Find it here.
2010 Academic Calendar

Spring Semester 2010
Online Registration Begins.................. M, Nov. 9, 2009
Face-to-Face Registration Begins.......... M, Nov. 16, 2009
Opening Conference/Prof Dev.............. M, Jan. 4, 2010
Final Payment Due.......................... T, Jan. 5
Drop Date for Non-Payment.................. W, Jan. 6
Final Registration .......................... Varies based on session
Classes Begin ................................ M, Jan. 11
fst 7 ½ week session ....................... M-U, Jan. 11-Mar. 2
2nd 7 ½ week session........................ M-U, Mar. 3-May 2
Spring Break ................................ M-U, Mar. 29-April 4
Spring Holiday-College Closed............. F, April 2
Honors Convocation........................ F, April 30
Commencement ................................ S, May 1
Semester Ends ................................ U, May 2
Grades Entered .............................. W, 1 pm, May 5
NMC BBQ .................................... U, May 23

Summer Session 2010
Online Registration Begins.................. M, Nov. 9, 2009
Face-to-Face Registration Begins.......... M, Nov. 16, 2009
Final Payment Due.......................... M, May 3, 2010
Drop Date for Non-Payment.................. T, May 4
Final Registration .......................... Varies based on session
Classes Begin ................................ S, May 8
4-week Session ................................ S-M, May 8-June 7
Classes Canceled.............................. S-M, May 29-30
Memorial Day-College Closed ................. M, May 31
Eight-week Session......................... S-M, June 12-Aug. 9
Classes Canceled.............................. S-M, July 3-4
College Closed .............. S-M, July 4-5
Classes End .................................. M, Aug. 9
Grades Entered .............................. W, 1 pm, Aug. 11

Fall Semester 2010
Registration Begins......................... W, April 14, 2010
   Registration for BIO 227 begins at 7:30 a.m.
   Registration for all other courses begins at noon.
Tuition Payment Due ........................ T, Aug. 10, 2010
Classes Begin .................................. S, Aug. 28
College Closed ................................ S-M, Sept. 4-6
Classes Canceled.............................. T, Oct. 19
   (Faculty Professional Development Day)
Spring & Summer 2011
Registration Begins......................... W, Nov. 3
College Closed ................................ R, Nov. 24 after 5 pm
   (Thanksgiving) .......................... F-U, Nov. 25-28
Semester Ends ................................ U, Dec. 19
Grades Available ............................ U, Dec. 23
College Closed .............................. F-M, Dec. 24-27
   (Holidays) .................. R-F, Dec. 30 at noon-Dec. 31

Visit www.nmc.edu/news/calendars/academic for the most updated academic calendar.
Welcome

Northwestern Michigan College
2010 - 2011 Catalog

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 averaging 15 years of teaching experience at NMC
• 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 10 universities

Timothy J. Nelson
President

“NMC’s faculty and staff take pride in seeing students achieve their goals. Whatever you’re looking for, we are dedicated to helping make sure you find it here.”

NMC. Find it here.

“Your get a lot for your money. NMC allowed me to build a career without having to leave the city.”

Benjamin Marentette
NMC 1999-2001
B.A., Spring Arbor College at NMC’s University Center, 2003
MBA - Lawrence Tech at NMC’s University Center, 2006
### 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. Three 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 10 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.

- **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.

#### 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.

#### Enrollment
Approximately 4,300 students enroll in credit courses each semester. An additional 10,000 enroll in non-credit courses and workshops annually. About half of NMC’s academic students are between 18 and 21 years old. The average student age is 26, factoring in the many adults in the region who choose to continue their education. Grand Traverse County is home to 52 percent of enrolled students. The balance come from other Michigan counties, outside Michigan, and foreign countries.

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

#### Campus Housing
NMC provides a residence hall, plus apartment buildings on main campus.

#### Financial Aid
More than half of NMC students receive financial aid through scholarships, loans, grants and on-campus employment.
Facilities

Main Campus
1701 East Front Street, Traverse City, Michigan 49686

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, one distance learning classroom, and one writing center. It also has faculty offices, a conference room and several study areas.

BIEDERMAN BUILDING
This building contains general purpose classrooms, student interaction areas, one computer lab, Counseling Services, 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 has rooms for about 200 students and offices for the housing staff. It was remodeled in 2002.

FOUNDERS 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 a Macintosh computer lab for art and music, as well as 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.
Main Campus continued

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, Career and Employment Services, classrooms, and computers.

POWER HOUSE
This small brick building houses the power plant for the college.

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, 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 the president, educational services, administrative services, admissions and financial aid, registration and records, computer services, human resources and the business office.

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, student and staff dining rooms, the campus bookstore as well as offices for the college radio station, magazine, student government, and honors program.

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. The harbor is being redeveloped to improve its function and accessibility.

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
2600 Aero Park Drive, Airport Industrial Park, Traverse City

PARSONS-STULEN MICHIGAN TECHNICAL EDUCATION CENTER (M-TEC)
This facility provides training in the areas of manufacturing, construction, aviation, and information technology. Named after John T. Parsons and Frank L. Stulen, local innovators who created “numerical control,” M-TECsm contains a flexible learning environment, including a “high bay” area for construction and manufacturing, plus computer labs, an interactive television classroom, conference room and faculty and staff offices. Other offerings include organizational training and research.

AERO PARK LABORATORIES
Aero Park Laboratories (APL) is NMC’s newest campus building. Located on the Aero Park campus, across from the Automotive Technologies building, it is currently under renovation for use as classroom space.

AUTOMOTIVE TECHNOLOGY SERVICE BUILDING
This facility contains the Automotive Service Technology Program and NMC Shipping and Receiving.

AVIATION BUILDING
This building contains the Flight Training Device (FTD) for the NMC Flight Program.

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 30-acre parcel was purchased in 1989 and was formerly owned by Sara Lee Corporation.

SCHMUCKAL BUILDING
This building is named after generous NMC benefactors, Arthur M. and Mary E. Schmuckal. It houses the NMC University Center which offers more than 40 bachelors completion and advanced degree programs in partnership with 10 Michigan universities and colleges. Also located at the University Center Campus is NMC Extended Educational Services, which provides community and continuing education offerings. Attached to the Schmuckal Building is the Northwest Michigan Council of Governments Building (1995) which added a new second floor in 2000 for University Center classes.
Welcome

Administrative Offices

BOOKSTORE & CLASS SUPPLIES
The Bookstore is located in West Hall. (231) 995-1285
Check-cashing policy: The Bookstore will gladly accept your check when you provide one of the following: Picture I.D., Driver’s License, State I.D., Dining Hall Pass, Credit card, Work I.D., Voter Registration card, Current semester NMC student I.D. card.

Bookstore Refund Policy: Refunds will be given through the second week of the semester only. You are entitled to a full refund if: 1) You drop a class or withdraw from the college; 2) Your class has been cancelled. To receive a refund, you must provide the original cash register/financial aid receipt.

BUSINESS OFFICE
Accounts payable and payroll. Tanis Building, lower level, (231) 995-1140 fax (231) 995-1681.

CASHIER SERVICES
Payment for tuition, fees, parking permits, accounts receivable information. Tanis Building, main floor, (231) 995-1085 or fax (231) 995-1570.

INSTITUTIONAL ADVANCEMENT
Marketing, public relations, publications, development, alumni, grants, NMC Barbecue. Founders Hall, (231) 995-1021 or 877-922-1021.

EDUCATIONAL SERVICES
Vice President for Educational Services. Tanis Building, lower level, (231) 995-1543.

HUMAN RESOURCES
Employee information, employment policies, employment opportunities, benefits. Tanis Building, lower level, (231) 995-1143.

INFORMATION TECHNOLOGY SERVICES
Computer services and information. Tanis Building, lower level, (231) 995-1044.

PRESIDENT’S OFFICE
Tanis Building, main floor, (231) 995-1010.

STUDENT SERVICES
Admissions, financial aid, records/registration, counseling, on-campus housing, center for learning, career/employment services, health services, student activities. Dean for Student Services is in the Tanis Building, main floor, (231) 995-1046.

WELCOME CENTER

Campus Services/Information

CANCELED CLASSES
Weekdays: Call (231) 995-1100, or www.nmc.edu/students
Weekends: Call your instructor’s campus telephone number directly. Your instructor will update his/her voicemail greeting with class cancellation information.

EMERGENCY TEXT MESSAGE NOTIFICATION
NMC offers an optional system for students and employees to receive Emergency Alert text message via cell phone. You can also choose to receive notifications about campus closures due to weather or other factors. To opt in:
1. Log in to NMC Self-Service: www.nmc.edu/selfservice
2. Click on the “Personal Information” tab
3. Click on “Text Message Opt-In” and follow directions

FOOD SERVICE
Located in West Hall. Vending machines are located in most campus buildings. Main floor, (231) 995-1678.

LOST AND FOUND

PARKING
All NMC students, faculty and staff must display a valid parking permit to park in any main campus lot during Fall and Spring semesters. No NMC permit is required on weekends. Vehicles with valid permits may use any lot that is not designated for visitors, special needs or restricted parking. 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. Any questions or comments about NMC parking policies should be directed to (231) 995-1694. See map on inside back cover of catalog for parking lot locations.

PUBLIC TRANSPORTATION
Bay Area Transportation Authority (BATA) busses have a schedule of stops on the NMC campus plus call-in service. BATA, (231) 941-2324.

STUDENT ASSISTANCE PROGRAM
Referral/resource program for all health/wellness needs. Peer education and support groups. Student Activities Office, East Hall, main floor, (231) 995-1405.

TELEVISION MONITORS
Current information on class cancellations, activities, and events, available on television monitors in each classroom building.
Learning Opportunities

Northwestern Michigan College provides a wide variety of learning experiences to more than 50,000 learners each year. Learners come to NMC for academic degrees, personal enrichment, organizational training and cultural activities.

While this catalog primarily contains information about associate degrees and certificates, this section offers an overview of all the learning opportunities and community resources available at NMC. You can also visit www.nmc.edu for more information about these other facets of NMC.

Academic Degrees
- Transfer options and occupational specialty programs. Use this catalog, a Schedule of Classes or visit www.nmc.edu/programs
- NMC’s University Center offers Bachelor’s completion and advanced degrees. Visit www.nmc.edu/ucenter

Online & Other Flexible Learning Options
Choose classes that fit your life and learning style. www.nmc.edu/online

Extended Educational Services
Non-credit, short-format courses. Visit www.nmc.edu/ees
- Professional development
- LIFE Academy for older adults
- College for Kids
- Continuing education certificates

Community Resources
You don’t have to enroll to take advantage of all NMC offers. See an exhibit at the Dennos Museum Center, attend an event at the Hagerty Center, stargaze at Rogers Observatory or listen to WNMC radio.
- Dennos Museum Center - www.dennosmuseum.org
- Great Lakes Water Studies Institute - www.nmc.edu/wsi
- Hagerty Center - www.nmc.edu/hagerty
- Lobdell’s: A Teaching Restaurant - www.nmc.edu/culinary
- Osterlin Library - www.nmc.edu/library
- Rogers Observatory - www.nmc.edu/observatory
- Training and Research - www.nmc.edu/training
- WNMC radio - www.wnmc.org

Whatever your learning needs, you can “Find it here” at NMC.
Academic Area: Aviation

Aviation

An FAA-approved flight training school, the Aviation Program combines flight training, ground school and liberal arts courses and awards an Associate in Applied Science degree. Flight training begins the first semester and you’ll learn to fly in all four seasons. The curriculum includes completion of Private, Instrument, and Commercial Certificates and Multi-engine and Flight Instructor Ratings, plus specialty courses designed to increase your hiring potential. A fleet of single and multi-engine aircraft provide hands-on experience enhanced by a level 6 state-of-the-art flight simulator. NMC has relationships with many aviation businesses to increase hiring opportunities after graduation.

Degrees Available

Associate in Applied Science (AAS)

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.

