.
   x. Making a false report concerning a fire, bomb, or other alleged emergency.
   xi. Use, possession, manufacture, or distribution of drug paraphernalia, controlled substances, and look-alike drugs. The use of tobacco products and alcoholic beverages as prohibited by NMC policies and/or state law.
   xii. Possession, while on campus or at a college-sponsored function, of any weapons, or look-alike weapons, including, but not limited to firearms, explosives, dangerous chemicals, knives, brass knuckles, licensed weapons, or objects or instruments possessed for use as a weapon or for direct or indirect delivery to another person for use as a weapon.
   xiii. Willful disobedience of college officials or authorized agents acting in the performance of their duties.
   xiv. Willful violation of college rules, regulations, procedures, and policies as promulgated in college policy statements.
   xv. Any violation of a local ordinance, or state or federal law.
   xvi. Unauthorized possession, duplication, or use of keys to any college premises, or unauthorized entry to or use of college premises, or tampering with any door or door locking mechanism.
   xvii. Bringing animals into the classrooms or buildings, with the exception of Seeing Eye dogs, or dogs trained to assist persons with a disability recognized under state or federal law.
   xviii. To maintain classroom integrity, only those students registered for an NMC class may attend that class, except for authorized guests.
   xix. Conduct which is disorderly, lewd, or indecent; which includes the use of electronic/digital recording and/or imaging devices used to take images and/or recordings of persons without their knowledge and/or consent; breach of the peace; aiding, abetting, or procuring another person to breach the peace on college premises or at functions sponsored by the college, or participated in by the college.
   xx. Theft or other abuse of computer time, as described in the Computer and Network Acceptable Use Policy including, but not limited to:
      (a) Unauthorized entry into a file to use, read, or change the contents, or for any other purpose.
      (b) Unauthorized transfer of files.
      (c) Unauthorized use of another individual's identification or password.
      (d) Use of computer facilities to interfere with the work of another student, faculty/staff member, or college official.
      (e) Use of computer facilities to send or publish threatening, obscene, or abusive messages.
      (f) Use of computer facilities to view and/or print obscene or offensive images.
      (g) Use of computer facilities to interfere with normal operations of the college computer system.
   xxi. Abuse of the disciplinary process, including, but not limited to:
      (a) Failure to obey the summons of a disciplinary body or college official.
      (b) Falsification, distortion, or misrepresentation of information before a disciplinary body.
      (c) Disruption or interference with the orderly conduct of a disciplinary proceeding.
      (d) Interruption of a disciplinary proceeding.
      (e) Attempting to discourage an individual's proper participation in, or use of, the disciplinary system.
      (f) Attempting to influence the impartiality of a member of a disciplinary body prior to, and/or during the course of, the disciplinary proceeding.
      (g) Verbal or physical harassment and/or intimidation of a member of a disciplinary body prior to, during, and/or after a disciplinary proceeding.
      (h) Failure to comply with the sanction(s) imposed under the Student Code of Conduct.
      (i) Influencing or attempting to influence another person to commit an abuse of the disciplinary system.
c. **Report of Violations – Initial Inquiry**

i. Any person may report that a student has allegedly violated the Student Code of Conduct to the Dean of Enrollment Management and Student Services, or his/her designee.

ii. Upon receiving such a report, the Dean of Enrollment Management and Student Services or his/her designee may conduct an informal inquiry to determine:

   (a) If there is jurisdiction over the alleged violation;
   
   (b) Whether the accused is a student, as defined in Section 2;
   
   (c) Whether the alleged conduct is prohibited; and
   
   (d) Whether a sanction is probable, if the allegation is proven.

iii. **Procedures:** Following an informal inquiry, if the Dean of Enrollment Management and Student Services or his/her designee determines that the alleged violation, if proven, would result in a written warning, the procedures as set forth in Section 3. d. 1. of the Student Code of Conduct shall apply. If the Dean of Enrollment Management and Student Services or his/her designee determines that the alleged violation, if proven, could result in the imposition of a sanction or sanctions more severe than a warning, the procedures as set forth in Section 3. d. ii. of the Student Code of Conduct will apply.

   i. If the Dean of Enrollment Management and Student Services or his/her designee determines after discussing with the student that a violation has occurred and the sanction for the violation should be a written warning, the following procedures shall be used:

      (a) A written warning shall be administered and presented to the student by the Dean of Enrollment Management and Student Services, or by his/her designee, or any other authorized employee of the College.

      (b) Written notice of the conduct constituting the violation and the nature of the warning shall be filed by the Dean of Enrollment Management and Student Services or his/her designee or any other authorized employee with the Office of Student Services.

      (c) There shall be no appeal from this written warning.

      (d) All written warnings and notices will be securely stored in the office of the Dean of Enrollment Management and Student Services. This material will be held for a minimum of three years.

   ii. If the Dean of Enrollment Management and Student Services, or his/her designee, has a reasonable basis to believe a sanction more severe than a warning could be imposed, then the following procedures will be used:

      (a) **Complaint.** All proceedings other than the administration of a warning shall commence with the filing of a written complaint with the Dean of Enrollment Management and Student Services as soon as reasonable following the date of the alleged violation. A complaint may be filed only when there is a good faith belief that there has been a violation of prohibited behavior.

      (b) **Form of Complaint.** The complaint shall include (1) facts alleged to constitute a violation; (2) the provision(s) of the Student Code of Conduct alleged to have been violated; and (3) the name of the student alleged to have committed the violation.

      (c) **Who May File.** The complaint may be filed by (1) a college administrator or staff person; (2) faculty member; (3) student; (4) resident hall staff; and (5) other individual as designated or confirmed by the Dean of Enrollment Management and Student Services.

      (d) **Service.** The student against whom the complaint is made shall be personally notified and provided a copy of the complaint and the probable sanctions by the Dean of Enrollment Management and Student Services or his/her designee, as soon after the complaint is filed as possible.

      (e) **Response.** A student served with a complaint shall elect one of the following options within three (3) college business days after service of the complaint by completing, signing, and returning the Student Response form to the Dean of Enrollment Management and Student Services.

         (i) The student may admit the alleged violation and be sanctioned accordingly.

         (ii) The student may request mediation, if the Dean of Enrollment Management and Student Services and other affected parties agree to mediation. If mediation fails or is not agreed to by the Dean of Enrollment Management and Student Services or any of the other parties, the individual shall proceed under options (i) or (iii) of this section.

         (iii) The student may deny the alleged violation.

      If the Student Response Form is not completed and returned within three (3) college business days after service, the Dean of Enrollment Management and Student Services may treat such action as an admission of the violation and administer a sanction.

      (f) **Investigation.** If the student denies the allegations, the Dean of Enrollment Management and Student Services will, within a reasonable period of time, but not more than fifteen (15) college business days, begin the investigation process. The Dean of Enrollment Management and Student Services shall take the following action:

         (i) Meet with the student and other relevant parties.

         (ii) If necessary, assign an impartial investigator to conduct further investigation pursuant to the College’s “Investigation Guidelines.”

         (iii) Present the student with all of the evidence upon which a decision will be made and an opportunity for the student to refute the evidence.

      (g) **Findings.** Following completion of the Investigation provided under ii. (f) above, the Dean of Enrollment Management and Student Services shall take the following action:

         (i) Evaluate all evidence presented and, either:

      - Dismiss the complaint for lack of clear and convincing evidence that a violation of the Student Code of Conduct occurred or that the accused did not commit the act that resulted in a violation, or

      - Based on a finding of clear and convincing evidence, determine that a violation of the Student Code of Conduct was committed by the accused and impose an appropriate sanction.

      (h) **Notice.** As soon as the Dean of Enrollment Management and Student Services makes a finding, the Dean shall notify the student in writing.

ii. **Sanctions:** A sanction is an action taken when the Student Code of Conduct has been violated. One or more of the following sanctions may be applied. If the student expressly waives his/her right to be sanctioned under this section, the college may impose a different sanction than those listed.

   i. **Warning.** Notice, orally or in writing, that continuation or repetition of conduct in violation of Section 3. b. may be cause for more severe disciplinary action.

   ii. **Censure.** A written reprimand, including the possibility of more severe disciplinary sanctions in the event of a subsequent violation of a college regulation within a stated period of time.

   iii. **Letter of Apology.** The student will prepare and send a letter of apology to the victim(s) of the misconduct.

   iv. **Probation.** Exclusion from participation in privileges or extra-curricular college activities for a period not to exceed one academic year from date of offense or infraction.

   v. **Restitution.** Reimbursement for defacement, damage to, or misappropriation of property, or personal injury expenses.

   vi. **Community Service.** The performance of an appropriate amount of public service that is both beneficial to the community and which will likely assist the individual in understanding the harm caused by his or her conduct.

   vii. **Attendance.** Enrollment and completion of a class that helps the person understand the harm caused by his or her conduct. This sanction may be required for alcohol, substance abuse, or psychological assessments.

   viii. **Restricted Student Status.** The student will be allowed to go to and from classes only and will not be allowed to participate freely in any other campus activity. Campus security services may be required, if deemed appropriate. This sanction may remain in effect
until completion of the disciplinary process.

ix. Disciplinary Suspension. Exclusion from classes and other privileges or activities as set forth in the notice for a definite period of time. A disciplinary suspension will be held in abeyance during an appeal.

x. Emergency Suspension.  
(a) Exclusion from campus and/or classes and/or other privileges or activities for purposes of investigation, and/or relieving the tension of the student body or class due to a serious infraction of campus rules; or removing a threat to the well-being of the students, or removing for the good of the order of the college a student or students whose presence would prevent the continued normal conduct of the academic community.
(b) Emergency Suspension may be imposed immediately by the Dean of Enrollment Management and Student Services or by his/her designee without the filing of a complaint. Emergency Suspension will continue until reviewed by the Dean of Enrollment Management and Student Services. If the Emergency Suspension is continued for more than three (3) college business days, the student shall have the right to appeal to the College Review Board within seven (7) college business days following the emergency suspension. Students who are suspended for disciplinary reasons will receive a grade of W for all classes in which he/she is enrolled. If the suspension is overturned and the student does not wish to finish the semester, tuition, and fees paid for that semester may be applied toward future enrollments or refunded.

xi. Expulsion. Termination of student status. Re-admission may not be sought before the expiration of one academic year from the date of expulsion.

xii. Permanent Expulsion. Permanent expulsion is for the most severe cases, with no rights for future re-admission consideration.

Appeal: An appeal of the Dean of Enrollment Management and Student Services’ finding that a violation occurred and/or the imposed sanction or sanctions may be taken to the College Review Board. (See Section 7). A notice of appeal must be filed with the office of the Dean of Enrollment Management and Student Services within ten (10) college business days after the student has received notice of the decision of the Dean of Enrollment Management and Student Services.