Contact Information

www.nmc.edu/aviation
2600 Aero Park Drive
(231) 995-1220
(231) 929-7116 fax
aviation@nmc.edu

Memberships

University Aviation Association
NBAA

Accreditation

Federal Aviation Administration

Transfer Guides

Available in the Counseling Center, Biederman 104 or www.nmc.edu/counseling

Scholarships

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

Facilities

Single-engine aircraft
Multi-engine aircraft
2 simulators
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 a counselor or 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

Accounting (AAS) ................................................................. 70
Administrative Support Specialist (Certificate) .................. 70
Business Administration (AAS) ............................................. 74
with concentrations in Computer Applications, Entrepreneur,
General Business, Insurance, Management, and Marketing
Business Administration - Online (AAS) .......................... 75
Clerical Support (Certificate) ............................................... 77

Computer Studies

Computer Information Technology - General (AAS) ............ 77
Computer Information Technology - Developer (AAS) ......... 78
Computer Information Technology - Infrastructure (AAS) .... 78
Infrastructure Specialist I, II and III (Certificates) ............... 79
Industry Certifications ......................................................... 80
Office Applications Specialist (Certificate) .......................... 80
Support Specialist (Certificate) ............................................. 81
Culinary Arts (AAS) ............................................................. 83
Culinary Arts (Certificate) .................................................. 83
Entrepreneurship - Levels I and II (Certificates) ................. 85
Insurance - Levels I, II and III (Certificates) ....................... 86
Legal Assistant (AAS) .......................................................... 87
Technical Management Administration (AAS) ................. 96
Web Developer - Levels I, II and III (Certificates) ............... 81

Transfer Options (Follow ASA Degree Requirements)

Accounting ................................................................. 66
Business Administration .................................................. 66

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

Accreditation

American Culinary Federation

Transfer Guides

Available in the Counseling Center, Biederman 104 or
www.nmc.edu/counseling

Scholarships

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

Facilities

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

Internships

Academic International
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)

Communications .......................................................... 66
English ........................................................................ 67
Modern Languages
  - American Sign Language ........................................... 68
  - French ...................................................................... 68
  - Spanish .................................................................... 68
  - Theater .................................................................... 68

**Online & Other Learning Options**

ASA degree - Depending on the transfer college requirements, many required courses can be taken online.
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) .......................................................... 96
Dental Assistant
- Dental Assistant (AAS) ........................................................................... 84
- Dental Assistant (Certificate) ................................................................. 85
Nursing
- Associate Degree in Nursing (ADN) ......................................................... 92
- LPN to ADN Completion (ADN) ............................................................... 93
- Practical Nursing (Certificate) ................................................................. 94

Transfer Options - Nursing

Many colleges and universities offer BSN completion programs. Two University Center partners, Ferris State University and the University of Michigan, allow you to complete your Bachelor’s while remaining in Traverse City. See page 22-23 or go to www.nmc.edu/ucenter for more information.

Online & Other Learning Options

- Nursing Online Option (page 93)
- Allied Health/Pharmacy Technician - NMC offers a 4-credit independent study course in Fundamentals of the Pharmacy Technician. It includes training and testing using both an online format and textbook with independent projects and homework. Upon successful completion, you will have the basic foundation to begin preparing for the national certification exam. Call (231) 995-1245 for more information.
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’ll 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) ................................................................. 97
Visual Communications - Creative Management in Art Direction (AAS) ...... 97

Transfer Opportunities
Art ............................................................................................................ 66
Dance ....................................................................................................... 68
History .................................................................................................... 67
Music....................................................................................................... 68
Philosophy ............................................................................................. 68
Religion ................................................................................................... 68
Visual Communications .......................................................................... 69

Online & Other Learning Options
ASA degree - Depending on the transfer college requirements, many required courses can be taken online.
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 commercial 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 100 percent employment and exceptional 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........................................................................................................... 88-89
  Maritime Deck Officer
  (AAS-NMC; BS-Ferris State University).......................................................... 90
  Maritime Engineering Officer
  (AAS-NMC; BS-Ferris State University).......................................................... 91
Power Plant Facilities Operator (AAS) .............................................................. 91

Contact Information
www.nmc.edu/maritime
Great Lakes Campus
(877) 824-SHIP
(231) 995-1200
(231) 995-1318 fax
maritime@nmc.edu

Memberships
Propeller Club
SNAME
Women On The Water

Accreditation
U.S. Maritime Administration
U.S. Coast Guard

Transfer Guides
Available in the Counseling Center, Biederman 104 or www.nmc.edu/counseling

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

Facilities
T/S State of Michigan
Maritime Labs
Shiphandling Simulator
Engineering Simulator
Great Lakes Campus Harbor

Internships
Academic
International

Opportunities
Sea time aboard T/S State of Michigan, Great Lakes and ocean vessels
Academic Area: Physical Education

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 58.

Physical Education courses are grouped as follows:

- **Health and Fitness (HF)**
  
  Fitness Circuit, Yoga, Pilates, Aerobic Workout, Aerobic Dance, Step Aerobics, Lap Swim

- **Outdoor Pursuits (OUT)**
  
  Winter Travel and Camping, Backpacking, Caving, Rock Climbing, Snowshoeing, Canoeing, Kayaking

- **Physical Education (PE)**
  
  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 here offerings designed to fulfill basic course 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) ................................................................. 95

Transfer Opportunities
Astronomy ................................................................................................. 66
Biology ........................................................................................................ 66
Chemistry ..................................................................................................... 66
Engineering ................................................................................................. 67
Environmental Science ............................................................................... 67
Mathematics ............................................................................................... 67
Physics ........................................................................................................... 69

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 Counseling Center, Biederman 104 or www.nmc.edu/counseling

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

Student Employment Opportunities
Computer Lab Aid
Office Assistant
Science Lab Assistant
Whether you’re looking to fill a program requirement or wish to concentrate in a specific social science area so that you may transfer to a four-year institution, you’ll find what you need here. NMC offers Child Development and Law Enforcement programs, a Teacher Academy partnership and Service Learning Internships. Career Exploration and Planning is also offered for students undecided about a career path.

You may wish to pursue a two-year Associate in Science and Arts degree with an emphasis in Child Development. This degree opens many doors to you as an education professional in the field of Early Childhood, or could be a stepping stone to transfer programs.

In addition, NMC partners with Traverse Bay Area Intermediate School District and the Career Tech Center with agreements that allow high school students dual-enrollment in certain courses. Students interested in the teaching field can receive up to six credits for elementary and secondary education through the completion of the TBAISD Teacher Academy Program. Dual-enrolled Career Tech students in the Early Childhood Program may receive up to six credits toward a certificate or degree in Child Development.

If your interest lies in law and serving the community, you’ll want to consider NMC’s Law Enforcement program, which prepares students to become law enforcement officers while earning a two-year degree.

No matter the area of study, 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) ................................................................. 76
- Law Enforcement (AAS) ........................................................................ 86

### Transfer Opportunities

- Child Development .................................................................................... 66
- Criminal Justice ....................................................................................... 66
- Economics .................................................................................................. 66
- Education .................................................................................................... 66
- Geography .................................................................................................. 67
- Political Science .......................................................................................... 69
- Psychology .................................................................................................. 69
- Social Work ................................................................................................ 69
- Sociology .................................................................................................... 69

### 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

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Contact Information
www.nmc.edu/technical
2600 Aero Park Dr.
(231) 995-1300
(231) 995-2022 fax
technical@nmc.edu

Accreditation
Automotive Service Excellence (ASE)

Transfer Guides
Available in the Counseling Center, Biederman 104 or www.nmc.edu/counseling

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

Facilities
Auto-Tech Lab
Cisco Lab
Electronics Lab
Machining Lab
Welding Lab
Open Learning Lab

Opportunities
Internships
Northwestern Michigan College provides a variety of ways to learn. Options include online classes, evening classes, self-paced classes, and hybrid options that combine multiple delivery methods. This allows you to choose options that best fit your life and learning style. Five associate degrees, three certificates and more than 200 classes are offered online or through other non-traditional learning options. Below you’ll find more information on the delivery methods and specific programs. You can also find whether your desired academic area offers online or other learning options by turning to that academic area’s overview (page 10-19).

Visit www.nmc.edu/online to find out more details about these classes and sample syllabi. To locate classes offered in a specific delivery method, such as online, visit www.nmc.edu/webregistration where you can use the searchable schedule feature to view current offerings and register.

Recommendations

• Significant self-motivation and time management skills are essential for success due to the flexibility of these courses.
• Read the course prerequisites and requirements carefully before registering. Some classes will require special skills and/or prerequisites before you can enroll.

Delivery Methods & Online/elearning

• Delivers instruction through NMC’s eLearning system, elearning.nmc.edu (Moodle).
• Basic computer literacy is a must and a computer with reliable Internet access is required.
• Regular participation, up to several times per week, in online activities and assignments is required throughout the semester.
• On-campus orientations, on-campus meetings, and/or proctored testing may be required.

Self-paced

• Learning activities are competency-based, enabling you to learn at your own pace.
• Generally, courses must be completed by the end of the semester.
• On-campus orientation and/or activity work in the O.P.E.N. Learning lab located in the Center for Learning or M-TEC may be required.
• Instructors, or Learning Coaches, along with lab staff, are available for assistance.

Online Degree Programs

ADN (Associate Degree in Nursing)
• This option is intended for full-time ADN students.
• Lab and clinical courses require on-site attendance.
• More information is available at www.nmc.edu/healthoccupations or from the Health Occupations Office, (231) 995-1235.

AAS (Associate In Applied Science Degree)
Business Administration - General Business
• Contact the Business Academic Office at (231) 995-1169 for more information.

ASA (Associate in Science and Arts Degree)
• Depending upon the transfer college requirements, many or all required courses can be taken online (and/or through other FLO delivered options).
• Contact an NMC Counselor or a Program Advisor for more information.

AGS (Associate in General Studies)
• For students whose goal is self-enrichment.
• Designed to expose you to a wide breadth of college curriculum.
• Contact the Counseling Office at (231) 995-1232 for more information.

ASA: Criminal Justice
• A collaborative program among NMC and two partner colleges.
• Some required classes are offered online through Delta College and West Shore Community College.
• Contact the Social Science Office at (231) 995-1290 for more information.

Certificate Programs

Computer Studies: Office Applications Specialist Certificate
• Contact the Business Academic Office at (231) 995-1169 for more information.

General Studies Certificate
This certificate can stand alone until the student determines which program they wish to pursue, and will fulfill the general education requirements of the AAS or AGS degrees. See specific program requirements to select appropriate courses.

Science and Arts Certificate
• Contact an NMC Counselor or a Program Advisor for more information.

For more information about online or other learning options, contact the Flexible Learning Options Office at (231) 995-1962 or Osterlin 134.

Can’t find a program or course at NMC?
Visit the Michigan Community College Association Virtual Learning Collaborative at vcampus.mccvlc.org for more information.
Extended Educational Services

www.nmc.edu/ees
(NMC University Center on Cass Road)
2200 Dendrinos Drive - Suite 102,
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
- Creative Arts
- Culinary
- Fitness and Recreation
- Language and Writing
- LIFE Academy
- Personal Enrichment
- Personal Growth and Wellness
- Renewable Energy
- Small Business/Entrepreneur
- Professional Development
- Up-to-date Computer Courses

Complete Learn for Life course schedules are published four times a year and posted online. Sign up for courses 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 and nonprofit management topics. Continuing Education Units (CEUs) can be awarded for many courses meeting requirements for professional development within specific fields of study.

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, computers, outdoor adventure, aviation, astronomy, and writing. Summer formats are varied with options for a day, a week, or two weeks. Partial scholarships are available based on financial need.

LIFE Academy - Learning Is Forever

The LIFE Academy is a program of learning opportunities created with and for adults age 50+ in a format of mostly daytime, short-term noncredit courses. Learners choose from more than 30 courses 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

Learning online is interactive and convenient. 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
- American Management Association Certificate in Management
- Residential Energy Assessment

Complete descriptions are available.

Scholarships

A variety of partial scholarships are available.

Special Events

- Fall Campus Day
- Summer LIFE Week
- Spring Kaleidoscope Day
- International Affairs Forums
- Monthly LIFE Lunch Forums
- Conferences
- Workshops/Seminars

www.nmc.edu
Mission
The Northwestern Michigan College University Center facilitates the delivery of high quality programs and courses beyond the associate degree level to northwest Michigan. Serving students since the fall of 1995, the NMC University Center has enabled residents to complete degrees without leaving the area.

Partnership
The University Center is a unique partnership between Northwestern Michigan College and senior universities. The four-year institutions offer all courses required for the completion of the final two years of selected bachelor degree programs or the fulfillment of requirements for selected graduate or certificate programs. You may select from more than 50 undergraduate and graduate programs offered at the University Center in the areas of Allied Health and Human Services, Business and Teacher Education.