4. Residence Hall Code of Conduct

a. Jurisdiction  
   i. The Director of Residence Life and Judicial Affairs and the Dean of Enrollment Management and Student Services shall have jurisdiction, respectively, in all cases involving code violations under the Residence Hall Code of Conduct as set forth in Section 4. b.
   ii. Personal actions on NMC Residence Hall property, adjacent areas, or at official Residence Hall sponsored functions, as prescribed in Section 4. b., are governed by the Residence Hall Code of Conduct.

b. Prohibitive Behavior: The following behavior and conduct is prohibited. This list is not intended to be exhaustive and incorporates by reference all prohibited personal behavior included in Section 3. b. of this publication for purposes of a warning. The College reserves the right to impose discipline for personal actions that may not be expressly identified in Section 4. b. if the student knew or should have known that the conduct was not appropriate under the circumstances.
   i. The manufacture, use, or sale of alcohol, inhalants, and other drugs are prohibited. Alcohol containers and drug paraphernalia are also prohibited.
   ii. Knowingly being present in a residence hall room where a prohibited substance is being used, but not using it or consuming it yourself.
   iii. Any violation of a local ordinance, or state or federal law.
   iv. Violation of posted quiet hours or making continued noise during other hours when requested by another resident to limit your noisemaking. These other hours are commonly referred to as courtesy hours.
   v. Burning of items such as incense, candles, embers, natural fuel, oil, kerosene, propane, and charcoal.
   vi. Keeping of fireworks, gasoline, and all other combustibles.
   vii. Keeping or using any item which displays an open heating element, such as hot plates and hot pots.
   viii. Keeping of motorcycles or other fuel-driven engines in your room.
   ix. Keeping of natural cut trees, leaves, or greens in your room other than potted plants.
   x. Keeping of firearms, weapons, including, but not limited to, hunting knives, swords, brass knuckles, and martial arts weapons.
   xi. Keeping of look-alike weapons, including, but not limited to, pellet guns.
   xii. Keeping of paintball guns and paintball pellets.
   xiii. Allowing a guest to stay in your room or other resident’s rooms for more than three nights per semester.
   xiv. Allowing a guest to enter the living areas of the Residence Halls without signing in at the Front Desk during the hours of 10:00 p.m. and 8:00 a.m.
   xv. Allowing guests in your room who are under the age of 18 years. The only exceptions are those guests who are NMC students or family members.
   xvi. Allowing a guest of the opposite sex to stay in your room without the written and verbal permission of your roommate and suite-mate(s), filed a minimum of 24 hours prior to the visit with your resident assistant.
   xvii. Smoking inside any areas of the Residence Halls including individual rooms.
   xviii. Intoxicating offensive odors in any areas of the Residence Halls including individual rooms. Offensive odors may be defined as, but not limited to, clove cigarettes, pipes, potpourri, or use of fragrant sprays.
   xix. The throwing of any material (including liquids) from windows.
   xx. Entering a room through a window.
   xxi. Unauthorized access to, and on the roof of either Residence Hall building, and the glass skylight area of the Student Center in West Hall.
   xxii. Keeping your Residence Hall room in an unsafe or condition that hinders the health of yourself and others.
   xxiii. Use of nails, tape, putty, glue, or any adhesive material as decorations in your room, which may cause damage.
   xxiv. Writing directly on furniture, walls, doors, floors, and windows in your Residence Hall room.
   xxv. Failure to remove your garbage to the dumpsters located behind West Hall.
   xxvi. Disposing of garbage, including cigarette butts, on the ground.
   xxvii. Entering the cafeteria without a shirt or shoes or in a swimsuit.
   xxviii. Transferring use of your meal card to another person.
   xxix. Decorating your room with alcohol bottles, cans, or boxes.
   xxx. For your safety and the safety of others, all sports are banned inside the Residence Hall buildings. This includes bike riding, rolleblading, and any kind of ball play.
   xxxi. Not evacuating during a fire alarm.
   xxxii. Failure to comply with sanction(s) imposed under the Residence Hall Code of Conduct.

c. Report of Violations – Initial Inquiry  
i. Any person may report that a student has allegedly violated the Residence Hall Code of Conduct to the Director of Residence Life and Judicial Affairs.
   ii. Upon receiving a report, the Director of Residence Life and Judicial Affairs, or his/her designee, may conduct an informal inquiry to determine:
      (a) If there is jurisdiction over the alleged violation;
      (b) Whether the accused is a student, as defined in Section 2.
      (c) Whether the alleged conduct is prohibited; and
      (d) Whether a sanction is probable, if the allegation is proven.

d. Procedures: Following an informal inquiry, if the Director of Residence Life and Judicial Affairs, or his/her designee, determines that the alleged violation, if proven, would result in a written warning, then the procedures as set forth in Section 4. d. i. of the Residence Hall Code of Conduct will apply. If the Coordinator of Student Life or his/her designee determines that the alleged violation, if proven, could result in
the imposition of a sanction more severe than a warning, the procedures as set forth in Section 4. d. ii. of the Residence Hall Code of Conduct will apply.

i. Upon completion of an investigation, if the Director of Residence Life and Judicial Affairs, or his/her designee, determines after discussing with the student that a violation has occurred and the appropriate sanction for the violation should be a written warning with appropriate counseling, the following procedures will be used:

(a) A written warning shall be administered and presented to the student by a Residence Life Supervisor, or the Director of Residence Life and Judicial Affairs, or any other authorized employee of the College.

(b) Written notice of the conduct constituting the violation and the nature of the warning shall be filed by the appropriate staff member with the Office of Residence Life.

(c) There shall be no appeal from this written warning.

(d) All written warnings and notices will be securely stored in the office of the Dean of Enrollment Management and Student Services. This material will be held for a minimum of three years.

ii. If the Director of Residence Life and Judicial Affairs has a reasonable basis to believe a sanction other than a warning could be imposed for the alleged violation of the Residence Hall Code of Conduct, the following procedures shall be used:

(a) Complaint. A complaint shall be filed with the Director of Residence Life and Judicial Affairs as soon as reasonable following the date of the alleged violation. A complaint may be filed only where there is a good faith belief that there has been a violation of the prohibited conduct.

(b) Form of Complaint. The complaint shall include (1) facts alleged to constitute a violation; (2) the provision(s) of the Residence Hall Code of Conduct believed to have been violated; (3) the name of the student(s) alleged to have committed the violation.

(c) Who May File. The complaint can be filed by (1) a college administrator or staff person; (2) faculty member; (3) student; (4) resident hall staff; or (5) another individual as designated or confirmed by the Director of Residence Life and Judicial Affairs.

(d) Service. The student against whom the complaint is made shall be personally notified and provided a copy of the complaint and the probable sanction by the Director of Residence Life and Judicial Affairs as his/her designee as soon after the complaint is filed as possible.

(e) Response. A student served with a complaint shall elect one of the following options within three (3) college business days after service of the complaint by completing, signing, and returning the Student Response form to the Director of Residence Life and Judicial Affairs.

(1) The student may admit the alleged violation and be sanctioned accordingly.

(ii) The student may request mediation, if the Director of Residence Life and Judicial Affairs and other affected parties agree to mediation. If mediation fails or is not acceptable to the Director of Residence Life and Judicial Affairs or any of the other parties, the individual shall proceed under options (i) or (iii) of this section.

(iii) The student may deny the alleged violation.

If the Student Response form is not completed and returned within the seven (7) college business days, the Director of Residence Life and Judicial Affairs may treat such action as an admission of a violation, and administer a sanction.

(f) Investigation. If the student denies the allegation, the Coordinator of Housing and Residence Life shall, within a reasonable period of time, but not more than fifteen (15) college business days, begin the investigation process. The Director of Residence Life and Judicial Affairs shall take the following action:

(i) Meet with the student and other appropriate parties.

(ii) If necessary, assign an impartial investigator to conduct further investigations pursuant to the College’s “Investigation Guidelines.”

(iii) Present the student with all of the evidence upon which a decision will be made and provide the student with an opportunity to refute the evidence.

(g) Findings. Following completion of the Investigation provided under (ii)(f) above, the Dean of Enrollment Management and Student Services shall take the following action:

(i) Evaluate all evidence presented and, either:

(ii) Dismiss the complaint for lack of clear and convincing evidence that a violation of the Residence Hall Code of Conduct occurred or that the accused did not commit the act that resulted in a violation, or

(iii) Based on a finding of clear and convincing evidence, determine that the accused violated the Residence Hall Code of Conduct and impose an appropriate sanction.

c. Sanctions: A sanction is an action taken when the Residence Hall Student Code of Conduct has been violated. Sanctions are meant to assist in creating a community which upholds the educational mission of the Residence Halls. If the student expressly waives his/her right to be sanctioned under this section, the College may impose a different sanction.

i. Warning. Notice, orally, or in writing, that continuation or repetition of student conduct in violation of prohibited conduct as set forth in Section 3. b., and Section, 4. b., may be cause for more severe disciplinary action.

ii. Censure. A written reprimand, including the possibility of more severe disciplinary sanctions in the event of a subsequent violation of a Residence Hall violation within a stated period of time.

iii. Letter of Apology. The student will prepare and send a letter of apology to the victim(s) of the misconduct.

iv. Restitution. Reimbursement for defacement, damage to, or misappropriation of property, or personal injury expenses.

v. Fines. Differing from reimbursement in that the monetary amount required is a pre-set designation and is not tied to cost of defacement or damages:

(a) Smoking violation; $25 fine per offense

(b) Throwing items from room window; $50 fine per object

(c) Unauthorized or overextended guest; $50 fine per night

(d) Garbage or personal belongings placed in unauthorized areas; $25 fine per bag or $15 fine per item

(e) Non-evacuation during fire alarm; $100 fine per offense

(f) Tampering with fire safety equipment; $500 fine per offense

(g) Unauthorized access on the roof; $50 fine per offense

(h) Failure to comply with health and safety violation correction; $25 fine per day

vi. Educational Design. The individual enrolls in and completes a class or completes a study or paper that helps the person understand the harm caused by his or her conduct. Required for alcohol, substance abuse, and may be required in psychological assessments.

vii. Community Service. The individual completes work projects assigned by the Director of Residence Life and Judicial Affairs. The work will be directly related to the prohibited action the student engaged.

viii. Disciplinary Housing Suspension. Removal from the Residence Hall living areas and possibly public areas, such as cafeteria. The individual may be responsible for all remaining housing and meal charges. The individual forfeits his/her deposit. This sanction is in full effect during the appeals process if it is invoked. Re-admission may not be sought before the expiration of one academic year from the date of suspension.

ix. Permanent Housing Eviction. Removal from the Residence Hall living areas and public areas. The individual may be responsible for all remaining housing and meal charges. The individual forfeits his/her deposit. This sanction is in full effect during the appeals process if it is invoked. No rights for future re-admission considered.

x. Emergency Suspension.