Accreditation
Institution and program accreditation information is available from the individual universities at the University Center.

Opportunities
NMC University Center opportunities include: Bachelor's Degrees, Master's Degrees, Doctoral Degrees, Professional Certification and Education Endorsements, and Planned Programs.

Admissions
To study at the University Center, apply for admission to a program with the four-year institution of your choice. Once accepted to a university, you are literally a student at your selected institution, with the same rights and responsibilities as other students at that college or university.

Location of Classes
Classes offered by the universities are typically held at the NMC University Center Campus on Boardman Lake in Traverse City. Some classes may also be held on NMC’s main campus, Great Lakes Campus, Aero Park Campus, or at other sites in the region.

Facilities
NMC University Center facilities include Zonta Library, Computer Labs, and Interactive and General Classrooms.

Paying for Classes
Tuition and fees are assessed by the institutions in which students are enrolled, not by Northwestern Michigan College. More complete information about payment and refund policies is available from the institutions listed below.

You should also contact the university that you plan to attend for assistance with financial aid applications. Apply at least nine months prior to the beginning of classes.

For Scholarship information call (231) 995-1776.
Learning Opportunities

**Eastern Michigan University**
Contact: Jacqui Frensley
2200 Dendrinos Dr., Suite 200-M
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
- Information Security and Intelligence
- Nursing
- Secondary Teacher Education
- Social Work

**Undergraduate Programs & Certificates**
- 18-Hour Planned Programs
- Elementary Endorsement to Secondary Provisional Certificate
- Human Resource Management Certificate
- International Business Certificate
- Marketing Certificate
- Secondary Endorsement to Elementary Provisional Certificate
- Special Education Endorsement

**Master’s Programs**
- Career and Technical Education
- M. Education in Curriculum and Instruction
- Secondary/Elementary Certificate options

**Grand Valley State University**
Contact: Dr. Marty Litherland
2200 Dendrinos Dr., Suite 101
Traverse City, MI 49684
(231) 995-1785 or (888) 922-1785
(231) 995-1786 fax
nminfo@gvsu.edu

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

**Master’s Programs**
- Education, emphasis areas:
  - Early Childhood Education
  - Elementary Education
  - Special Education (ECDD)
  - Special Education (CI)
- Occupational Therapy (online)
- Social Work

**Endorsements & Planned Programs**
- Cognitively Impaired (CI)
- Early Childhood Developmental Delay (ECDD)
- Early Childhood (ZA)
- 18 Hour Planned Program
- Special Education Dual Endorsement Options

**Lawrence Technological University**
Contact: Tricia Fewins
2200 Dendrinos Dr., Suite 211
Traverse City, MI 49684
(231) 995-1725 or (877) LTU-8866
(231) 995-1723 fax
tfewins@ltu.edu

**Master’s Program**
- Business Administration (MBA)

**Doctoral Program**
- Business Administration (DBA)

**Graduate Certificate**
- Nonprofit Management & Leadership

**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**
- Applied Plant Science (NMC ASA/AAS Degree and MSU Certificates)

**Spring Arbor University**
Contact: Jill Niemi
2200 Dendrinos Dr., Suite 200-E
Traverse City, MI 49684
(231) 995-1760 or (800) 648-5843
(231) 995-1763 fax
jniemi@arbor.edu

**Bachelor’s Programs**
- Family Life Education
- Management and Organizational Development
- Nursing

**Master’s Program**
- Master of Arts in Organizational Management

**Western Michigan University**
Contact: Mary Swartz
2200 Dendrinos Dr., Suite 200-H
Traverse City, MI 49684
(231) 995-1788, (231) 995-1789 fax
mary.swartz@wmich.edu

**Master’s Program**
- Counselor Education (Community & School)

**Graduate Certificate Programs**
- Holistic Health Care
- Alcohol and Drug Abuse (SPADA)
Dennos Museum Center
www.dennosmuseum.org
(231) 995-1055

The Dennos Museum Center at NMC offers programming in the visual and performing arts to the college community and the citizens of northwestern Michigan.

Exhibit space includes three changing galleries, a significant collection of Inuit (Eskimo) art and a gallery devoted to interactive exhibitions for children.

Milliken Auditorium hosts lectures, theater, and musical performances. These events showcase some of the best talent from around the world. Student Government-sponsored events and NMC music department programs are often presented at the Milliken Auditorium.

The Dennos Museum Center is open to the public Monday-Saturday, 10 a.m. to 5 p.m. and Sundays, 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/wsi
(231) 995-1793

Located on West Grand Traverse Bay at NMC’s Great Lakes Campus, the Great Lakes Water Studies Institute was founded in 2004 with a three-fold mission:

• Learning - To provide learning opportunities about freshwater that foster stewardship of the Great Lakes and its watersheds.

• Collaboration - To build, support, and encourage partnerships that achieve shared missions for freshwater - including nonprofit organizations, businesses, K-12 schools, and school districts, higher education, research institutions, foundations, and others.

• Convening - To bring people and organizations together to learn about and address freshwater issues and needs.

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

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, the observatory contains a classroom, dome, telescope and darkroom. It was built to house astronomy classes and provide an educational program for community groups. Located south of Traverse City to take advantage of dark skies, the Grand Traverse Astronomical Society conducts regular programs at the Observatory.

The Observatory is part of Project ASTRO,™ a national science education program that links professional and amateur astronomers with teachers and youth group leaders and elementary and middle school students, and Project Family ASTRO,™ a national K-12 and community science education outreach program.

Michigan Manufacturing Technology Center - NW

Training & Research is the home of MMTC, which assists manufacturers in maintaining or developing their global competitiveness.

- Performance Benchmarking
- Lean Learning Consortium
- Lean Manufacturing
- Power of Lean introductory series
- Technical Skills
- Process Improvement
- ISO/QS/TS 9000
- Six-Sigma

Research Services

Providing customized reports for organizational planning, development and alignment is the focus of NMC Research Services. A full range of research activities are offered:

- Survey Planning and Project Management
- Questionnaire Development
- Data Analysis
- Web-Based Surveys
- Telephone Surveys
- Mail Surveys
- Personal Interviews
- Focus Groups

WNMC Radio Station

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.

Training & Research

www.nmc.edu/training
(231) 995-2218

Located at NMC’s Aero Park campus, Training and Research provides customized services to a business clientele. Beginning with assessment, meeting your company’s organizational goals and objectives are what drive the design and delivery of Training & Research services. Training locations are flexible—visit NMC or let us come to you. Specific services include:

Training and Coaching

- Training Plan Development
- Individual Development Plans
- Training Grant funding and grant management
- Leadership Development
- Supervisory Skills
- Lean Learning Consortium
- Lean Office
- Team Skills
- Problem Solving Processes
New Student Checklist

**Find out about NMC**
- Explore the opportunities for study at NMC - visit [www.nmc.edu](http://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](http://www.nmc.edu/admissions) or visit the NMC Admissions Office on the main floor of the Tanis Building, (231) 995-1054.
- Complete the application, mail it in or deliver it, along with the $20 application fee, to the NMC Admissions Office.
- 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**
- To be considered for Financial Assistance, complete and submit your Free Application for Federal Student Aid (FAFSA) to the Federal processing center in the envelope provided with the form or go to [www.fafsa.ed.gov](http://www.fafsa.ed.gov) online. For more information, visit the Financial Aid Office on the main floor of the Tanis Building, visit [www.nmc.edu/financialaid](http://www.nmc.edu/financialaid) or call (231) 995-1035.
- Check with your academic Office to find out more about divisional scholarships.

**Complete Placement Testing & Attend Orientation**
- Take NMC’s COMPASS Placement Exam to make sure you are placed in the right courses. Testing is available Monday - Friday, through the Career and Employment Services Office (Osterlin 118). Evening and weekend testing is available by appointment. Call (231) 995-1041. ACT scores of 19 or higher in reading and English and/or a 24 or higher in math may be used for course placement.
- Upon admission to NMC, you will receive information about upcoming orientation sessions - all new students are required to attend.
- Attend an orientation session where you will meet with a counselor or advisor to schedule 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/webregistration](http://www.nmc.edu/webregistration) or in the Records and Registration Office. Stop by the Bookstore in West Hall and purchase your books.
Welcome Center

The Welcome Center, located in the main lobby of the Health and Science building, is available to answer questions, provide tours, schedule orientation sessions and placement testing, issue parking stickers and provide general information about the college. The Welcome Center, (231) 995-1135, is staffed 8 a.m. to 5 p.m., Monday through Friday.

Admissions

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.

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. 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 commensurate with a student’s ability to benefit, a referral to an agency or other alternative will be made with the assistance of a counselor or advisor.

Obtaining Personal Assistance

Northwestern Michigan College is pleased to provide you assistance in applying for admission.

WELCOME CENTER
• Visit the Welcome Center in the lobby of the Health and Science Building to obtain information or to schedule a campus tour. You may also contact the Welcome Center via e-mail to welcome@nmc.edu or call (231) 995-1135.

ADMISSIONS OFFICE
• Visit the Admissions Office in the Tanis Building. The Financial Aid and Records/Registration offices are located across the hall for your convenience. For more information e-mail admissions@nmc.edu or call (231) 995-1054.

Types of applications

• 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.

• DUAL-ENROLLED ADMISSION
For applicants who are enrolled in classes at NMC while still in high school.

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

• 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.

Procedures for Applying to NMC

• Fill out an NMC admission application form.
• Attach a check or money order for $20 (payable to NMC) to cover this one-time, non-refundable admission fee.
• Mail or bring the completed application to: Northwestern Michigan College Admissions Office 1701 East Front Street, Traverse City, Michigan 49686
• You may also go to www.nmc.edu/admissions to access the NMC Admissions Application online.

if your ACT score is 19 or above in reading and 19 or above in writing you are not required to take those portions of the basic skills assessment test (COMPASS) before commencing study at NMC. 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. (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 will be required to seek academic counseling and enroll in a reduced class load.)
HIGH SCHOOL AND/OR COLLEGE TRANSSCRIPT 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 to send an official transcript to the NMC Admissions Office. Your credits will be evaluated and the evaluation mailed to your permanent address. You will most likely receive credit from institutions accredited by the Association of Colleges and Schools 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. Please remember that while credits transfer, grades do not.

HOME-SCHOoled APPLICANTS
NMC welcomes home school and non-traditional school applications. Please follow the procedures for applying to the college as previously outlined. 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. For more information, contact the Admissions Office at (231) 995-1054.

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. Take NMC’s COMPASS Placement Test. For information on testing, please call (231) 995-1041.
3. If you also want to take a college class that requires proficiency in math, you will need an ACT score of 24 or better on the math placement test. This may qualify you for College Algebra, Math for Elementary Teachers - MTH 106, or Intro to Probability and Statistics. All other math courses require COMPASS testing.

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 to the NMC Admissions Office showing what classes they may be able to take and outlining additional steps in the dual enrollment process.

Visit www.nmc.edu/admissions for more detailed information on dual enrollment, from the “Apply to NMC” menu.

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 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 $550 per year. Deadline for Fall admission is July 15; deadline for Spring admission is November 15. Please write to the Office of Admissions-International, NMC, 1701 East Front Street, Traverse City, MI 49686, or call (231) 995-1034, for complete application procedures.

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. You may be admitted as in-district, out-of-district (other Michigan counties), out-of state or international. 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.) Contact the Admissions Office at (231) 995-1054 for further information.

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/GT County for a minimum of six consecutive months as a non-student. (For residency purposes, a non-student is someone not attending or 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.

RESIDENCY CLASSIFICATIONS
A person may be admitted in one of these 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.
Tuition, Billing & Fees

Tuition
You may pay any amount at any time prior to the due date, but the final balance must be paid by 5:00 p.m. on the due date listed below or your enrollment may be cancelled. After final payment day, tuition is due at the time of registration. For online registration only, payment by credit card is recommended or 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 is returned unpaid for insufficient or uncollected funds we will charge a $25 NSF fee. An NSF payment may affect your enrollment.

FINAL PAYMENT DATES:
- Fall 2010: August 10, 2010
- Spring 2011: January 4, 2011
- Summer 2011: May 10, 2011

Visit www.nmc.edu/tuition for current rates.