a. Exclusion from housing privileges or activities for purposes of investigation and/or relieving the tension of the student body or class due to a serious infraction of housing or campus rules; or removing a threat to the well-being of the students, or removing for the good of the order of the college, a student or
students whose presence would prevent the continued normal conduct of the academic or residential community.

b. Emergency Suspension may be imposed immediately by the Director of Residence Life and Judicial Affairs or by his/her designee without the filing of a complaint. Emergency Housing Suspension will continue until reviewed by the Director of Residence Life and Judicial Affairs. If the Emergency Suspension is continued for more than three (3) college business days, the student shall have the right to appeal to the Dean of Enrollment Management and Student Services within three (3) college business days following the emergency suspension. A student may not appeal the decision of the Dean of Enrollment Management and Student Services. The decision of the Dean of Enrollment Management and Student Services is final.

f. Appeal
i. An appeal of the Director of Residence Life and Judicial Affairs decision may be taken to the Dean of Enrollment Management and Student Services. All appeals must be filed, in writing, within ten (10) college business days after the student has received notice of the decision. All appeals must be based on the following reasons and pursuant to the following procedures:

   (a) New evidence that is available that was not available during the investigation.
   (b) The evidence upon which the decision was made was insufficient or failed to meet the burden of proof.
   (c) The sanction was too severe for the offense.

ii. The Dean of Enrollment Management and Student Services will decide the individual’s appeal after a careful review of the evidence. The Dean’s findings shall be in writing and submitted to the student within twenty (20) college business days after the appeal was filed. The Dean of Enrollment Management and Student Services may:

   (a) Uphold the original decision.
   (b) Reverse the original decision and dismiss all sanctions because the evidence did not meet the standard of proof.
   (c) Replace the original sanction with one that is less severe.

iii. A student may not appeal the decision of the Dean of Enrollment Management and Student Services. The decision of the Dean of Enrollment Management and Student Services is final.

5. Academic Code of Behavior
a. Cheating or Plagiarism: Cheating or plagiarism on written or oral examinations, quizzes, papers, or other academic work is prohibited. Cheating is defined as falsifying data on a report, exam, summary, or paper; the giving or receiving of aid in an examination situation; and/or the use of unauthorized materials as an aid during an examination. Plagiarism consists of offering as one’s own work, the words, ideas, or arguments of another person, without appropriate attribution by quotation, reference, or footnote. Plagiarism occurs both when the words of another are reproduced without acknowledgment, and when the ideas or arguments of another are paraphrased in such a way as to lead the reader to believe that they originated with the writer.

b. Procedures and Sanctions
i. If the faculty member has substantial evidence that a student has cheated or plagiarized academic work in violation of Section 5. a., the faculty member, after a good faith effort to contact the student, may impose the following sanctions:

   (a) Warning. Written notice that continuation or repetition of wrongful conduct may result in further disciplinary action.
   (b) Censure. A written reprimand for breach of the Academic Code of Behavior, including the possibility of more severe disciplinary sanctions if there is further violation of any part of the code.
   (c) Course-level Sanctions. Repeat relevant course requirements or lower grade on relevant course requirements by deducting the value of the examination paper or other evaluation instruments in which the violation occurred in part or in its entirety in the determination of the final grade for the course. Sanctions may also include but not be limited to failure for the assignment or exam where the dishonesty occurred and /or failure for the course.

ii. The act of academic dishonesty also will be reported to the Dean of Enrollment Management and Student Services who may do one or more of the following:

   (a) Conduct conferences with the student, the faculty member, and the Academic Discipline Chair to try and resolve the matter.
   (b) If the Dean of Enrollment Management and Student Services determines that the act of academic dishonesty is egregious, then the Dean of Enrollment Management and Student Services may impose an appropriate sanction pursuant to Section 5. b. iii.

iii. If the Dean of Enrollment Management and Student Services finds a violation of Section 5. a. of the Academic Code of Behavior, based on substantial evidence, he/she may impose one of the following sanctions:

   (a) Suspension from the College, which constitutes ineligibility to continue at the College for a specified period of time not to exceed one calendar year.
   (b) Dismissal from the College, which constitutes ineligibility to continue at the college, normally with no opportunity for readmission.

c. Appeal: If the Dean of Enrollment Management and Student Services finds that a student has violated the Academic Code of Behavior, the student may appeal the decision to the Academic Review Board pursuant to Section 8. Notice of appeal must be submitted to the office of the Dean of Enrollment Management and Student Services, in writing, within ten (10) college business days after receiving notice of the decision.

d. Unfair Grading
i. Unfair grading practices by faculty members are prohibited. Unfair grading practices are defined as the assignment of a particular grade to a student because of the student’s age, color, disability/handicap, height, marital status, national origin, political affiliation, race, religion, gender, sexual orientation, veteran status, or weight; and/or the failure to apply equal standards of academic evaluation to all students in a course; and/or the assignment of a grade on the bases of standards other than those announced in the syllabus or by the instructor. It is recognized that in college-level instruction, some reasonable non-quantifiable judgments must be made in determining grades.

ii. Students who wish to protest a faculty grading decision must do so in writing within twenty (20) college business days after assignment of the grade to the faculty member involved, with a copy delivered to the Dean of Enrollment Management and Student Services.

iii. The student complaint of unfair grading will be addressed through a series of informal conference(s) until the complaint is resolved. The order of the conferences is as follows: (1) the student and the faculty member; (2) the student, the faculty member, and the Department Head or Academic Chair; (3) the student, the faculty member, and the Dean of Enrollment Management and Student Services. The conferences shall be held expeditiously.

iv. If the conferences fail to resolve the dispute, the Dean of Enrollment Management and Student Services shall uphold the grade unless there is compelling evidence that warrants overturning the faculty member’s decision. If a decision is made to overturn a grade, the Dean of Enrollment Management and Student Services shall be mindful of the following:

   (a) Under no circumstances shall the Dean review the quality of an instructor’s teaching methods, the course content, the appropriateness of the standards established for the course, or the right of the instructor to establish standards for the course.
   (b) The due process system does not deny that the right and responsibility to assign grades rests with the faculty member. The responsibility to apply disciplinary rules related to the classroom and programs of instruction rests with the faculty member and, as appropriate, with administrators charged with program responsibility.

v. Either the faculty member or the student may appeal the decision of the Dean of Enrollment Management and Student Services to the Academic Review Board pursuant to Section 8. Notice of
appeal must be submitted to the office for the Dean of Enrollment Management and Student Services in writing within ten (10) college business days after receiving notice of the decision.

6. Miscellaneous Codes
   a. Professional Standards for Occupational Programs: Any conflict between the Professional Standards for Occupational Programs and the Student Rights and Responsibilities will be resolved in favor of the Professional Standards.
   i. Cadet Discipline, Great Lakes Maritime Academy. These rules and regulation are described in the GLMA Cadet Rules and Regulations.
   ii. Health Occupational Students. These rules and regulations are described in the Student Policies for each Health Occupation program.
   iii. Law Enforcement Students. These rules and regulations are described in the NMC Law Enforcement Program Requirements.
   iv. Career Pilot Students. These rules and regulations are described in the NMC Student Pilot Training Program Requirements.

b. Apartment Rules and Regulations: The rules and regulations that apply to living in an NMC apartment can be found in the Northwestern Michigan College Apartment Living Handbook.

c. Motor Vehicle Rules and Sanctions
   i. Violations of the Uniform Traffic Code of Traverse City are within the jurisdiction of the City of Traverse City, Laws, rules, and regulations affecting the operation and use of vehicles on College property are found in the Uniform Traffic Code of Traverse City and in the College Rules and Regulations.
   ii. Violations of the motor vehicle rules and regulations not covered under the Uniform Traffic Code of Traverse City are subject to College disciplinary action by the Coordinator of Security, or his/her designee.

d. Off-Campus Misconduct
   i. The College may take action regarding off-campus misconduct that does not occur at any official college function when that conduct constitutes a flagrant disregard for any person's health, safety, and/or property, and there is probable cause to believe that it is a violation of law.
   ii. The Dean of Enrollment Management and Student Services will provide written notice to the student of any disciplinary action and the evidence upon which the college relied to impose the discipline. The student shall have ten (10) college business days to refute the evidence and request a re hearing in front of the Dean of Enrollment Management and Student Services.

e. Mandatory Assessment Procedures: Instructions for Behavioral Incident Report Team (BIRT) Follow-Up with Students (Medical/Psychological Assessment). The BIRT may direct a student to participate in a medical or psychological evaluation whenever the behavior of a student appears to pose a serious threat to the health and safety of the student or others. The medical and/or psychological evaluation process is designated to assess the student's ability to safely participate in the educational programs at Northwestern Michigan College. In mandating an assessment, the college may determine:
   i. Who the assessor will be:
   ii. How many sessions the assessment will include, over what period of time:
   iii. How soon the assessment must be completed:
   iv. What information the student must consent to sharing with the college:
   v. Who will pay for the assessment:
   vi. Whether the student will be on interim suspension during the period of assessment
   (a) Failure to respond to the directive by the BIRT to complete the medical and/or psychological evaluation, or failure to provide necessary records of prior treatment by the date requested, may result in judicial action in accordance with the NMC Student Rights and Responsibilities policy until the evaluation and records request requirements are met.
   (b) The student, who leaves, withdraws, or fails to return to the College before a medical and/or psychological evaluation is completed will be ineligible for readmission until the outstanding matter is resolved.

Interim Suspension: Based on a recommendation of BIRT, hospitalization or other indication that a student may represent a threat of harm to themselves or others, the Dean of Enrollment Management and Student Services, or designee, will attempt to talk with the student who is deemed "at-risk." The Dean will consult the appropriate staff, which may include a College counselor. After consultation, the situation will be assessed and a plan of action will be put into place. The student may be required to meet with the Dean of Enrollment Management and Student Services, or designee, to define the College's expectations of the student to discuss support measures to help the student succeed at the College. Depending on the situation, the at-risk student may be placed on interim suspension, which may prohibit them from living in the Residence Halls, the Campus Apartments, attending classes or participating in College activities until cleared by the Dean of Enrollment Management and Student Services, or designee, in consultation with a Counselor and/or Health Services Professional. If the student is allowed to continue at the College, the student and his or her parent(s) or guardian(s) may be asked to sign an agreement for continuation of enrollment. Students who are treated at a hospital due to suicidal behavior may be placed on interim suspension, which will require a meeting with Dean of Enrollment Management and Student Services before a student is permitted to return to campus. At minimum, the BIRT will require that student to gain professional assessment at the Counseling Office. The purpose of the assessment is to monitor the student's willingness and ability to adhere to a basic standard of self-care and to provide the student with the resources deemed necessary to that self-care. The student will be asked to sign a release of information that permits consultation between the counseling staff, other mental health professionals and the Dean of Enrollment Management and Student Services or his/her designee. If a student on interim suspension returns to campus without permission, the student will be considered a trespasser and Campus Security will be notified and the College may pursue judicial action.