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: (Refundable if student withdraws from all courses during the 100 percent refund period; nonrefundable thereafter.) The fee is paid Fall and Spring Semester by all students taking 6 or more contact hours and includes services of a family nurse practitioner, medical assistant, doctor, and reduced fees for some medications and lab tests. Students who are enrolled for less than 6 hours may also pay the fee and obtain services. Call (231) 995-1255 for more information. For anyone taking 6 or more contact hours............. $20.00
Tuition and fees are established and reviewed by the Board of Trustees on an annual basis and are subject to change without notice.

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

HOUSING
Housing 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 mailed to the student each month, as well as email notices directing students to access the NMC Self-Service to view their account. We encourage you to access your account at www.nmc.edu/webregistration, to view or print account information and make credit card 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 for amounts not covered by:

- Fall 2010: July 26, 2010
- Spring 2011: December 20, 2010
- Summer 2011: April 25, 2011
- Fall 2011: July 25, 2011

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/webregistration to pay with your credit card. 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](http://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, then financial aid and tuition refunds will be refunded back to the credit card that was used to pay on the account.

### Financial Aid

Northwestern Michigan College is committed to working with you to acquire the maximum financial aid for which you are eligible. To do so, you need to follow financial aid guidelines in a timely manner. While NMC maintains a large number of scholarships, state and federal financial aid programs are also available to assist with the costs of your college education. Visit [www.nmc.edu/financialaid](http://www.nmc.edu/financialaid) for additional information.

#### Financial Aid Philosophy

Paying for college is a shared responsibility among the student, the family, and the college financial aid programs. Scholarships, grants, employment, and loans are available through the Financial Aid Office. Any or all of these may be combined in a “financial aid package” to help with educational costs. Scholarships and grants are forms of financial aid which do not have to be repaid. Loans must be repaid. 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.

#### Application Procedures for Financial Aid

Upon applying for financial aid at NMC via the Free Application for Federal Student Aid (FAFSA), the applicant is automatically considered for the following types of assistance:

- Federal Grants/Loans/Workstudy
- State Grants/Scholarships/Workstudy
- Institutional Scholarships

Application materials are available at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or from the Financial Aid Office (Tanis 142) or by calling (231) 995-1035, option 1.

Institutional scholarships that are determined by area departments within the college will generally post scholarship requirements and provide applications by March for the following academic award year. Please see the Office Manager in your major area of study for specific information and any other application deadline opportunities.

An aid application will be considered complete when:

1. The applicant is accepted for admission in an aid eligible program of study leading to a degree or certificate at NMC and is making Satisfactory Academic Progress while attending NMC, and

2. The Financial Aid Office has on file the following for the aid applicant:
   a) Institutional Student Information Report (ISIR). This report is electronically transmitted to NMC as a result of the student’s listing NMC as a recipient on the FAFSA;
   b) Official Academic Transcripts from all previous colleges (Preferred).
   c) Complete IRS tax returns (including schedules), W2s, and all other required verification documents at the request of the federal government and/or NMC.

Complete and accurate applications received prior to April 1st may be given first priority for the next academic year. The deadline date for Spring and Summer semesters is the final registration day of the preceding semester. Applications received after these dates will be considered if funds become available. **Students must apply for financial aid each academic year of their college attendance.**

### Selection Criteria

Financial aid at NMC is awarded on the basis of financial need and/or academic merit. Generally, awards will be made on a first-come, first-served basis in compliance with respective program guidelines until existing funds have been exhausted. Eligible applicants who apply by the deadline date will have the best opportunity for assistance. Students who demonstrate the most need and/or highest academic achievement will be considered accordingly. All financial aid is awarded without regard to age, color, disability, handicap, height, marital status, national origin, citizenship, political affiliation, race, religion, gender, sexual orientation, veteran's status or weight.
DETERMINATION OF KIND & AMOUNT OF AID

Complete and accurate financial aid applications will be reviewed for funding through all federal, state, and institutional programs awarding gift-aid first (scholarships and grants) with self-help (loans and employment) second. Depending on availability, every effort will be made to award sufficient funds to cover direct educational expenses (tuition, fees, books and required supplies.) Generally, gift-aid will not exceed one-half of the cost of attendance.

A student must be taking classes toward their degree in order to be eligible for financial aid. The funding amount may be adjusted according to the number of credits a student is enrolled in for the semester.

- **Full time (100%)**.......................... min. of 12 credit hours
- **Three-quarter time (75%)**............... 9 to 11 credit hours
- **Half-time (50%)**.......................... 6 to 8 credit hours
- **Less than half-time**........................ 1 to 5 credit hours* (may not be eligible)

* Not Stafford loan eligible

SATISFACTORY ACADEMIC PROGRESS POLICY

Federal regulations require the Financial Aid Office to monitor the progress of all financial aid students toward the completion of their declared degree or certificate. This monitoring process is called Satisfactory Academic Progress (SAP). Maintaining SAP is essential in order to be eligible to receive funds from any Federal Title IV, state or institutional programs.

Generally, financial aid recipients will have their Satisfactory Academic Progress (SAP) measured each semester.

- **Minimum grade point average (GPA) requirements:**
  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:** All financial aid students must complete a minimum of 67% of credits registered for at the time aid is finalized. Financial aid will be finalized on the 15th day of the Fall/Spring semesters and on the 7th calendar day from the main Summer session start date. When calculating completion factor 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; and

- **Maximum time a student has to complete his/her Associate Degree (150% Rule):** (Students enrolled prior to 7/1/2008) Six (6) semesters as a full-time student (12 credits or more); nine (9) semesters as a three-quarter-time student (9-11.5 credits); twelve (12) semesters as a half-time student (6-8.5 credits); or fifteen (15) semesters as a less-than-half-time student (1-5.5 credits.) Aid eligibility concludes after this time frame, pending mitigating circumstances. All credits are counted toward the 150% rule, even those for which the student did not receive financial aid.

Students who are receiving Pell for the first time on or after 7/1/2008. Legislation has limited the period of time that a student may receive a Pell Grant to 18 semesters or the equivalent as determined by regulation. The regulations are to provide fractional equivalents for terms in which a student is enrolled less than full-time. As a result, a student is eligible to receive up to nine Federal Pell Grant Scheduled Awards.

If a student does not achieve Satisfactory Academic Progress they will be placed on financial aid probation for the next semester of attendance. If, after that semester, they are unable to maintain SAP requirements their aid will be cancelled. A student will be removed from financial aid probation upon maintaining a cumulative 2.0 GPA and making SAP.

SATISFACTORY ACADEMIC PROGRESS APPEAL

Students whose aid has been cancelled due to extenuating or special circumstances may appeal in writing to the Financial Aid Office for reinstatement of their financial for their next semester of attendance. The student must provide a letter detailing the following: circumstances for their request; dates of any incidents; supporting third party documentation; rational as to what changes the student will implement to ensure that their next semester of attendance will be successful. The Financial Aid Office will review the student’s college academic history; onset of medical situation (if indicated); situation itself as to being out of the students control; how the student was doing in their course work prior to the incident; and information as provided by the student. After all information has been provided and reviewed, the file will be documented to provide supporting rational of this decision; all decisions are final and cannot be appealed further. If an appeal is denied, financial aid eligibility may be reestablished. Please see “Re-establishing Financial Aid Eligibility” on next page. An Appeal Form may be obtained from the Financial Aid Office.

• Minimum grade point average (GPA) requirements:
• Minimum completion factor required:
• Maximum time a student has to complete his/her Associate Degree (150% Rule):
RE-ESTABLISHING FINANCIAL AID ELIGIBILITY
Students whose aid eligibility has been cancelled due to lack of Satisfactory Academic Progress may become aid eligible the semester after they enroll for a minimum of six (6) credits in one semester (pay for them with resources other than financial aid) and complete a minimum of 67% of the credits enrolled for with a minimum 2.0 semester GPA.

FINANCIAL AID ADJUSTMENTS
/ENROLLMENT CHANGES
If a student withdraws (officially or unofficially) from all classes before 60% of the semester is completed federal regulations require NMC to determine the amount of financial aid the student has earned for that semester of enrollment. A student may be eligible to retain the percentage of Title IV aid earned that is equal to the percentage of the enrollment period that was completed. These funds will be credited against charges incurred for that semester (i.e. tuition/fees, books/supplies, on-campus room and board, and short term loans). If the charges incurred for the period of that semester exceed the adjusted financial aid the student is responsible for the balance. If the adjusted financial aid exceeds the charges incurred for that semester the student will receive the remaining portion. The unearned Title IV aid must then be returned to the appropriate federal aid program.

ORDER OF REFUND DISTRIBUTION:
• Federal Unsubsidized Stafford Loan
• Federal Subsidized Stafford Loan
• Federal PLUS Loan
• Federal Pell Grant
• Academic Competitiveness Grant
• Federal SEOG Grant
• Other Title IV Aid

Student financial aid recipients may receive the portion of their financial aid based on the Federal Return to Title IV Funds Policy (sample calculations may be obtained in the Financial Aid Office).

• The student aid recipient who withdraws officially or unofficially from all classes after aid has been finalized for the semester will be placed on financial aid probation as outlined in the NMC Satisfactory Academic Progress policy. If that student is currently on financial aid probation at the time of withdrawal, he/she will be ineligible to receive further aid until Satisfactory Academic Progress can be demonstrated, pending mitigating circumstances.

• Dropping or failure to attend classes may result in a financial aid adjustment for the semester and could also affect the student’s Satisfactory Academic Progress. A student’s credit load is established at the time aid is finalized; approximately 15 calendar days into the semester for Fall and Spring, approximately 7 calendar days for Summer’s main session.

REPEATING A COURSE
For financial aid purposes, classes that are repeated may not be counted in total number of credits taken for the semester if the prior class can be counted toward graduation. If a course can be repeated and included for financial aid purposes it can only be taken three (3) times and still be aid eligible.

Financial Aid Sources
Qualified students may be eligible for federal, state and local grants, scholarships, loans, and employment. Most of the scholarships listed on the following pages have been made possible by federal and state legislation or donations to Northwestern Michigan College by Grand Traverse area individuals, organizations, and business firms.
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 Academic Competitiveness Grant (ACG) - provides up to $750 for freshman level students and $1,300 for sophomore level students with a 3.0 GPA seeking an Associate’s degree or Certificate. The student must be receiving a Pell Grant, be a U.S. citizen or eligible non-citizen, have completed a rigorous high school program and be attending at least half-time (6 credits or more).

Federal Pell Grant - Provides grants up to $5,350 per year (2009-2010 pending Federal funding levels). Full-time, three-quarter time, half-time, and less than half-time awards are based on student need, which is prorated accordingly.

Federal Supplemental Educational Opportunity Grant - Provides grants up to $4,000 per year to those in exceptional need. Minimum half-time enrollment is required.

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 Adult Part-Time Grant - Provides grants up to $600 per year to adult students enrolled for 3-11 credits each semester. Maximum funding is for 24 months. Apply using separate application available in Financial Aid Office.

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

Michigan Educational Opportunity Grant - Provides grants up to $1,000 per year to students enrolled on a minimum half-time basis.

Michigan Merit Award Scholarship Program - This scholarship was replaced with the Michigan Promise Scholarship with the high school graduating class of 2006 but may be used through the 2009-10 academic year. For additional information visit www.mi.gov/mistudentaid or call the Michigan Department of Treasury at 1-888-447-2687.

Michigan Promise Scholarship - Provides up to $2,000 to Michigan residents starting with the high school graduating class of 2007 who have qualifying scores on the Michigan Merit Exam and apply within two years of graduation. Students must maintain a 2.5 GPA in order to continue to receive this scholarship. Students who do not receive qualifying scores on the State Assessment Test may receive up to $4,000 after the successful completion of two years of postsecondary education with at least a 2.5 GPA. Provides up to $2,000 to Michigan residents starting with the high school graduating class of 2007 who have qualifying scores on the Michigan Merit Exam and apply within two years of graduation. Upon completion of an associate's degree, 2-year vocational training program, or 50% or more of the academic requirements for the award of a bachelor's degree at an approved postsecondary educational institution within four years of initial enrollment a student may be eligible for an additional $2,000 upon submission of application. For additional information visit www.mi.gov/mistudentaid or call the Michigan Department of Treasury at 1-888-447-2687.

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.

Michigan Nursing Scholarship - Provides up to $4,000 for Michigan residents enrolled in the Licensed Practical Nurse (LPN) or Associate Degree in Nursing (ADN) programs. Students must file the FAFSA form and show financial need. Separate applications are available in the Financial Aid Office.

Occupational Programs Grants - Awarded to students enrolled in an approved occupational program who demonstrate financial need. It may be used toward the cost of tuition, fees, required books/supplies, transportation and/or daycare.

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.

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. The program will cover registration and health fees up to $250 per semester. Students must initiate benefits for enrollment within four years of high school graduation or GED completion. For students residing in an area not included in a community college district, the out-of-district tuition rate may be authorized. Contact the Financial Aid Office at (231) 995-1033 for authorization information. Students must be enrolled on at least a half-time basis each semester. Additional funding may extend to the university level after transferring from a community college. Contact your high school counselor for an application.
Institutional Scholarships

NMC 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 re-main eligible. Recipients are also required to perform community volunteer service each semester. For applications and more information, contact NMC’s Admissions Office.

NMC Divisional 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.

NMC 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.

NMC 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.

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.

You are encouraged to file the Free Application for Federal Student Aid, available at www.fafsa.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 eligibilit-ity criteria. New scholarships are added continuously. Both criteria and availability of funds are subject to change.

Visit www.nmc.edu/financialaid for the most detailed and updated criteria for all scholarships.
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### Health Occupations Scholarships

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Visit [www.nmc.edu/financialaid](http://www.nmc.edu/financialaid) for the most detailed and updated criteria for all scholarships.
Loans

Short-Term Loans
NMC may provide a short-term loan to a student who is in need of emergency funding to cover a portion of their on-campus expenses (tuition, fees, required books/supplies, or housing) provided they have applied for financial aid through the Free Application for Federal Student Aid (FAFSA) and are eligible for funding. This loan is interest free provided it is repaid by the due date (usually within 30-60 days).

Sources of Short-Term Loans are:
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.

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

Federal Stafford Loan Program - After having applied for financial aid via the FAFSA, a student may borrow up to $5,500 as a dependent freshman, $6,500 as a dependent sophomore with an aggregate loan maximum of $31,000. A freshman student who is considered Independent may borrow up to $9,500 and $10,500 as a sophomore with an aggregate loan maximum of $57,500 for undergraduate studies. In order to be eligible for a Stafford Loan a student must be taking classes toward their degree, be enrolled for at least six (6) credits, and have a 2.0 cumulative GPA. If the student does not have a 2.0 cumulative GPA but aid has not been canceled the loan will be held for certification until mid-semester. If the student does not have any unsatisfactory remarks at this time the loan will be reviewed for eligibility and processed.

Federal Parent Loan for Undergraduate Students (PLUS) - The parent(s) of a dependent student (who has filed a FAFSA) may borrow under this program for their child’s educational expenses. The maximum per year is the cost of education minus any financial aid. Interest rates on Stafford and PLUS loans first disbursed after July 1, 2006 are at a fixed rate. The interest rates on existing variable rate Stafford and PLUS loans are adjusted annually on July 1, based on the last 91-day T-bill auction in May.

Applications for the Subsidized, Unsubsidized and parent PLUS loans are available online www.nmc.edu/financialaid or through the Financial Aid Office. Please note: In order to be eligible for any of the above federal loan programs a student must be enrolled in a minimum of 6 credits with all enrolled courses approved toward their program of study. Students with less than a 2.0 GPA will be reviewed for loan eligibility after mid-semester grading and may be eligible for certification if there are no "Unsatisfactory" remarks noted at that time.

Student Employment

It is a policy at NMC that a student employee, whether or not on Federal Work-Study or on Michigan 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 twenty (20) hours per week during the semester and forty (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. Any student employee who is no longer enrolled at NMC must be terminated from employment.

It is recommended that students wishing employment on campus file for financial aid using the Free Application for Federal Student Aid (FAFSA) and should register with the Career and Employment Services Office in the Osterlin Library, (231) 995-1041.

Federal Work-Study & Michigan Work Study Programs
Eligibility under these programs requires a student to have demonstrated financial need, be making satisfactory academic progress and be enrolled at least half-time. The basic pay rate is according to the NMC Student Assistant pay scale.

Veterans

Educational Benefits
The NMC Veterans Office is located in the Records/Registration Office to assist veterans in exploring financial aid opportunities, prepare requests for benefits, and provide certification of enrollment. Determination of VA educational benefits lies with the regional office in St. Louis, MO.

There are currently seven 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 32 .......... Veterans Education Assistance Program
Chapter 33 .......... Post - 9/11 GI Bill
Chapter 35 .......... Eligible Dependents and Survivors
Chapter 1606 ......... Reservists - Montgomery G.I. Bill
Chapter 1607 ......... REAP

Michigan Veterans’ Trust Fund
Disabled veterans approved under Chapter 31 will be given a waiver for tuition, fees and supplies. Those eligible for Michigan Veterans’ Trust Fund will be given a waiver for tuition and fees. All others are required to make payment directly to the college by the required published final payment date.
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**............................ min. 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 VA representative for summer and partial semester credit load requirements: (231) 995-1057.

**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 for certification to the Regional Office in St. Louis, MO.

3. Monthly Verification - Veteran students who receive benefits under Chapter 30, 34 and 1606 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.

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.

Advance payment may be available to qualified veterans and dependents. Contact the NMC Veterans Office for details, Records/Registration Office, Tanis Building, (231) 995-1057.

**Placement & Orientation**

**Placement Assessment for New Students**

Once you have been admitted to NMC, you must complete the COMPASS Placement Test for reading, writing and math placement. This test will place you into appropriate courses. Students are required to begin these courses in their first semester and complete the sequence in subsequent semesters: ENG 97, ENG 99, ENG 107, ENG 108, ENG 11/111, MTH 06/08, MTH 08, MTH 10/23, MTH 23, MTH 11/111, MTH 111. COMPASS is given daily, Monday through Friday, in Career and Employment Services in the Osterlin Building. You will need to bring photo identification, your student identification number, and a calculator. COMPASS is not timed and is administered on computer. Visit www.act.org/compass for sample questions.

ACT scores of 19 or higher in reading and English and/or a 24 or higher in math may be used for course placement.

A COMPASS resource manual is available for review in the career office. 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. You may find it helpful to refresh your skills by using the software available in the Center for Learning. Two programs, MultiMedia and Plato are especially good at sharpening skills you may not have used recently. For additional information, call (231) 995-1041.

**Orientation & Registration for New Students**

Orientation and registration for new students is a convenient one-stop process. When you receive your acceptance letter to NMC, you also receive information about the Orientation and Registration program that is designed to acquaint new students with the campus and to plan for the best Schedule of Classes to insure success at NMC. Part of the orientation program includes a placement test which assesses skills in reading, writing, and math as discussed in above. You will have an opportunity to discuss your test scores one-on-one with an advisor as well as transfer possibilities and other pertinent course information. After selecting the best individual schedule, students then register for classes.
Records & Registration

Northwestern Michigan College provides both online and in-person opportunities for admitted students to register for academic classes. 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. See Academic Policies beginning on page 45 for more details.

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, etc, so note the start dates of your courses and be sure to register before the session begins. The dates for the main session will be published in the Schedule of Classes and are also available online.

ONLINE REGISTRATION:
Available at www.nmc.edu/webregistration and begins one week prior to office registration.

OFFICE REGISTRATION:
Takes place in the Records and Registration Office in the Tanis Building.

Registration after the start of the session may take place only if you obtain special permission from the instructor and the class is not full.

Earning a Second Associate Degree

You may earn a second associate degree at NMC. Credits will be evaluated from one degree to the second degree, as applicable. See an advisor or counselor for more information. Both degrees may be earned at the same time.

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 their 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.

Graduation

Applying for Graduation

One semester before you anticipate completing the requirements for your degree or certificate program, fill out an Application for Graduation found online. You may also pick up a form at the Records and Registration Office on the main floor of the Tanis Building.

Those participating in the graduation ceremony need to contact the NMC Bookstore, in the lower level of West Hall, to order caps and gowns.

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. We strongly encourage graduates to participate in the Commencement ceremony in May so you can be recognized for your achievements. This also gives you a time to thank the family and friends whose support made the accomplishment possible. Your degree/certificate will be mailed to you after the semester you complete the requirements. Applying for graduation is a simple process. Application for graduation should be made at least one semester prior to the semester of graduation. Please see above.

Graduation with Honors

Students who have completed all the requirements for their degree, based on their specific program of study, and who have achieved an overall grade point average of between 3.5 and 4.0 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 for the purpose of recognizing 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 the Departmental Awards, Divisional Scholarships, Honors Scholarships and Adult Student of the Year Award.
**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. A student who is repeatedly absent from class without good reason may be withdrawn from the course by the instructor.

**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 in a variety of ways. The following options are available to you:

- 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 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 evaluated as 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. It is advisable to get 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 complete an enrollment form in the Records and Registration Office, or mail or fax (231) 995-1570 a letter to the Records Office. Include name, NMC ID or social security number, semester and signature. The date the letter is received is the official date of the withdrawal. Courses may also be dropped on the NMC web site if there are no holds on the student’s records.

- Students dropping part of their classes may do so in the Records and Registration Office, or on the NMC web site if no holds are present. If you wish to drop online and have a hold, call (231) 995-1049 for options.

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. It is the student’s responsibility to notify their instructor(s) of the drop and be aware of any financial obligations.

Dropping classes may affect financial aid. Contact the Financial Aid Office if you have any questions. Students dropping all their classes will be subject to the Federal Title IV Funds Policy.

The Add and Drop policies are subject to change. Go to [www.nmc.edu/records](http://www.nmc.edu/records) to view any updates online.
Grades

STANDARD GRADING SYSTEM AT NMC:

4.0 - outstanding
3.5 - excellent
3.0 - good
2.5 - above average
2.0 - average
1.5 - below average
1.0 - deficient
0.0 - failed
S - satisfactory
U - unsatisfactory
I - incomplete
W - withdrawn
FA - failed to attend
AU - audit

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 up to approximately 50 percent 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.

The semester GPA is the weighted GPA. For example:

<table>
<thead>
<tr>
<th>Credits</th>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4.0</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>2.0</td>
<td>10</td>
</tr>
</tbody>
</table>

22 divided by 8 = 2.75 GPA

Visit www.nmc.edu/counseling for an online GPA calculator to assist in determining GPA. For questions, contact the Records Office at (231) 995-1048.

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 grade point average. Grades of S, U, I, W, FA, and AU are not used in the computation of grade point averages. Consult with the Counseling Center if this concerns you.

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 Counseling Center for petitions and further information: (231) 995-1040. A student may exercise this option once. Transfer institutions may or may not recognize GPA re-evaluation.
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. 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.

Mid-semester Progress Report
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 by 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. Anatomy and Physiology may only be taken once unless special approval is given. See a counselor or the Science/Math Office manager.

Transcripts
Students who plan to attend another college or university will need to send an official transcript of their academic record to that college. A transcript is a list of the academic courses have taken at NMC and the grades earned. Your official transcript will be sent to colleges or employers upon written request. If you request the transcript be sent to you, it will be unofficial. Each request should include:

1. Your name, permanent address, and NMC ID or social security number,
2. the name and address where the transcript is to be mailed,
3. your signature,
4. your phone number and
5. $5.00 for each transcript requested.

The request may be made in person, by mail, online through NMC Self-Service or by fax (231) 995-1570. 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 can be faxed to a third party for $7.00. 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 $5.00. 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/webregistration to view their transcript.

Transfer Information
If you are planning to transfer to another institution, you should:
1. Speak with a NMC counselor or academic advisor.
2. Review the transfer guide for the program you wish to enter.
3. Visit with a representative of the institution early in your education.

The NMC Counseling Center has catalogs and transfer guides from most Michigan colleges and universities. Representatives of Michigan colleges and universities visit the NMC campus each fall and spring to discuss transfer requirements. It is helpful to visit four-year colleges and universities early to facilitate the transfer process. Go to www.nmc.edu/counseling to view transfer guides.
Reach for Academic Support

**Osterlin Library**

Get better grades. Find great information in less time!

**Step 1:** Visit the Mark & Helen Osterlin Library at [www.nmc.edu/library](http://www.nmc.edu/library) or in person.

**Step 2:** Ask a librarian for help. We are happy to share our power searching techniques with you.

Digital or Print - We’ve got it: books, journals, newspapers, government documents, e-books, e-journals. The number of electronic information databases to which we subscribe on your behalf extends your information reach far beyond our walls. As a bonus, course reserves can be picked up at the library service desk for in-library use. We offer ample study space and plenty of help.