Interim Suspension Procedure: The Dean of Enrollment Management and Student Services may initiate an administrative interim suspension from the College, Residence Halls, Campus Apartments of any student for the following reasons:
   i. Behavior that poses a threat to the health and safety of the student of others.
   ii. Completion of a mandated evaluation on the basis behavior that continues to pose a threat to the health and safety of the student and/or others.
   iii. Behavior continues to be disruptive to the community and/or a concern to campus constituents.

A student on interim suspension may not return to the College, Residence Halls or Campus Apartments until they have completed a medical and/or psychological evaluation, or otherwise has satisfied the terms of the interim suspension indicated that the student no longer poses a threat to their health and safety or the health and safety of others. Student will not be able to register for classes until the Dean of Enrollment Management and Student Services has readmitted the student.

Confidentiality
   a) All medical and counseling records associated with the disruptive behavior assessment are kept separately and do not appear as a part of the student's academic record. All other records regarding the student's behavior that are not medical or counseling records are private and kept in compliance with FERPA.
   b) All records associated with the mandated assessment are protected by state laws regarding confidentiality.

Voluntary Withdrawal Procedure: If a student is involved in a mandatory assessment procedure and decides to voluntarily withdraw, conditions of return will be determined at the time of withdrawal, and given to the student in writing. Involuntary Withdrawal Procedure "Direct Threat Determination" by BIRT
   a) To initiate the process, a recommendation for withdrawal must be issued from the BIRT.
b) When the BIRT recommends involuntary withdrawal, it will prepare a report of its rationale and initiate the complaint for withdrawal to the Dean of Enrollment Management and Student Services.

c) The Dean of Enrollment Management and Student Services will follow the NMC Student Rights and Responsibilities procedures for this complaint, in accordance with the complaint procedures as outlined in section 3.c. with the following amendments.

   i. The Dean of Enrollment Management and Student Services may conduct a formal administrative hearing where both the student and the BIRT will share their positions. In this administrative hearing, the “direct threat” threshold must be met before a student can be involuntarily withdrawn.

   ii. At the hearing, the Dean of Enrollment Management and Student Services will determine whether by a preponderance of evidence the student poses a high probability of substantial harm to themselves or others.

   iii. The Dean of Enrollment Management and Student Services will make an individualized and objective assessment of the student’s ability to safely participate as a student at Northwestern Michigan College. If the Dean of Enrollment Management and Student Services determines the student is not a direct threat, the student will remain in good standing with the college. If the student is determined to be a direct threat, the Dean of Enrollment Management and Student Services will determine how separation will be accomplished, for what duration, and upon what conditions. Conditions for return will also be determined and delivered in writing with the Dean of Enrollment Management and Student Services’ decision to the student.

   iv. In circumstances when it is determined that the student must leave the College, it is the responsibility of the student or the student’s parent(s) or guardian(s) to make arrangements for the student’s transportation home. If the parent(s) or guardian(s) are unable or unwilling to make such arrangements, the student’s welfare is still their responsibility.

**Suicide Attempts**

1) Procedures

   a) When BIRT receives a credible report that a student has threatened or attempted suicide, engaged in efforts to prepare to commit suicide or has expressed a preoccupation with suicide, the BIRT will make a recommendation to the Dean of Enrollment Management and Student Services that the student be required to attend professional assessment with a licensed mental health professional.

   b) The student will participate in the program’s requirement of a comprehensive and in-depth assessment of the precipitating incident, prior attempts and threats, and current suicidal intent.

   c) The first assessment will occur within three college business days of the incident or release from the hospital.

   d) The remaining assessments will occur based upon the therapist’s recommendations. Students are required to participate only in an assessment of their past and current suicidality. Students are not required to engage in counseling or therapy. A student may elect to go beyond the required assessment and participate in counseling or therapy.

   e) With the permission of BIRT, students may obtain the assessments with a private practitioner with comparable credentials at his or her own expense and after signing an authorization allowing that practitioner to communicate with members of BIRT. All professionals will make the incident, its roots and implications a significant focus of each of the assessments.

   f) The student must provide the independent sources of information regarding the suicidal incident, if such reports exist. These include suicide notes, police reports, emergency room reports and eye witness accounts.

   g) Private practitioners will be required, during the period in which the assessment occurs, to provide the College with reports of instances in which the student threatened or attempted suicide, engaged in efforts to prepare to commit suicide, or expressed a preoccupation with suicide.

   h) During the first assessment appointment, the student will sign a release of authorization form allowing BIRT to communicate with the Dean of Enrollment Management and Student Services in the event he or she fails to attend the assessment session.

   i) Failure to adhere to this standard of self-welfare or failure to fulfill the requirements of the assessment following a suicidal incident may result in disciplinary action. The appropriate actions associated with this policy will be determined by the Dean of Enrollment Management and Student Services or his/her designee.

   j) The Dean of Enrollment Management and Student Services (or designee) may take other steps, including contacting the student’s parents and/or other significant others in the event of particularly potentially lethal suicide attempt or in the event of repeated suicide attempts.

2) Confidentiality

   a) All medical and psychological records associated with the reported incident are kept separate and do not appear as part of the Student academic or judicial record.

   b) All records associated with the mandated assessment are protected by state laws regarding confidentiality.

7. College Review Board

   a. **Jurisdiction:** Appellant jurisdiction over a student’s appeal from a disciplinary decision made by the Dean of Enrollment Management and Student Services under Section 3. (Student Code of Conduct) shall be vested in the College Review Board.

   b. **Parameters**

      i. The College Review Board is not a court of law. Its procedures are informal and its reviews shall not be perceived as an adversary process. The College Review Board shall have the right to make appropriate judgments about procedural questions as they arise. These judgments shall be made in light of the need for a fair, expeditious, and orderly review.

      ii. In its deliberations, the College Review Board shall not consider the appropriateness of College rules and regulations or the right of faculty and administrators to enforce College rules and regulations. The right to define and establish appropriate standards, rules, and regulations, which govern various college functions and activities shall be reserved to the administrators and faculty members charged with the implementation and supervision of those functions and activities.

   c. **Membership:** The College Review Board shall be composed of the Faculty Council Chair, a staff person appointed by the Vice President for Educational Services, and the President of the Student Government Association. If any of the College Review Board members is involved in Board proceedings or has a conflict of interest, or cannot be present for the hearings, the appropriate body shall provide a substitute. The Faculty Council Chair, or the Chair’s substitute, shall serve as Chair and shall call the meetings.

   d. **Procedures**

      i. The aggrieved student, within ten (10) college business days, must
file a notice of appeal with the Dean of Enrollment Management and Student Services. The Dean of Enrollment Management and Student Services will notify the Chair of the College Review Board that a notice of appeal has been filed and that the Chair shall set a date for a hearing within twenty (20) college business days of the filing of the notice unless all parties agree to an extension.

ii. Not less than ten (10) college business days prior to the hearing, the student and the College Review Board shall be provided with a copy of (1) the complaint; (2) the investigation file; and (3) the Dean’s decision, including the sanction.

iii. The student shall be allowed to review and supplement the file with his/her statement, any witness statements, or any other relevant evidence, within five (5) college business days before the hearing.

iv. The College Review Board’s proceedings shall be closed to the public to maintain confidentiality. The Board may request the presence of the accused student or any other person to clarify evidence on the record.

e. College Review Board Decisions

i. Decisions of the College Review Board shall be based upon the record of all material required to be furnished to the Board as set forth in Section 7. d. ii-iv.

ii. The College Review Board shall decide cases by a majority vote. After following the procedures described in this section, the Board may:

(a) Accept the decision of the Dean of Enrollment Management and Student Services and support the penalty imposed.

(b) Reverse the decision of the Dean of Enrollment Management and Student Services and dismiss the case because the evidence did not meet the standard of proof or there was a flagrant abuse of the process.

(c) Accept the decision of the Dean of Enrollment Management and Student Services, but reduce the sanction because it is too severe.

iii. The student shall be provided with written explanation of the reasons for any decisions rendered against him/her.

8. Academic Review Board

a. Jurisdiction: Appellant jurisdiction over a decision made by the Dean of Enrollment Management and Student Services pursuant to Section 5. shall be vested in the Academic Review Board.

b. Parameters: The Academic Review Board is not a court of law. The purpose of the Board shall be the discovery of the truth and the rendering of a just and fair decision. The Chair shall have the right to make appropriate judgments about procedural questions as they arise. These judgments shall be made in light of the need for fair, expeditious, and orderly reviews or hearings.

c. Membership: The Academic Review Board shall be composed of the Academic Chair of the area within which the dispute arises; one member chosen from within the area which the dispute arises selected by the Vice President for Educational Services; two faculty members (not from the area in question) selected by the Vice President for Educational Services; and one student chosen by the Student Government Association. If the Academic Chair is the instructor involved in the complaint, the Vice President for Educational Services shall appoint an alternate for the Academic Chair.

d. Procedures:

i. The aggrieved party, within ten (10) college business days, must file a notice of appeal stating the reasons for an appeal and any evidence supporting his/her position with the Dean of Enrollment Management and Student Services. The Dean of Enrollment Management and Student Services will notify the Academic Chair of the decision within which the dispute arose and he/she will serve as the Chair of the Academic Review Board and shall set a date for a meeting of the Board within twenty (20) college business days of the filing of the notice.

ii. Not less than ten (10) college business days prior to the hearing, the Board shall receive (1) the complaint, (2) any material used by the Dean of Enrollment Management and Student Services upon which his/her decision was based, and (3) the notice of appeal along with any evidence supplied by the aggrieved party.

iii. The decision of the Academic Review Board shall be based upon the record of all material required to be furnished to the Board as set forth in Section 8. d. The decision will be by majority vote based on substantial evidence.

e. Academic Review Board Decision

i. This Academic Review Board may uphold the findings of the Dean of Enrollment Management and Student Services.

ii. The Academic Review Board may reverse the decision of the Dean of Enrollment Management and Student Services and dismiss the original complaint.

iii. The Academic Review Board may find a violation, but reduce the sanctions and impose a less severe sanction as listed in Section 5.

f. Notice

i. A written explanation shall be given to the aggrieved party of the reasons for any decisions rendered and/or any sanctions that have changed.

ii. The records of the proceedings are regarded as confidential. They are to be kept for a minimum of three years in the office of the Dean of Enrollment Management and Student Services and are available only to those approved by the Dean of Enrollment Management and Student Services in accordance with applicable policies and laws.

9. Student Complaints

a. Complaints: Students with complaints regarding College operations not otherwise covered in the prior sections should report their concerns to the Dean of Enrollment Management and Student Services Office. The following procedures shall apply.

b. Procedures

i. The Dean of Enrollment Management and Student Services will receive a student’s verbal or written complaint. The Dean of Enrollment Management and Student Services will consider the merit of the complaint and will take any action considered appropriate or necessary. At this level, the student has the right to remain anonymous.

ii. If the student’s verbal or written complaint is not resolved to the student’s satisfaction and the student wishes to continue to pursue the complaint, the student must submit a request in writing to the Dean of Enrollment Management and Student Services requesting further resolution. The written request must include the specific nature of the complaint, reasons for filing the complaint, and specific remedy requested. At this level, the student may no longer remain anonymous. The Dean of Enrollment Management and Student Services will seek a resolution by using the following means: Contact the appropriate college employee who is responsible for the College operation complained about and arrange a meeting between the parties involved to discuss a possible resolution. The written complaint will be forwarded to all appropriate parties involved in the conflict prior to the meeting. Should resolution not be reached, the Dean of Enrollment Management and Student Services will review the complaint and all supporting material and render a decision regarding the complaint.

c. Limitations

i. Student complaints shall not be the basis for any discipline against a supervisor, staff member, or faculty member so long as there is no evidence of unfair treatment of the student or discriminatory practice against the student.

ii. A student may not appeal the decision of the Dean of Enrollment Management and Student Services. All decisions of the Dean of Enrollment Management and Student Services shall be in writing with rationale and are final. No further appeal will be considered.
NMC Policies

**Academic Policies**

Northwestern Michigan College is committed to open access to higher education and to your academic success. Our intent is to offer support and remediation for students who are considered at risk of academic failure.

**Attendance**

Attendance is critical to student academic progress. Even though attendance expectations may differ from course to course, you are expected to be present, prepared, and be active participants in your classes. Students will receive a written attendance policy from the instructor at the first class meeting.

**Credit for Prior Learning**

Students who have achieved competency in certain skill or course work areas may receive credit for classes or waivers of prerequisite classes. This competency could be gained through life, work, or military experience; vocational training at an area vocational, career or skill center; or completion of high school advanced placement courses. Assessment of proficiencies may be demonstrated through the following options:

- AP (Advanced Placement) credit achieved through high school courses;
- CLEP (College Level Examination Program);
- ACE (American Council on Education) for veterans;
- Competency Assessment in some NMC courses;
- Course waiver;
- Articulation credit for work at the Traverse Bay Area Career Tech Center

Students who wish to pursue credit or waivers for competencies should go to [www.nmc.edu/records](http://www.nmc.edu/records) or contact the NMC Registrar in the Records and Registration Office in the Tanis Building. Students wanting information or to register for the CLEP exam should call (231) 995-1360.

**Credit Equivalences**

An associate degree requires a minimum of 64 semester credits, or 96 quarter credits. A bachelor’s degree usually requires a minimum of 120-128 semester credits, or 180-192 quarter credits. Thus, when credits are transferred from a college on the quarter system to a college on the semester system, a quarter credit is equivalent to two-thirds of a semester credit. For example, 30 quarter credits become 20 semester credits. No credits are “lost;” they are simply converted to a different unit. This may result, however, in some fractional credits. Obtain complete transfer information from a counselor.

**Adding Classes**

Students (except for Dental Assisting, Nursing, Maritime, and Law Enforcement students) may be permitted to register without a signature into classes during the first week of its session provided the students have the required prerequisites, the class still has open seats, and the class has not met yet.

Dental Assisting, Nursing, Maritime, and Law Enforcement students need the approval of the appropriate Academic Area office. After the first class has met, the student must seek the permission to add the class from the Academic Area office. Some Academic Areas may not allow late registration. After the Drop/Add Period, students will not be permitted to add any courses. The only exceptions will be for special circumstances in the Aviation, Maritime, or Technical Programs. In these cases, students will need approval from the appropriate academic office.

**Dropping Classes**

Students must officially drop classes during the designated dates listed in the semester Schedule of Classes or online to obtain any refund or prevent receiving a grade at the end of the semester.

- Students dropping all of their classes must either drop courses online at [www.nmc.edu/selfservice](http://www.nmc.edu/selfservice) if there are no holds on the student’s record. You may also complete an enrollment form in the Records and Registration Office, or mail or fax a letter to the Records Office at (231) 995-1956. Include name, NMC ID or social security number, semester and signature. The date the letter is received is the official date of the withdrawal.
- Students dropping some of their classes may do so online at [www.nmc.edu/selfservice](http://www.nmc.edu/selfservice) if no holds are present or in the Records and Registration Office.

If you wish to drop either some or all classes online and have a hold, call (231) 995-1049 for options. In most cases, the hold may be temporarily moved to allow you to drop.

Courses may be dropped without record through the add period of the session that the course is offered. Courses dropped after the add period and before the last 25 percent of the session will be drop with record. A grade of “W” (Withdrawn) will be assigned. This grade will not affect the NMC grade point average. Dropping a class is not permitted during the last 25 percent of the session in which the course is offered. It is the student’s responsibility to notify their instructor(s) of the drop and be aware of any financial obligations.
**Grades**

**STANDARD GRADING SYSTEM AT NMC:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>outstanding</td>
</tr>
<tr>
<td>3.5</td>
<td>excellent</td>
</tr>
<tr>
<td>3.0</td>
<td>good</td>
</tr>
<tr>
<td>2.5</td>
<td>above average</td>
</tr>
<tr>
<td>2.0</td>
<td>average</td>
</tr>
<tr>
<td>1.5</td>
<td>below average</td>
</tr>
<tr>
<td>1.0</td>
<td>deficient</td>
</tr>
<tr>
<td>0.0</td>
<td>failed</td>
</tr>
<tr>
<td>S</td>
<td>satisfactory</td>
</tr>
<tr>
<td>U</td>
<td>unsatisfactory</td>
</tr>
<tr>
<td>I</td>
<td>incomplete</td>
</tr>
<tr>
<td>W</td>
<td>withdrawn</td>
</tr>
<tr>
<td>FA</td>
<td>failed to attend</td>
</tr>
<tr>
<td>AU</td>
<td>audit</td>
</tr>
</tbody>
</table>

S/U (satisfactory/unsatisfactory) may be given to designate the level of performance in courses which evaluate completion of specified competencies. (For designated courses only.)

I (incomplete) may be given at the discretion of the instructor if it is believed that the student has a valid reason for not having completed the course work and can fulfill the requirements of the course during the next semester. An incomplete not made up by the end of the next semester automatically becomes a 0.0. Incompletes may be extended one additional semester at the discretion of the instructor.

W (withdrawn) will be given to the student who officially withdraws from the class after the add period and before the last 25 percent of the session.

FA (failed to attend)—may be given if a student registered for a course but never attended and did not officially drop. FA will not affect a student’s GPA.

AU (audit) can be issued at the time of registration upon full payment of tuition and fees if a student wishes to attend a class without receiving college academic credit or a grade. Changing from “credit” to “audit” may take place through the first half of the academic session. Changing from “audit” to “credit” must be completed during the add period. Dates can be found online or in the current Schedule of Classes.

**GOOD STANDING**

You are considered to be in academic good standing when you have a minimum overall grade point average of 2.0.

**GRADE POINT AVERAGE**

Grade point average (GPA) is a weighted average of grades. A grade for a course is multiplied by the credit hours for that course to obtain “points.” Total points are then divided by total credit hours to determine the grade point average. A GPA calculator is available online.

When a course is repeated, both the most recent grade and the previous grade will appear on the transcript (official academic record). However, only the last grade will be counted in the NMC cumulative GPA. Grades of S, U, I, W, FA, and AU are not used in the computation of grade point averages. Consult with the Advising Center if this concerns you.

**DEAN’S LIST**

Students who have achieved a semester grade point average (GPA) of 3.5 or higher qualify for the Dean’s List. Each full-time student (taking 12 credits or more) receives a congratulatory letter from the Vice President for Educational Services. Dean’s List students will have their names listed in the lobby between the Biederman and Tanis buildings.

**GRADE POINT RE-EVALUATION**

Northwestern Michigan College offers you an opportunity to improve upon a cumulative grade point average by repeating a course or courses, or by petitioning for a grade point re-evaluation under special circumstances. These options provide you with the opportunity to achieve a cumulative grade point average that is truly representative of your capabilities. You may pursue this option by calling the Advising Center for petitions and further information: (231) 995-1040. Transfer institutions may or may not recognize GPA re-evaluation.

For more information on GPA re-evaluation, visit www.nmc.edu/records and click on “grades.”

**Academic Probation**

Any student whose cumulative grade point average is below a 2.0 is considered academically at risk and will be placed on academic probation. The purpose of academic probation is to assure careful academic planning and referral to support services while the student attempts to improve his or her academic record.

**SUPPORT & INTERVENTION FOR STUDENTS ON ACADEMIC PROBATION**

Any student who is on probation must meet with a counselor or academic advisor prior to registering for any semester or session until the status of probation is removed. This enables the student to build a realistic academic program and receive appropriate referrals to support services that afford the maximum possibility for success. Students who are on probation may not take more than 12 semester credits during fall/spring semester, or six credits during the summer session. The status of academic probation is removed when the student’s cumulative grade point average becomes 2.0 or higher.

**Academic Suspension**

When a student has been on probation for two semesters and is unable to maintain a current grade point average of 2.0 or higher, that student will be suspended from academic enrollment for a period of one semester of the regular academic year (not including summer.) A student may appeal academic suspension to the Registrar in writing.
**Reinstatement Following Academic Suspension**
A student who has been academically suspended is encouraged to petition the Registrar for reinstatement when the waiting period is over if he/she feels that sufficient changes have occurred to enable academic success. This petition must be made in writing at least two weeks prior to the beginning of the semester for which the student is seeking re-entry.

**Grade Alert**
Learning is dependent upon regular feedback regarding student performance. Students and instructors are both responsible for this communication. Students achieving less than a 2.0 in any 15-week class may receive written notification around the midpoint of the academic session encouraging them to contact their instructor.

**Repeating Courses**
Northwestern Michigan College offers you an opportunity to improve upon a cumulative GPA by repeating a course or courses. All courses and grades will appear on the transcript (official academic record); however, only the last grade will be counted in the cumulative grade point average. Most courses at NMC can be taken a maximum of three times. Exceptions are activity courses such as physical education and applied music. Although NMC allows a student to repeat a class up to two times, Financial Aid may have further restrictions and should be consulted.

**Transcripts**
Students who plan to attend another college or university will need to send an official transcript of their academic record to that college. Often new employers require an official copy of your transcript. A transcript is a list of the academic courses taken at NMC and the grades earned. Your official transcript will be sent to colleges or employers upon your written request. If you request the transcript be sent to you, it may not be considered official. Each request should include:

1. Your name, permanent address, and NMC ID or social security number
2. Name and address where the transcript is to be mailed
3. Your signature
4. Your phone number
5. $5 for each transcript

Requests may be made in person, by mail, online at [www.nmc.edu/selfservice](http://www.nmc.edu/selfservice) or by fax (231) 995-1956. Online or fax requests will be honored if you include your charge card number (Visa, MasterCard or Discover) and expiration date to cover the transcript fee.