With all the ways to reach us, there is no excuse not to use us:

**Reference** ................................................ (231) 995-1540  
**Service** .................................................... (231) 995-1060  
**Email** .................................................... library@nmc.edu  
**Website** ................................................... [www.nmc.edu/library](http://www.nmc.edu/library)  
**In Person** .................................................. Feel free to visit us the old fashioned way - come into the library!

**Computer Labs**

Equipment and locations:

- Dell computers running Microsoft Windows XP or Vista 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  
  - Fine Arts Building, FA 120, (231) 995-1325

**Writing Center**

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. The Writing Center is free and located in Scholars Hall, Room 221 or (231) 995-1189.

**Center for Learning**

The Center for Learning provides a variety of academic support services using current technology and a professional staff available 70 hours per week. The Center is located on the main floor at the back of the Osterlin Building. Some services and resources include:

**ACADEMIC SKILLS IMPROVEMENT**

- Skill-building in reading, writing, math (all levels)  
- Textbook software support  
- Personal skill development, including study skills and time management

**COMPUTER APPLICATIONS**

- Specialty software such as AutoCAD, nursing, dental assisting, graphics etc.  
- 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

For more information, stop into the Center for Learning or call (231) 995-2134.

**Tutoring & Support Services**

Tutoring and Support Services are located on the main floor of the Osterlin Building. NMC strives to insure that students are valued and respected regardless of ethnicity, race, religion, age, gender, sexual orientation, or disability.

- **Tutoring:** The Tutorial Program offers workshops, group and drop-in tutoring. Tutors are available in many NMC courses to supplement the material covered in class. Call (231) 995-1138.

- **Support Services:** Services available to students with documented disabilities include: academic advising, classroom accommodations and testing modifications. Call (231) 995-1929, 995-1139, 995-1038 (TTY) for more information.
**Career Planning & Placement**

Confused about your career direction? Career and Employment Services can help you clarify your career path.

- Take the Myers-Briggs Type Indicator to determine which careers most suit your personality.
- Use the Strong Interest Inventory to compare your interests to people already working in different careers.
- Identify what you like to do and what’s important to you with a skills and values card sort instrument.
- Use easy, informative software programs to research careers or explore.
- Enroll in Career Exploration and Planning (PSY 100), a one-credit elective course, that includes all of the above and more.

Stop by Career and Employment Services in the Osterlin Building, visit www.nmc.edu/careers or call (231) 995-1041.

**Employment Opportunities**

Looking for a job? NMC maintains a list of regional job openings online at www.nmc.edu/careers. You may also view these lists in person in our office or check this site for employers who are conducting interviews on campus. Students seeking on-campus employment may apply through Career and Employment Services in the Osterlin Library. Any student who is enrolled for a minimum of six NMC credits per semester is eligible for on-campus employment. Visit www.nmc.edu/careers or call (231) 995-1041.

**Employability Skills**

NMC’s Career and Employment Services 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. Post your profile with us. Career and Employment Services is located in the Osterlin Building, visit www.nmc.edu/careers or call (231) 995-1041.

**Counseling Services**

The Counseling Center is located in the Biederman Building, Room 104. For information visit www.nmc.edu/counseling or call (231) 995-1040.

**Academic Advising**

Academic advising at NMC is a shared responsibility. The Counseling Center, with a staff of licensed professional counselors and advisors, offers a full complement of advising services for all levels of students. First-year students will meet with an advisor during orientation, but 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 time at NMC to ensure they are on the right track.

**Transfer Advising**

The Counseling Center staff has developed an extensive collection of online transfer guides for students planning to transfer to 4 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, the counseling staff will assist in selecting appropriate courses. NMC also recommends that students personally contact the transfer institution they are considering for additional information and questions. NMC invites students to visit www.nmc.edu/counseling to compare requirements at different schools.

**Career Counseling**

Students who are undecided about their career direction may benefit from career counseling and testing provided in the Counseling Center, as well as in the Career Center.

**Personal Counseling**

You will find professional counseling services to meet a full spectrum of personal needs. In addition to personal counseling, licensed counselors can assist with crisis intervention and referrals when necessary. All personal counseling is on a short-term basis with continuing support available from other 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. No fees are charged for counseling services.
Support for Excellence

Adult Student Award
Named by the NMC Barbecue Board, the Adult Student of the Year who is recognized at Honors Convocation and presented with a cash award. The Adult Student of the Year is someone who is at least 30 years old, has demonstrated academic performance over time, has a record of academic excellence, has achieved success along with fulfilling family, job, and community responsibilities and has achieved a degree or is near completion. Candidates for this award are nominated by NMC faculty and staff.

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.

Departmental Awards
At the end of the academic year, each academic department at NMC may select a student for a Departmental Award. Awards are presented to students with high academic achievement who also demonstrate a strong personal commitment to education and exemplify the characteristics necessary for future success in their field. Students are recognized with a certificate and gift at the annual Honors Convocation.

Divisional Scholarships
Each year, NMC’s academic areas may award Divisional Scholarships to students who will be returning to NMC and have achieved a minimum of a 3.0 grade point average in their first 20 semester credits at NMC. These scholarships are based on academic excellence and, in combination with other financial aid for which the student is eligible, may provide one year of tuition expenses. Contact the Academic Area office manager for more information and an application early in the Spring Semester.

Faculty Excellence Awards
Each year at commencement, NMC honors two instructors for teaching excellence with the Imogene Wise Faculty Excellence Award, recognizing a regular faculty member, and the Adjunct Faculty Excellence Award. Students are invited to nominate instructors for these awards, as are other faculty, staff and community members. The criteria are:

- Teaching effectiveness
- Rapport with students
- Innovative and interesting approaches
- Sense of dedication

Nomination forms are available during fall and spring semesters in various locations on campus and online. For more information, contact the Center for Instructional Excellence at (231) 995-1155.

Upward Bound

Funded by the U.S. Department of Education, Upward Bound is a 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.

Upward Bound is one of 772 programs nationally and one of 21 in Michigan. There is no cost for participants. For more information, visit nmc.edu/upwardbound or call (231) 995-1393.
### Living on Campus

#### Residence Halls
Close, convenient, affordable... fun! Northwestern Michigan College has a residence hall which offers a unique opportunity to live in a supportive, alcohol/drug-free community. More than just a place to eat and sleep, East Hall provides educational and social activities to promote your personal development. Up to 220 students live in the residence hall, which is a great place to meet people and make new friends.

**Requirement**
First-year students under the age of 20, not living with a parent or legal guardian, are required to live in the residence hall.

**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 and 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**
Flexible dining memberships are available for faculty, staff and students. NMC Food Court in West Hall offers hot breakfasts, lunches and dinners plus a soup, salad and deli bar, while Northwest Grind coffee shop and convenience store offers a menu of ready-made sandwiches, wraps, snacks and drinks. A variety of pre-paid meal plans allow you to choose what works for you. For more information 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 Housing Contract contains guidelines for residence hall living and is available to answer all your questions about occupancy, room assignments, and payment.

### 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 Housing 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 Students Rights and Responsibilities and Housing Contract or by calling the Housing Office at (231) 995-1400.

### Campus Apartments
NMC has a main-campus apartment complex with three buildings. These apartments are the ideal solution for students age 21 and older who are enrolled in at least 6 credit hours per semester (fall and spring). Students with children will feel at home in the family-friendly setting. Older and international students will enjoy the freedom of living in an apartment within a great community.

The apartment complex contains 4 one-bedroom and 32 two-bedroom units. One of the two-bedroom apartments is wheelchair accessible. Basic utilities (electricity, heat, water, sewer), kitchen appliances (refrigerator, stove, garbage disposal) and trash pick up are included in the rent. Each building has a laundry facility. For more information about the apartments and current costs visit [www.nmc.edu/housing](http://www.nmc.edu/housing) or call Campus Services at (231) 995-1111.
Health Services

Student Health Services is located in Room 106 of the Biederman Building and can be reached by calling (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 General 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 the charges 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.

Student Government Assoc.

The NMC Student Government Association is comprised of students who represent the student body. It meets weekly. Full or part-time students are eligible to become an SGA representative. A student can become a representative through a signature process or appointed by an academic department. Each academic discipline appoints a representative, and the student body elects three first-year and three second-year students each year 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 represent the student body on several college committees. The SGA Constitution is included in the Student Handbook portion of this catalog. For more information on SGA, please contact Lisa Blackford at (231) 995-1043.

Honors, Phi Theta Kappa

Honors Program

To enable you to challenge yourself, Northwestern Michigan College has established an Honors Program with two options:

1. A formal and rigorous two-year program which results in graduation from the Honors Program and
2. “Individualization” of course content for a single course or group of courses for honors credit.

At commencement, Honors Program graduates are recognized; they must have a minimum cumulative GPA of 3.5 and at least 16 semester credits in designated honors courses on their transcript. At graduation the following categories are recognized:

3.50 - 3.75 = With Honor, Honors Program Graduate
3.76 - 3.90 = With High Honor, Honors Program Graduate
3.91 - 4.00 = With Highest Honor, Honor Program Graduate

The Honors Program also sponsors a range of events, seminars, contests, scholarships, field trips and opportunities for study abroad. For information about the Honors Program, visit www.nmc.edu/honors or call (231) 995-1228.

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. The service hallmark includes buying school supplies, providing mastectomy pillows for the oncology unit at Munson Hospital, participating in park and beach cleanups and supporting various charity fundraisers. The scholarship hallmark involves an in-depth study of the bi-annual Honor Topic which is coordinated by Phi Theta Kappa International. The NMC chapter sponsors programs and a special satellite seminar series to help NMC students explore this topic in depth. Phi Theta Kappa also explores the topic through movies and discussions.

Leadership activities may involve being an officer in the chapter or providing leadership to other campus/community organizations. Fellowship provides an opportunity to get together with other Phi Theta Kappans. There are opportunities for travel both in the state to three regional conferences and the annual international 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 2005-2008. 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.
**Student Life**

### Student Media

**NMC MAGAZINE**
The magazine is published two or three times a year in print, interactive DVD, and website versions and 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. Serving on the magazine staff offers art, literary and design students exciting opportunities to learn about publishing and to express their creativity. Office is in the lower level of West Hall.

**WHITE PINE PRESS**
This award-winning student newspaper is published bi-weekly. Students with an interest in journalism, photography, graphic design, illustration, advertising, or business management acquire excellent hands-on experience. The Office is in the lower level of West Hall. (231) 995-1173.

**WNMC: 90.7 FM**
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. For additional information and to arrange a tour of this facility, call (231) 995-2562.

### Volunteer Opportunities
Volunteering is an important way for you to enhance learning, build a resumé, and feel the satisfaction of contributing something to the college or the community. There are many ways to serve, from environmental projects to human service experiences. Students may count up to four credits of volunteer time toward degree requirements, or they may participate without credits. For additional information, contact the Service Learning Coordinator at (231) 995-1294.

NMC Career and Employment Services can also assist you with obtaining volunteer positions to enhance your resume and clarify your career decision. You may visit Career and Employment Services in the Osterlin Building, visit www.nmc.edu/careers or call (231) 995-1041.

### Clubs & Organizations
To officially register a club or organization on campus, stop by the Student Activities Office in West Hall. To form a new group you must:

1. Establish a purpose that does not discriminate against any student who may wish to participate;
2. Have a faculty or staff advisor;
3. Complete an application to be recognized as a student organization;
4. Update your club’s status on an annual basis by informing the Student Activities Office (231) 995-1043 regarding club officers and contact telephone numbers.

Some of the student organizations available on campus are: Student Government, Residence Hall Council, Phi Theta Kappa, Society for Professional Engineers, International Student Club, Propeller Club, Society of Naval Association Maritime Engineers, Women’s Maritime Organization, Botany Club, Law Enforcement Club, The Native American Student Group, SPECTRUM, Student Christian Ministry, and Habitat for Humanity.