Transcripts may be faxed to a third party but may not be considered official. Contact the third party for confirmation. To protect the confidentiality of the student, telephone requests cannot be honored. You may also obtain a student copy of your transcript. The official transcript has an embossed stamp and the student transcript does not. Both the official and student transcript fee is $5. Transcript requests can be completed only if all fees and obligations to NMC have been fulfilled. Current students may also go to [www.nmc.edu/registration](http://www.nmc.edu/registration) to view their transcript.

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**Inclement Weather Policy**

It is the policy of Northwestern Michigan College to maintain normal college operations on all regularly scheduled days, except in very rare cases when severe weather conditions prevent this.

It is further the policy of NMC that each staff member and student will make his or her own determination concerning attendance on unfavorable travel days.

Given unfavorable weather conditions, the college may choose to delay or close, in which case the following actions will be taken:

- For daytime classes, a decision to delay the opening of the college or close entirely will be communicated by 6 a.m.
- For evening schedules, delays or closings will be announced by 3 p.m. There is a possibility that NMC would cancel all day classes and hold evening classes.
- If the college delays opening, students should report to class at the designated opening time. If a student’s class begins before the designated opening time, that class would be canceled unless one-hour of instruction remains after the designated opening time. Up-to-date information regarding class cancellations and college closures will be communicated on the 24-hour telephone line at (231) 995-1100.
- College delays or closures will be reported to area radio and television stations (a list of stations is available in the Office of Institutional Advancement) campus video monitors, public access channel, NMC’s general information number (231) 995-1000, and online.
- College delays or closures will be reported via email to all faculty and staff, via email to all student email accounts, and via text message to those students who are subscribed to receive alerts on their cell phones.
- For weekend academic courses, the college closure/delay decision will first be enforced. If, on the other hand, a faculty member determined he/she cannot make it to campus for their particular class, the faculty member teaching the weekend course will update his/her voicemail greeting with the class cancellation information. Weekend students should then call their instructor’s voicemail rather than the 24-hour telephone line.

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**Harassment Policy**

Harassment of students and employees at NMC is unacceptable and will not be tolerated. Sexual harassment means unwelcome sexual advances and/or requests for sexual favors, and/or other verbal or physical conduct or communication of a sexual nature that creates an intimidating, hostile, or offensive environment for the student.
Upon receipt of any report or complaint of alleged harassment, NMC will promptly investigate. NMC will take reasonable measures to treat complaints discretely and respect the personal privacy rights of the person making the complaint and any accused party. Upon conclusion of the investigation, appropriate action will be taken. For additional information, contact the Dean of Enrollment Management and Student Services in the Admissions Office, Tanis Building, (231) 995-1039. Employees may contact Human Resources, Tanis Building, (231) 995-1025. Go to www.nmc.edu/policies to view all NMC policies.

Right to Know

In 1990, Congress passed into law the Student Right-to-Know and Campus Security Act. The legislation is designed to provide better consumer information to students and their families by requiring institutions of higher education to compile and report completion or graduation rates, job placement statistics, crime statistics, as well as general information about the college. Job placement statistics, crime statistics, and general information about the college is available in the schedule of classes and the student newspaper, or may be obtained in the Admissions Office, Tanis Building, (231) 995-1054. For completion or graduation rates contact the NMC Registrar at (231) 995-1058. All Board of Trustee and Student Government meetings are open to students.

Campus Security & Safety Policy

The safety of students, faculty, staff and visitors is of vital concern to Northwestern Michigan College. Everyone in the campus community is involved in creating a safe environment and is encouraged to report all safety concerns by calling campus security, (231) 883-9099. Emergency outdoor phones are identified by a blue light; all incidents will be documented and investigated. NMC has a staff of campus security personnel who work closely with the Traverse City Police Department. On a regular basis, information and presentations are made available to students and employees on issues of importance to campus safety. The campus safety report is published with the class schedule each semester and is in compliance with the Student Right-to-Know and Campus Security Act. Visit www.nmc.edu/security to view a daily crime log. Click on crime log.

Campus Safety Report

Mission: to establish a system of communication and response to provide for the safety of students and employees.

A. Report Procedures: To report criminal actions, emergencies, or suspicious situations, call:

**Emergencies** ......................................................... 911
**Campus Security** ................................................. (231) 883-9099

Emergency outdoor phones are identified by a blue light and can be used to make on-campus calls. To make an emergency call, press the red button, state your location and the situation. Police personnel will respond.

B. Access to Campus Facilities: All campus buildings are open from 7 a.m. to 10 p.m., Monday through Friday, and at other times on weekends depending on need. Residence halls are open from 7 a.m. to 12 midnight every day. Residents have keys and guests are required to register with the residence hall staff after midnight. All guests must be escorted by the resident they are visiting.

C. Authority of Institutional Security Personnel: The NMC Campus Security personnel have the authority to confront the individuals related to an incident, require identification, and when necessary, contact the Traverse City Police Department. Officers keep a daily record of activities and all incidents are promptly reported to the Campus Liaison Officer.

D. Information Programs: On a regular basis students and employees receive information on campus security and crime prevention and are invited to attend presentations on such subjects as sexual assault and rape; fire prevention; crime prevention; bomb threats; and alcohol and drug abuse prevention.

E. Occurrence Statistics: The NMC Campus Security and Safety Department has compiled these statistics for incidents on NMC’s four campuses from January 1, 2010 to December 31, 2010. Go to www.nmc.edu/security to view statistics for the past three years.

<table>
<thead>
<tr>
<th>Offenses On Campus</th>
<th>O</th>
<th>R</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder / Non Negligent</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negligent Manslaughter</td>
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<tr>
<td>Sex Offenses: Forcible</td>
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<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Sex Offenses: Non forcible</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Robbery</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aggravated Assault</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Burglary</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Motor Theft</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Arson</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Liquor Law Violations: Referred for action</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Liquor Law Violations: Arrest</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Drug Law Violations: Referred for action</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Drug Law Violations: Arrest</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Illegal Weapons Violations: Referred for action</td>
<td>1</td>
<td>1</td>
<td>0</td>
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<tr>
<td>Illegal Weapons Violations: Arrest</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hate Crime</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The Michigan State Police make available the list of registered sex offenders at www.michigan.gov/msp select “Michigan Sex Offender Registry.”

Drug-Free Learning Environment Policy
It is the intent of Northwestern Michigan College to provide a drug-free workplace and learning environment for students, faculty and staff. Furthermore, NMC intends to comply with the provisions of the Drug-Free Schools and Communities Act of 1989. All students, employees, and visitors are expected to observe all federal, state and local laws and college regulations governing the use and possession of alcohol and illicit drugs. All students, employees and visitors are specifically forbidden to use or possess alcoholic beverages, or to be under the influence of any controlled substance while on college property (except as provided by policy for use of alcohol on campus) or violate conditions of Controlled Substance Act.

Tobacco-Free Policy
In the interest of providing a safe, clean and healthy environment for students, employees and visitors, NMC has prohibited smoking on all campuses.

Student Sexual Assault Policy
I. Legal and Behavioral Definition of Sexual Assault
Sexual assault is any unwanted sexual contact resulting from force, threat, or coercion, or when the victim is mentally incapacitated or physically helpless. State of Michigan statutes will be the guide in defining sexual assault and are available in the office of the Coordinator of Campus Security.

II. Reporting Sexual Assault
The following campus offices may be contacted to report a sexual assault:
Dean of Enrollment Management and Student Services...........................................(231) 995-1039
Housing Office............................................(231) 995-1408
Personnel Counseling..........................(231) 995-1040
Student Health Services.........................(231) 995-1256
Local law enforcement.................................911
Campus Security.................................(231) 883-9099

The option of reporting to a supervisor in any discipline or department is also available.

Family Educational Rights & Privacy Act
The Family Educational Rights and Privacy Act (FERPA) helps protect the privacy of student records. The Act provides for the right to inspect and review educational records, the right to seek to amend those records and to limit disclosure of information from the records. Institutions may disclose information on a student without violating FERPA through what is known as “directory information.” Directory information includes the student’s name, address, telephone number, e-mail address, date and place of birth, major field of study, participation in officially recognized activities, enrollment status, dates of attendance, degrees and awards received. Questions about student records may be directed to the Registrar. Go to www.nmc.edu/records for more information.

Privacy Statement
In order to improve the instruction offered at Northwestern Michigan College and to meet the requirements of the Carl D. Perkins Vocational and Technical Education Act, Section 113 and the Workforce Investment Act of 1998, Section 122, we will be using your Social Security Number in order to compile summary reports. Section 113 of the Carl D. Perkins and Technical Education Act, 20 USC 2323, and section 122 of the Workforce Investment Act of 1998, 29 USC 2842, requires Northwestern Michigan College and the State of Michigan to assess the effectiveness of vocational and technical education programs aimed at training, placement, and retention of students in employment. Although these laws require that performance reports be compiled based on wage record information, neither law requires students to give their social security numbers (SSN) to the college.
Northwestern Michigan College reports currently enrolled student status to the National Student Clearinghouse each semester. This information is provided to assist students to defer repayment of student loans during the time a student is enrolled. Information is also provided to verify degrees earned and may be used by potential employers who contact the National Student Clearinghouse. Students may access the Clearinghouse website through NMC’s secure website to obtain verification of their student status to be used for insurance purposes.
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B.A., Adelphi University
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Certified Fund Raising Executive (CFRE)

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A.A., Delta College

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Masters License Ocean  
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Emeritus Faculty  
The following faculty members have retired with twenty or more years of service.

Glen Anderson  1959-85  
Norman Averill  1966-96  
Stephen Ballance  1975-00  
Pauline Baver  1951-75  
Elaine Beardslee  1963-94  
Walter Beardslee  1951-85  
Joan Berg  1977-00  
Lyle Bradford  1968-88  
Robert Burtleman  1970-06  
Larry Buys  1970-01  
Elizabeth Carden  1970-00  
Larry Carps  1971-01  
Richard Cookman  1970-00  
Helen Core  1952-74  
Sharon Dean  1965-92  
Joseph Dionne  1971-06  
Kathleen Donnelly  1961-85  
David Donovan  1971-01  
Sallie Donovan  1975-06  
William Faulk  1965-01  
Adam Gahn  1963-01  
Ernest Gaunt  1952-77  
Richard Gertz  1968-88  
Richard Goerz  1970-00  
Michele Grooters  1977-01  
Jill Hinds  1979-04  
Karen Howie  1987-10  
Dianne Keelan  1974-01  
Francis Kullman  1968-96  
John Leishman  1968-94  
Loretta Lockman  1964-84  
William Long  1965-88  
David Loveland  1973-94  
Keith MacPhee  1962-96  
Kenneth Marek  1968-01  
Kenneth Masc  1975-02  
Michael McIntosh  1970-04  
Richard Minor  1972-00  
Hetrle Molvang  1974-94  
Henry Morgenstein  1971-00  
Arlo Moss  1962-88  
Peter Nelson  1964-88  
Harry Oliver  1958-89  
Jack Ozegov  1968-89  
Richard Pascoe  1966-88  
Anne Patrick  1984-07  
Joseph Rogers  1955-84  
Kenneth Rose  1968-00  
Walter Ross  1972-97  
Robert Rudd  1963-98  
William Scharf  1964-91  
Maureen Schneider  1985-06  
William Shaw  1964-94  
Jacqueline Shinniers  1989-10  
Allison Shumsky  1957-95  
William Skinner  1961-88  
James Spenceley  1957-80  
Frederick Tank  1966-07  
John Tanner  1974-95  
Roberta Teahen  1975-01  
Roy Terdal  1964-94  
David Terrell  1969-07  
Jacqueline Tompkins  1955-84  
David Vermitten  1962-96  
Paul Welch  1964-87  
Lila Wilkinson  1951-74  
Jerry Williams  1970-05

Adjunct Faculty  
Annis, Joedy M.  
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A.A., Macomb Community College

Auch, Thomas F.  
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M.A., Michigan State University  
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Bagaloff, James B.  
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Bailey, Mary B.  
Communications Instructor

Bajema, David J.  
Automotive Instructor  
Master Certification - National Institute for Automotive Service Excellence

Ballance, Stephen J.  
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M.A., Ohio University  
B.A., Michigan State University

Bartlett, Beverly A.  
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Bartlett Jr., Fred P.  
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M.B.A., Averett College  
B.S., Lawrence Technological University

Beach, Rebecca C.  
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Ed.D., University of Missouri

Beeby, George W.  
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J.D., Wayne State University Law School  
B.S., Michigan Technological University

Beery, John W.  
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Borkovich, Michael L.  
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A.A., Lansing Community College

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Brown, Andrea L.  
Science/Math Instructor  
M.Ed., B.S., Oakland University

Bucco, Annette  
Health Occupations Instructor  
B.S.N., University of Michigan
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Education</th>
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<tbody>
<tr>
<td>Bullis, Jo</td>
<td>Social Sciences Instructor</td>
<td>J.D., B.S., University of North Dakota</td>
</tr>
<tr>
<td>Burke, Caroline E.</td>
<td>Business Instructor</td>
<td>M.S., B.A., B.B.A., Western Michigan University</td>
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<td>A.A., A.A.S., Northwestern Michigan College</td>
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<td>Buss, Thomas</td>
<td>Business Instructor</td>
<td>B.S., A.A.S., Ferris State University</td>
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<td>Cannon, Nelson J.</td>
<td>Social Sciences Instructor</td>
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<td>Carlson, Craig A.</td>
<td>Physical Education Instructor</td>
<td>B.S., Ferris State University</td>
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<td>Casperson, Leslie K.</td>
<td>Health Occupations Instructor</td>
<td>B.S.N., Western Michigan University</td>
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<td>Casperson, Todd A.</td>
<td>Construction Trades Instructor</td>
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<td>Cataldo, Horace P.</td>
<td>Technical Instructor</td>
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<td>Cavendish, Laura E.</td>
<td>Humanities Instructor</td>
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<td>Cherry, William M.</td>
<td>Social Sciences Instructor</td>
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<td>Chubb, Jr., Kenneth A.</td>
<td>Social Sciences Instructor</td>
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<td>A.A.S., Northwestern Michigan College</td>
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<td>Cochran, Michael L.</td>
<td>Social Sciences Instructor</td>
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<td>Cochrano, Kathleen A.</td>
<td>Health Occupations Instructor</td>
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<td>Cook, Aaron C.</td>
<td>Aviation Instructor</td>
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<td>Cooney, Robert</td>
<td>Social Sciences Instructor</td>
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<td>Crockett, James E.</td>
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<td>Culinary Arts Instructor</td>
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<td>DeCamillis, Susan L.</td>
<td>Business Instructor</td>
<td>M.L.S., Eastern Michigan University</td>
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<td>Denton, Shawn L.</td>
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<td>Deutsch, Mary Lou</td>
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<td>Ditri, Jane W.</td>
<td>Health Occupations Instructor</td>
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<td>Drzewiecki, Stephen M.</td>
<td>Social Sciences Instructor</td>
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<td>Eisenstein, Dorothy B.</td>
<td>Humanities Instructor</td>
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<td>Health Occupations Instructor</td>
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<td>Technical Instructor</td>
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<td>Science/Math Instructor</td>
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<td>Fewins, Nicole S.</td>
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<td>Physical Education Instructor</td>
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<td>Gentry, Ronald W.</td>
<td>Humanities Instructor</td>
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<td>George, Robert P.</td>
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<td>Gingras, William R.</td>
<td>Construction Trades Instructor</td>
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<td>Gleason, Karen R.</td>
<td>Health Occupations Instructor</td>
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<td>Goodchild, Daniel R.</td>
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<td>Hainen, Michael J.</td>
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<td>Harmon, BJ</td>
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<td>Haselton, Dean C.</td>
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<td>Heathner, Brian D.</td>
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<tr>
<td>Hill, Daria K.</td>
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<td>Hines, Eric C.</td>
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<td>Hoadley, Richard S.</td>
<td>Health Occupations Instructor</td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Education</th>
<th>College/Institution</th>
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<tbody>
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<td>Holley, Mark W.</td>
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<tr>
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<td>Hunt, Anita C.</td>
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<td>Hunt, Charles</td>
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<tr>
<td>Hunter, Michael F.</td>
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<tr>
<td>Husser, David A.</td>
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<td>Hutchens, Steven R.</td>
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<td>Jaquish, Marilyn S.</td>
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<td>Jarvi, Catherine L.</td>
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<td>Jerome, Matthew J.</td>
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<tr>
<td>Johnson, Maria</td>
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<tr>
<td>Jones, Rebecca T.</td>
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<td>Kahler, Chandler</td>
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<td>Kahler, Karen L.</td>
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<td>Kimble, Douglas M.</td>
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<td>Klein, Constance J.</td>
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<td>Klein, Leonard E.</td>
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<td>LaCourse, Peter W.</td>
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<td>Laughlin, Frederick L.</td>
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<td>Lee, Loren</td>
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<td>Littlefield, Jennifer M.</td>
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<td>Lyon, Mark E.</td>
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<td>Maasberg, Michael</td>
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<td>Maloney, Vincent J.</td>
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<tr>
<td>Masse, Laurent V.</td>
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<td>Masterson-Bzdok, Colleen F.</td>
<td>Science/Math Instructor</td>
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<td>B.Ed., University of Western Ontario</td>
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<td>Mathis, Richard A.</td>
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<td>B.S., Michigan State University</td>
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<td>Mayer, Sharon L.</td>
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<td>McCall, Brian D.</td>
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<td>McKee, Carole J.</td>
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<td>Miller, Karen L.</td>
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<td>Moody, Wayne A.</td>
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<td>Master Certification, National Institute</td>
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<tr>
<td>Mueller, Mark R.</td>
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<tr>
<td>Nadji, Taoufik</td>
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<td>Nelson, James D.</td>
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<td>Nuffer, Eric S.</td>
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<td>Oberlin, Michael B.</td>
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<td>Oberski, Danial J.</td>
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<td>O’Connor Heitjan, Mary</td>
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<td>Ogders, Susan L.</td>
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Residential Builder License

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Send, Jeffery M.  
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Cook, Frederick P.  
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Dalley, John  
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Custodian

Harrand, Sandra M.  
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Harvey, Kimberly K.  
Groundskeeper
Glossary

Academic Advising
The process by which faculty members assist students with course selection and career advisement; students are assigned to an advisor based on their program of study.

Accreditation
Recognition that the college or a college program has met standards or requirements set up by a governing organization.

Admission
Acceptance of an applicant for enrollment in the college.

Articulation
The process of identifying the transferability of NMC courses to other colleges and universities.

Associate Degree
A degree issued to a student who has completed a prescribed curriculum/program of courses totaling a minimum of 64 semester credits, generally completed in two years of full-time attendance; students earn an Associate of Science and Arts, Associate in Applied Science, or Associate Degree in Nursing, depending on their area of emphasis.

Audit
To enroll in an academic course on a non-credit basis; all regular fees and charges apply.

Baccalaureate Degree
A degree issued to a student who has completed a prescribed curriculum/program of courses totaling 120 to 128 semester credits, generally completed in four years of full-time attendance.

Catalog
A college's official publication outlining general information, requirements for admission, degree and certificate programs, special services, course descriptions, and faculty/staff listing.

Certificate Program
A prescribed curriculum/program of courses in a job specialty area which includes some basic education, designed as preparation for immediate employment; requirements for certificates vary considerably and details are found in this catalog.

Class Schedule
A publication listing all classes offered for a given semester including credit hours, class hours, costs, instructors, and locations.

COMPASS
An assessment of academic skills given to new students who are pursuing certificate or degree programs or who wish to enroll in English or math; the results are used by advisors in course advisement.

Co-requisite
An additional course or instructional experience which is required to be taken simultaneously with certain courses, such as a science lab which may be required to be taken with a science lecture course.

Counseling, Personal
Assistance which students may receive from the Counseling Center regarding personal issues.

Credit
A value measurement assigned to academic classes; earned credits certify that a student has successfully completed a course of study.

Curriculum
A group of courses offered by a school or college; a group of courses required for a specific major or program at a school or college.

Drop/Add
The official procedure for dropping or adding classes to a student’s schedule, accomplished by filing a “drop/add” form.

Elective
A course which a student may choose to take from a number of alternative courses in order to fulfill a program requirement.

Faculty Advisor
A faculty member who assists students with decisions about programs of study and courses.

Fees
Charges assessed to students other than tuition charges.

Financial Aid
Various forms of financial assistance to help pay college costs (see Grants, Loans, and Scholarships).

GPA
Grade Point Average. Students taking academic classes for credit are assigned a grade which is equal to a certain number of points: A = 4., B = 3., C = 2., D = 1., and E = 0. Grade Point Average is determined by the number of grade points earned divided by the number of credit hours completed.

Grant
A monetary award given to a student based on financial need; a grant does not have to be repaid.

Honors
A program at NMC through which students may earn honors credit by 1) taking special honors classes and/or 2) taking regular classes for honors credit by making arrangements with individual instructors.

In-District
A designation identifying the residency status of a student who lives in Grand Traverse County and pays NMC’s lowest general tuition.

In-State
A designation identifying the residency status of a student who lives in a Michigan county other than Grand Traverse and pays higher tuition, also called “Out-of-District.”

Independent Study
Individual in-depth study on a special subject under the guidance of a faculty member.

Liberal Arts
A curriculum which ranges across the broad field of human knowledge, including communications, humanities, social sciences, mathematics and the sciences.

Loan
A monetary award given to a student from a lender (college, bank, savings and loan, credit union) based on financial need; loans must be repaid.