### Music
NMC provides a rich opportunity for college students to participate in a wide variety of performing groups based on the student’s background. Students interested in instrumental music can participate in the NMC Concert Band or the Traverse Symphony Civic Strings Program. Guitar students can participate in small ensembles in jazz, classical or contemporary (studio) guitar. Jazz Instrumentalists can participate in one of two jazz bands depending upon experience. Choral students can participate in the NMC Chamber Singers, Grand Traverse Chorale or the Vocal Jazz Ensemble.

All of the above are considered courses and can be taken for elective credit and are readily transferable to four-year colleges and universities. The ensembles provide a showcase for NMC to the community. Performances take place in Milliken Auditorium and in the community. Contact the Music Department Chair for additional information.

### Theater
The NMC Players perform works from classical and contemporary theater during Fall and Spring Semester on the NMC campus. Participants are expected to enroll in “Play Production” (THR 211, 212, 213, 214) during that semester. “Play Production” is offered for academic credit or as a non-credit offering through the NMC Extended Educational Services Division. Information on play selection and audition dates is available by calling (231) 995-1174.

### Diversity Services
The Diversity Services Office strives to create 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. Services include support, academic advising, information regarding the Michigan Indian Tuition Waiver and student group advising. Student groups may include support for GLBT (gay, lesbian, bisexual and transgendered) students, international students, Native American and Hispanic students, and Student Christian Ministry. For more information, call (231) 995-1043. The Diversity Services Office is located in the Student Activities Office in West Hall.
Sports, Health & Fitness

Recreation & Intramural Sports
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 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. For more information, call (231) 995-1198.

Open Recreation hours are scheduled throughout the year in the gymnasium for pick-up games of basketball, volleyball, and indoor soccer. Outdoor courts are available for basketball and sand volleyball. An athletic field has two softball diamonds and a football/soccer field. A frisbee/disc golf course surrounds East Hall, athletic field and gymnasium.

Sports Clubs
Most evenings the gym is filled with students learning Taekwondo, Kungfu, Aikido and Judo. NMC is recognized regionally for excellent instruction and successful competitions around the state.

NMC students have formed sports clubs in swing dance, cross-country skiing, rock climbing, sailing and soccer. Any student wishing to start a sports club may do so through the Student Government Association (231) 995-1535. For more information, call the Physical Education Office at (231) 995-1198.

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.

Class Cancellations

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 at www.nmc.edu/students, select “Daily Class Cancellations” under “Quick Links.”
- College delays or closures will be reported via email to all faculty and staff, via email to all student MBX 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.

Class Cancellations
Due to Instructor Absence
In the event an instructor would need to cancel his/her weekday class, this information will be communicated continuously via the 24-hour telephone line at (231) 995-1100, online at www.nmc.edu/students and displayed on campus video monitors.

For weekend class cancellations, students should call their instructor’s voicemail rather than the 24-hour telephone line.

International Students

International Opportunities
NMC welcomes international students each year from all over the world. These students belong to an International Club which sponsors many social and cultural activities. This club is also open to interested American students. Contact the Admissions Office at (231) 995-1034.
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 counselor or 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 62-63.
- 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 a counselor or advisor for more details. When MACRAO requirements are met, contact the Records & 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/counseling](http://www.nmc.edu/counseling) for your four-year institution of choice to ensure transferability of courses.

**Register early!**
- Register early to get the classes you want. Some courses are only offered one semester every year or two and many courses fill up the first day of registration.
- Register in the Records and Registration on the first floor of the Tanis Building or online at [www.nmc.edu/webregistration](http://www.nmc.edu/webregistration)
- 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 floor 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 65.
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 analyze their own thinking and the thinking of others in order to effectively identify and resolve issues.

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)

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 63.

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. Level I certificate programs require that a minimum of 12 credit hours be completed at NMC (this may be waived in extenuating circumstances; contact the registrar). Level II and III certificate programs require that a minimum of 20 credit hours be completed at NMC (this may be waived in extenuating circumstances; contact the registrar).
4. Competency testing by the responsible academic area if the course work was not completed at NMC.

*Competency credit: Students with competency in a specific area should consult with their program coordinator for possible testing and/or credit.

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 62-63 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.

## 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 121 or higher, or
  - Successful completion of MTH 111 or higher with a grade of 2.0 or better.

** Reading Competency:
Guide available from academic advisors.

## 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 44 for Applying for Graduation.

## Total Degree Credits: Minimum of 64

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

One Cultural Perspectives and Diversity course from list on page 63.

Math Competency required.*
Reading Competency required.**

A list of courses in **Group 1 and 2** begins on page 62.
**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.

<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 BUS 231, ENG 112 or ENG 220.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 credits of a <strong>Group 1</strong> Humanities course.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science/Mathematics</th>
<th>4 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 credits of a <strong>Group 1</strong> Science lecture/lab course.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Science</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 credits of a <strong>Group 1</strong> Social Science course.</td>
<td></td>
</tr>
</tbody>
</table>

**Electives**

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

One Cultural Perspectives and Diversity course from list on page 63.

Math Competency required.*

Reading Competency required.**

**A list of courses in Group 1 and 2 begins on page 62.**

**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 better.

** 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 44 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 70-98. 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.

**Communications**

6-8 credits

ENG 11/111 or ENG 111 English Composition and either ENG 220, BUS 231, or ENG 112. (Program of Study may specify.)

**Humanities**

3 credits

3 credits of a Group 1 Humanities course. (Program of Study may specify.)

**Science/Mathematics**

4 credits

4 credits of a Group 1 Science/Math lecture/lab course. (Program of Study may specify.)

**Social Science**

3 credits

3 credits of a Group 1 Social Science course. (Program of Study may specify.)

**Major Area Requirements**

27 or more semester credits. See specific Programs of Study on pages 70-98.

Math Competency required.*

Reading Competency required.**

A list of courses in Group 1 and 2 begins on page 62.

**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 better.

** 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 44 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 State of Michigan licensure examination. With passing scores, graduates are awarded licensure as a Registered Nurse.

A nursing career specialty emphasis is the dominant characteristic of the program. 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.

<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 ENG 112 English Composition.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHL 202 Contemporary Ethical Dilemmas.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science/Mathematics</th>
<th>13 credits</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Social Science</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 101 Introduction to Psychology.</td>
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</tr>
</tbody>
</table>

**Total Degree Credits: Minimum of 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 better
- Reading Competency:
  - Guide available from academic advisors.
- Computer Competency:
  - CIT 122A Computer and Internet Basics, 1 credit

**OTHER REQUIREMENTS**
- Complete a minimum of 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 44 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.

ENGLISH DEPT. Credits
ENG 111 English Composition ........................................4
ENG 112 English Composition ........................................4
Note: Transfer students with Composition transfer credits totaling less than 5, choose one of the ENG Literature Dept. 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.

ART DEPT.
ART 100 Art Appreciation ...........................................3
ART 111* History of Western Art I ..................................4
ART 112* History of Western Art II ..................................4
ART 116* World Cultures ...........................................4
ART 213 Modern Art History .........................................3
ART 214* Women in Art ...........................................3

HISTORY DEPT.
HST 101* Western Civilization to 1500 AD .........................4
HST 110* Western Civilization from 1500 .........................4
HST 111* US History to 1865 .......................................4
HST 112* US History Since 1865 ..................................4
HST 211* Native American History ................................3
HST 212* African-American History ...............................3
HST 213* American Women's History ............................3
HST 225 American Civil War .......................................3
HST 228 The Vietnam War ..........................................3
HST 230 A History of Michigan .....................................3
HST 235 20th Century Europe .......................................3

HUMANITIES DEPT.
HUM 101* Introduction to Humanities I ..........................3
HUM 102* Introduction to Humanities II ..........................3
HUM 111 American Experience .....................................3
HUM 112 American Experience .....................................3
HUM 116* World Cultures ...........................................4

LANGUAGE (INTERMEDIATE LEVEL) DEPT.
MLF 201* Intermediate French I ..................................4
MLF 202* Intermediate French II ..................................4
MLS 221* Intermediate Spanish I ..................................4
MLS 222* Intermediate Spanish II .................................4
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 ............................................4
ENG 265 Science Fiction and Fantasy ...............................3
ENG 266 Popular Culture .............................................3
ENG 271* 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
<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHEMISTRY DEPT.</strong></td>
<td>CHM 101 - CHM 101L</td>
<td>Introductory Chemistry</td>
</tr>
<tr>
<td></td>
<td>CHM 150 - CHM 150L - 150R</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td></td>
<td>CHM 151 - CHM 151L - 151R</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td></td>
<td>CHM 250 - CHM 250L</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td></td>
<td>CHM 251 - CHM 251L</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL SCIENCE DEPT.</strong></td>
<td>ENV 103 - ENV 103L</td>
<td>Earth Science</td>
</tr>
<tr>
<td></td>
<td>ENV 104 - ENV 104L</td>
<td>Life of the Past</td>
</tr>
<tr>
<td></td>
<td>ENV 111 - ENV 111L</td>
<td>Physical Geology</td>
</tr>
<tr>
<td></td>
<td>ENV 112 - ENV 112L</td>
<td>Historical Geology</td>
</tr>
<tr>
<td></td>
<td>ENV 117 - ENV 117L</td>
<td>Meteorology and Climatology</td>
</tr>
<tr>
<td></td>
<td>ENV 131 - ENV 131L</td>
<td>Oceanography</td>
</tr>
<tr>
<td></td>
<td>ENV 140 - ENV 140L</td>
<td>Watershed Science</td>
</tr>
<tr>
<td></td>
<td>ENV 210 - ENV 210L</td>
<td>Fundamentals of Soil Science</td>
</tr>
<tr>
<td></td>
<td>ENV 231 - ENV 231L</td>
<td>Environmental Science</td>
</tr>
<tr>
<td></td>
<td>ENV 270A</td>
<td>Michigan Basin Geology (lab only)</td>
</tr>
<tr>
<td></td>
<td>ENV 270B</td>
<td>Field Mapping Techniques (lab only)</td>
</tr>
<tr>
<td></td>
<td>ENV 270C</td>
<td>Pre-Cambrian Geology of MI (lab only)</td>
</tr>
<tr>
<td><strong>MATHEMATICS DEPT.</strong></td>
<td>MTH 116</td>
<td>Intro to Computer Science</td>
</tr>
<tr>
<td></td>
<td>MTH 121</td>
<td>College Algebra</td>
</tr>
<tr>
<td></td>
<td>MTH 122</td>
<td>Trigonometry</td>
</tr>
<tr>
<td></td>
<td>MTH 131</td>
<td>Intro to Probability and Statistics</td>
</tr>
<tr>
<td></td>
<td>MTH 140</td>
<td>College Algebra and Trigonometry</td>
</tr>
<tr>
<td></td>
<td>MTH 141</td>
<td>Calculus I</td>
</tr>
<tr>
<td></td>
<td>MTH 142</td>
<td>Calculus II</td>
</tr>
<tr>
<td></td>
<td>MTH 241</td>
<td>Calculus III</td>
</tr>
<tr>
<td></td>
<td>MTH 251</td>
<td>Differential Equations</td>
</tr>
<tr>
<td><strong>PHYSICS DEPT.</strong></td>
<td>PHY 105 - PHY 105L</td>
<td>Physics of the World Around Us</td>
</tr>
<tr>
<td></td>
<td>PHY 121 - PHY 121L</td>
<td>General Physics I</td>
</tr>
<tr>
<td></td>
<td>PHY 122 - PHY 122L</td>
<td>General Physics II</td>
</tr>
<tr>
<td></td>
<td>PHY 221 - PHY 221L - 221R</td>
<td>Prob &amp; Prin of Physics I</td>
</tr>
<tr>
<td></td>
<td>PHY 222 - PHY 222L - 222R</td>
<td>Prob &amp; Prin of Physics II</td>
</tr>
</tbody>
</table>

**Social Science**

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

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>COURSE</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td><strong>ANTHROPOLOGY DEPT.</strong></td>
<td>ANT 112</td>
<td>Introduction to Physical Anthropology</td>
</tr>
<tr>
<td></td>
<td>ANT 113*</td>
<td>Introduction to Cultural Anthropology</td>
</tr>
<tr>
<td><strong>ECONOMICS DEPT.</strong></td>
<td>ECO 121</td>
<td>Basic Economics</td>
</tr>
<tr>
<td></td>
<td>ECO 201</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td></td>
<td>ECO 202</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td><strong>GEOGRAPHY DEPT.</strong></td>
<td>GEO 101*</td>
<td>Introduction to Geography</td>
</tr>
<tr>
<td></td>
<td>GEO 105-105L</td>
<td>Physical Geography with Lab</td>
</tr>
<tr>
<td></td>
<td>GEO 108</td>
<td>Geography of U.S. and Canada</td>
</tr>
<tr>
<td></td>
<td>GEO 109*</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td></td>
<td>GEO 110</td>
<td>Economic Geography</td>
</tr>
</tbody>
</table>