Non-credit
Courses which do not qualify as graduation requirements, such as developmental or specific topic courses; completion of these courses is recorded on a student's permanent record as a “Q” (qualified) or as a “NQ” (not qualified), but these grades are not part of a student's grade point average.

Occupational Studies
A curriculum which provides career-specific courses as well as core education courses, designed to prepare graduates for immediate entry into the workforce.

Orientation
A required program for all new NMC students which features an opportunity to become acquainted with campus resources and policies while registering for the first semester of NMC classes.
Out-of-District
A designation identifying the residency status of a student who lives in a Michigan county other than Grand Traverse and pays higher general tuition, also called “In-State.”

Out-of-State
A designation identifying the residency status of a student who lives outside of Michigan and pays NMC’s highest general tuition.

Permanent Record
A listing of each student’s academic history maintained by NMC’s Records Office; these records are confidential.

Postsecondary Education
Education beyond the high school level.

Pre-requisite
Requirements which must be met or courses which must be successfully completed prior to enrolling in a specific course or program.

Program
A planned curriculum in a field of study which includes a list of specific requirements.

Readmission
The process of officially re-entering college at registration time for students who have been away from NMC for one or more semesters.

Registration
The process of officially enrolling in a course(s) and paying tuition.

Residency
The official home address of a student which is used to determine the tuition rate charged; residency classifications are In-District, In-State, and Out-of-State.

Scholarship
A monetary award based on academic ability and/or financial need and/or a donor’s specific preferences; scholarships do not have to be repaid.

Semester
An academic session lasting approximately 15 weeks.

Service Area
The six-county area from which NMC primarily draws its students: Antrim, Benzie, Grand Traverse, Kalkaska, Leelanau, and Wexford.

Session
The number of weeks a course meets (15 weeks, 8 weeks, 5 weeks, etc.) during a semester.

Transcript
A copy of a student’s permanent record (grades) available upon written request by a student to be released to a third party from NMC’s Records Office.

Tuition
The monetary charge a student must pay at registration which typically equals the number of contact hours with the instructor multiplied by the student’s tuition rate, which is based on his/her residency status.

NMC. Find it here.
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21. HOUSING CHOICE

Application must be signed before being considered for admission.

NMC complies with Title IX of the Education Amendments of 1972 and with Section 504 of the Rehabilitation Act of 1973 which prohibit discrimination on the basis of

Signature __________________________________________________________________________ Date ___________________

22. PERSONAL HISTORY (Please answer both)

Please Note.

(Please see "Transcript Requirements" at the bottom of the following page.)

Do you consider yourself to be

Select one or more of the following

• I understand that falsification or omission of any information requested on this application may result in cancellation of admission

If you didn't graduate from high school, will you receive your GED or equivalent?

Name of last high school or home school attended

If you are under 21, please have an official transcript or GED scores sent to the address on pg 1.

If yes, please explain on a separate sheet.

23. CAREER PATHWAY CODES

1 Arts & Communications
2 Business, Management, Marketing & Tech.
3 Health Sciences
4 Engineering/Manufacturing & Industrial Tech.
5 Natural Sciences & Agriculture
6 Human Services

Table A - PROGRAM CODES

Associate in Science and Arts Degree (ASA)

(Transfer Options - Satisfies MACRAO Agreement)

733 Accounting
711 Art
702 Biology
734 Business Administration
727 Chemistry
722 Child Development
704 Communications
706 Criminal Justice
708 Education
709 Engineering
710 English (Literature, Creative Writing)

Freshwater Studies

591 Global Policy & Sustainability
592 Economy & Society
593 Science & Technology
576 Geography
730 History
712 Liberal Arts/Science
715 Mathematics
731 Modern Languages - American Sign Language
726 Performing Arts

**** Theater, Dance, Music
792 Philosophy/Religion
717 Physical Sciences
725 Political Science
718 Pre-Law
713 Pre-Medical, Pre-Dental, Pre-Veterinary
724 Psychology
723 Social Work
725 Sociology
728 Visual Communications (Comm. Art)

Table B - CATALOG HIGHLIGHTS

Associate in Applied Science Degree (AAS)

Occupational Specialty Programs

103 Accounting

**** Applied Plant Science

580 Viticulture
581 Fruit Production
582 Landscape & Nursery
583 Turf Grass Management

560 Automotive Service Technology

662 Aviation Flight Technology

**** Business Administration

122 Computer Applications

151 Entrepreneurship
105 General
15 Management
107 Marketing

555 Advanced Manufacturing

**** Computer Information Technology

106 General
108 Developer
125 Infrastructure
109 Culinary Arts
300 Dental Assistant

**** Great Lakes Maritime

Please call (231) 995-1200 or visit

www.nmc.edu/maritime

352 Law Enforcement
584 Manufacturing Technology
655 Renewable Energy Technology - Electrical
656 Renewable Energy Technology - HVAC

573 Technical Management Administration

**** Visual Communications (Commercial Art)

251 Creative Management in Art Direction
351 Visual Communications

302 Associate Degree in Nursing (ADN)

**** Associate in General Studies (AGS)

Table C - HIGH SCHOOL CODES

23035 Alba High School
23026 Bellaire High School
23028 Benzie Central High School
23040 Buckley High School
23043 Cadillac High School
23055 Central Lake High School
23140 Elk Rapids High School
23135 Elkhart High School
23135 Evart High School
23192 Forest High School
23157 Frankfort High School

Table D - COLLEGE CODES

00224 Adrian College
00235 Albion College
00236 Alma College
00237 Alpena Community College
00244 Anderson University
00239 Aquinas College
00467 Baker College
00240 Bay De Noc Community College
00366 Bay Mills Community College
00241 Calvin College
007617 Carnegie Institute
00243 Central Michigan University
00246 Cleary College
00247 Concordia College
00266 Cornerstone University
00254 Davenport University
00251 Delta College
00470 Detroit Business Institute
00253 Detroit School of Business
00469 Dorsey School of Business

002259 Eastern Michigan University
00290 Ferris State University
00263 Glen Oaks Community College
00265 Grace Bible College
00267 Grand Rapids Community College
00268 Grand Valley State University
00269 Great Lakes Christian College
006770 Great Lakes Lake College
00270 Henry Ford Community College
00273 Hope College
001627 ITT Technical Institute
00214 Jackson Community College
00227 Kalamazoo Community College
00649 Kalamazoo Valley Community College
00226 Kellogg Community College
007618 Kendall College
00229 Kalamazoo College
000929 Lake Superior State College
00278 Lansing Community College
00279 Lawrence Institute of Technology
008906 Macomb Community College
00292 Madonna University
00290 Michigan State University
002819 Michigan Technical College
00294 Monroe County Community College
00295 Montcalm Community College
00286 Mott Community College
00297 Muskegon Community College
00299 North Central Michigan College
00301 Northern Michigan University
00302 Northwestern Michigan College
000720 Northwood University
00303 Oakland Community College
00307 Oakland University
000717 Kittredge Community College
000238 Olivet College
00311 Revised Bible College

00293 Kirtland Community College

232420 Glen Lake High School
232430 Grand Traverse Christian Academy
232086 Interlochen Arts Academy
232190 Kalkaska High School
232215 Kingsley High School
23235 Lake City High School
232241 Leelanau Peninsula School
231645 Leelanau School
233580 St. Francis High School
233230 Leland High School
233240 Saint Mary’s High School/Lk Leelanau
232510 McBain High School
232385 Traverse City High School

Table E - COUNTY CODES

01 Alcona 13 Calhoun
02 Alger 14 Cass
03 Mecosta 15 Charlevoix
04 Alpena 16 Chippewa
05 Bay 17 Clare
06 Arenac 18 Claire
07 Clinton 19 Cleaveland
08 Barry 20 Crawford
09 Benzie 21 Delta
10 Benton 22 Dickinson
11 Charlevoix 23 Eaton
12 Branch 24 Emmet

25 Genesee 37 Isabella
26 Gladwin 38 Jackson
27 Gogebic 39 Kalkaska
28 Grand Traverse 40 Manistee
29 Huron 41 Marquette
30 Houghton 42 Mason
31 Iron 43 Mecosta
32 Houghton 44 Menominee
33 Ingham 45 Momanw
34 Ionia 46 Muskegon
35 Iosco 47 Newaygo
36 Iron 48 Montmorency

49 Mackinac
50 Manistee
51 Manistee
52 Marquette
53 Mason
54 Mecosta
55 Menominee
56 Midland
57 Muskegon
58 Monroe
59 Montcalm

60 Montmorency
61 Muskegon
62 Newaygo
63 Oakland
64 Oceana
65 Otsego
66 Osceola
67 Presque Isle
68 Roscommon

69 Delta
70 Ottawa
71 Presque Isle
72 Roscommon

73 Saginaw
74 Sanilac
75 Schoolcraft
76 Shiawassee
77 St. Clair
78 St. Joseph
79 Tuscola
80 Van Buren
81 Washtenaw
82 Wayne
83 Presque Isle
84 Roscommon

TRANSCRIPT REQUIREMENTS: Official Transcripts should be mailed directly to the NMC Admissions Office using the address shown at the top of the application. 1. If you have been recently attended high or home school if you are under 21 years of age. 2. From all previously attended colleges and universities if any of the following apply to you: A) You are under 21 years of age. B) You wish to have previous college coursework evaluated for credit at NMC. C) You wish to apply for Federal Financial Aid (including loans). D) You are a veteran and wish to apply for Educational Benefits. E) You are seeking admission to a limited enrollment program such as Dental Assisting or Nursing.
M. Main Campus
U. University Center Campus
  1 University Center Offices – South Entrance
  2 NMC Administrative Offices, NMC Extended Education – North Entrance
G. Great Lakes Campus
  3 Water Studies Institute
  4 Maritime Academy
  5 Culinary Institute/Lobdell’s
  6 Hagerty Conference Center
A. Aero Park Campus
  7 Automotive Service Technology
  8 Aviation Hangar
  9 Parsons-Stulen Building
  10 Aero Park Laboratories, Shipping and Receiving
O. Observatory

NMC Campus Locations

Main Campus
1 Dennos Museum Center
2 Scholars Hall (SH)
3 Osterlin Building/Library (O)
4 Power House
5 Tanis Building
6 Biederman Building (LB)
7 Health & Science Building (HS)
8 Founders Hall
9 West Hall/Bookstore/Cafeteria
10 East Hall
11 Clock Tower
12 Okerstrom Fine Arts Building (F)
13 Beckett Building (JB)
14 Apartments
15 Olenson Center (OC)
16 Rajkovich Building, Phys. Ed. (P)
17 Maintenance Building

Welcome Center

= Parking Lot
All lots are open weekdays, 7am-6pm to vehicles with a valid NMC parking permit. Metered spaces available for the general public. No permit is required after 6pm or on the weekends.

= College Entrance

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