**POLITICAL SCIENCE DEPT.**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>PLS 101*</td>
<td>Intro to American Politics</td>
</tr>
<tr>
<td>PLS 132*</td>
<td>Comparative Politics</td>
</tr>
<tr>
<td>PLS 211*</td>
<td>International Relations</td>
</tr>
<tr>
<td>PLS 222</td>
<td>Intro. to Political Theory</td>
</tr>
</tbody>
</table>

**PSYCHOLOGY DEPT.**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>PSY 211</td>
<td>Developmental Psychology</td>
</tr>
<tr>
<td>PSY 212</td>
<td>Psychology/Exceptional Child</td>
</tr>
<tr>
<td>PSY 221</td>
<td>Psychology of Personality</td>
</tr>
<tr>
<td>PSY 223</td>
<td>Intro to Social Psychology</td>
</tr>
<tr>
<td>PSY 225</td>
<td>Human Sexuality</td>
</tr>
<tr>
<td>PSY 231</td>
<td>Psychology of Adjustment</td>
</tr>
<tr>
<td>PSY 250</td>
<td>Abnormal Psychology</td>
</tr>
</tbody>
</table>

**SOCIOLOGY DEPT.**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 101*</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SOC 201</td>
<td>Modern Social Problems</td>
</tr>
<tr>
<td>SOC 211</td>
<td>Marriage and the Family</td>
</tr>
<tr>
<td>SOC 220*</td>
<td>Gender and Society</td>
</tr>
<tr>
<td>SOC 231*</td>
<td>Deviance and Criminal Behavior</td>
</tr>
</tbody>
</table>

*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.

**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](http://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 62-63 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 58 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.

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 58 for Associate in Science and Art degree requirements.

Astronomy

NMC offers courses that focus on Observational, Planetary, and Stellar Astronomics. Students planning on transferring to pursue a bachelor’s degree in this area should also take course work in Mathematics and Physics. Astronomy courses are listed on page 104.

Biology

Individuals planning to pursue a four-year degree in Biology should select from courses beginning on page 107. 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 113. 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

The most basic and enduring strength of economics is that it provides a logical, ordered way of looking at various problems and 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. Students interested in this field of study will select courses from among those on page 122.

Education

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.
To apply, use the three-digit NMC Code on your admissions application. 2010 - 2011 NMC CATALOG

**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 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 127. 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.

**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 102.

**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.

**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 Information Systems (GIS) is offered. Students planning on pursuing a rewarding career in Geography will select courses from those beginning on page 129.

**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

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

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- Early Childhood Music, School Music Educator, Music Supervisor, Music Professor, University Music School Administrator, Studio Teacher; Instrumental Music- Armed Forces Musician, Orchestra Musician, Concert Soloist, Rock or Jazz Band Musician, Music Clinician; Vocal Performance- Dance Band or Night Club Vocalist, Opera Chorus Member, Concert Soloist, Opera Soloist; Conducting- Choir, Orchestra, or Opera Conductor; Composing- School Music Composer, Art Music Composer, Commercial Jingle Composer, TV Show Composer, Film Score Composer; Music for Worship- Organist, Choir Director, Cantor; Music Business- Music Dealer Sales Person, Music Dealer Manager, Marketing or Advertising Specialist, Music Distributor; Instrument Making and Repair- Instrument Maker, Piano Tuner, Repair Technician; Music Publishing- Music Editor, Notesetter, Publishing Sales Representative, Copyright or Licensing Administrator; Music Communications- Publisher or Editor of Music Books or Periodicals, Music Reporter, Public Relations Specialist; The Recording Industry- Producer, Engineer, Mixer, Artist and Repertoire Person, Studio Arranger, Music Copyist; The TV and Radio Industry- Commercials Musician, Program Director, Post Production Scoring or Scoring Person, Music Advisor or Researcher.

The first two years of our music curriculum is common to all the professions listed above and provides a solid foundation for continued study at the transfer institution of choice and in some cases, such as audio technology courses, to immediately enter the profession.

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.

Many students who participated in their high school programs may wish to continue doing so at the collegiate level. Please turn to page 149 in this catalog to learn about ensemble courses at NMC.

Colleges and universities and music trade schools provide widely varied coursework leading to a bachelor’s degree and beyond. NMC can tailor the choice of music courses to best accommodate your needs. This is done through the Music Advisor.

Standard coursework for most of the professional positions listed above 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 230B, Ensembles-Recording Practicum.

*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 in the areas of Theory, Sight-Singing/Ear Training and Piano.

Performing Arts

DANCE

Students wishing to pursue an interest in the field of dance should take the courses in dance on page 120 and consult with an advisor and the dance faculty member before their first semester at NMC.

THEATER

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 159.

Philosophy and Religion

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 154-155.
**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**

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

LANDSCAPE & NURSERY

TURFGRASS MANAGEMENT

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 have the opportunity to 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**

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 courses in political science are referred to page 156.

**Pre-Law**

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

**Pre-Med, Pre-Dental, Pre-Vet**

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

**Psychology**

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**

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**

- **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**

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 159.

**Sociology**

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 158 for course listings.

**Visual Communications**

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 pages 58 and 60 for degree requirements.
Accounting Program Requirements

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: 16-17

Communications: ENG 111 and BUS 231 6-7
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: 47-48

ACC 121 Accounting Principles I 4
ACC 122 Accounting Principles II 4
ACC 221 Intermediate Accounting I 4
ACC 222 Intermediate Accounting II 4
BUS 101 Introduction to Business 3
BUS 105 Business Math** 3
BUS 150 Interpersonal Relations 2
BUS 156 Essentials of Customer Service 1
BUS 261 Business Law I 3
CIT 100 Computers in Business-An Intro 3
CIT 210 Electronic Spreadsheets 3
CIT 216 Computerizing Accounting Systems 2

Directed Electives (Choose any combination): 11-12

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

** It is recommended that BUS 105 be taken before or concurrently with ACC 121.*** Or a higher level math course, excluding MTH 116 and MTH 118.

Program Requirements: 64

Administrative Support Specialist Program Requirements

Certificate of Achievement (Level II) NMC Code 003

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

Certificate Requirements Credits: 39

Completion of all courses required for the Clerical Support Certificate: 17
(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 231</td>
<td>Professional Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS 290</td>
<td>Business Administration Internship</td>
<td>3</td>
</tr>
<tr>
<td>CIT 210</td>
<td>Electronic Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>CIT 212</td>
<td>Intro to Database Management</td>
<td>3</td>
</tr>
<tr>
<td>CIT 120A</td>
<td>Microsoft Word Level I A</td>
<td>1</td>
</tr>
<tr>
<td>CIT 120B</td>
<td>Microsoft Word Level I B</td>
<td>1</td>
</tr>
<tr>
<td>CIT 121A</td>
<td>Microsoft Word Level II A</td>
<td>1</td>
</tr>
<tr>
<td>CIT 121B</td>
<td>Microsoft Word Level II B</td>
<td>1</td>
</tr>
<tr>
<td>CIT 124A</td>
<td>Microsoft PowerPoint Level I A</td>
<td>1</td>
</tr>
<tr>
<td>CIT 124B</td>
<td>Microsoft PowerPoint Level I B</td>
<td>1</td>
</tr>
<tr>
<td>PHL 105</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>BPD 133</td>
<td>Keyboarding Speed/Accuracy</td>
<td>1</td>
</tr>
</tbody>
</table>

When applying for this program, please use NMC Code 003.

**Fine Arts Program Requirements**

**NMC Code 711**

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 that 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.

**Astronomy Program Requirements**

**NMC Code 717**

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. Astronomy courses listed here.

**Automotive: Electrical Drivability Specialist Program Requirements**

**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 is recommended; and completion of MTH 08 or placement into MTH 23 is recommended. For incoming students that do not meet the recommended level, remedial courses may be recommended.

**Foundation Requirements Credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 100* Automotive Service Basics</td>
<td>2</td>
</tr>
<tr>
<td>AT 190* Automotive Facility Orientation</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 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 160 Engine Repair</td>
<td>6</td>
</tr>
</tbody>
</table>

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

**Program Completion Requirements**

A minimum of 32 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.
Master Automotive Technician Program Requirements

Certificate of Achievement (Level III) NMC Code 001

NMC offers this program at both the state and federal levels of certification.

Foundation Requirements

For successful completion of the AT courses, placement into ENG 111 is recommended; and completion of MTH 08 or placement into MTH 23 is recommended. For incoming students that do not meet the recommended level, remedial courses may be recommended.

Certificate Requirements Credits: 56

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<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>

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

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

Automotive Service Technology Program Requirements

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 is recommended; and completion of MTH 08 or placement into MTH 23 is recommended. For incoming students that do not meet the recommended level, remedial courses may be recommended.

Certificate Requirements Credits: 16-18

<table>
<thead>
<tr>
<th>Component</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications: ENG 111 and ENG 112 or ENG 220</td>
<td>6-8</td>
</tr>
<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: Any Group 1 course with lab</td>
<td>4</td>
</tr>
<tr>
<td>Social Sciences: Any Group 1 course</td>
<td>3</td>
</tr>
</tbody>
</table>

* 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** 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>
</tbody>
</table>

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

AT 130 Engine Performance I 5
AT 230 Engine Performance II 4
AT 140 Suspensions and Steering 4
AT 150 Automatic Transmissions 6
AT 160 Engine Repair 6
AT 170 Heating and Air Conditioning 4
AT 180 Manual Drivetrain and Axles 6
AT 190** Automotive Facility Orientation 2
AT 200 Service Department Management 2

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

Program Requirements: 72-74

Automotive Under Car Specialist Program Requirements

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 is recommended; and completion of MTH 08 or placement into MTH 23 is recommended. For incoming students that do not meet the recommended level, remedial courses may be recommended.

Certificate Requirements Credits
AT 100* Automotive Service Basics 2
AT 190* Automotive Facility Orientation 2

Required Courses
AT 110 Automotive Brake Systems 5
AT 120 Automotive Electrical I 5
AT 140 Suspension and Steering 4
AT 150 Automatic Transmissions 6
AT 180 Manual Drive train and Axles 6

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

Program Completion Requirements
A minimum of 32 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.

Aviation Program Requirements

Associate in Applied Science Degree NMC Code 562

General Education Requirements Credits: 16-17
AVF 111 Private Flight 5
AVF 118 Instrument Flight I 1
AVF 130 Instrument Flight II 2
AVF 230 Commercial Flight I 2
AVF 232 Commercial Flight II 3
AVF 234 Commercial Flight III 2
AVF 271 Multi-Engine Rating 1
AVG 101 Private Pilot Ground School 5
AVG 161 Mechanics for Pilots 3
AVG 190 Aviation Weather 3

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

- AVG 202 Advanced Aircraft Systems 3
- AVG 204 Airline Aircraft Ground School or AVG 240 3
- Corporate Aviation Ground
- AVG 251 Commercial Ground School 4
- AVG 252 Instrument Ground School 4
- AVG 381 Instructor Ground School 5
- Elective Course 0-2

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 the NMC 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 better. 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

**Biology Program Requirements**

**NMC Code 702**

Individuals planning to pursue a four-year degree in Biology should select from courses listed here » In addition, students should select courses in Mathematics, Chemistry and Physics.

**Bridge Program Requirements**

**Workforce Training**

The NMC Bridge Program 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: 11**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPC 092*</td>
<td>Bridge to Math</td>
<td>3</td>
</tr>
<tr>
<td>BPC 094*</td>
<td>Bridge to Communication</td>
<td>4</td>
</tr>
<tr>
<td>BPC 096*</td>
<td>Bridge to Technology</td>
<td>4</td>
</tr>
</tbody>
</table>

* Denotes developmental classes.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT 109A</td>
<td>Keyboarding I</td>
<td>2</td>
</tr>
<tr>
<td>CIT 120A</td>
<td>Microsoft Word Level I A</td>
<td>1</td>
</tr>
<tr>
<td>CIT 120B</td>
<td>Microsoft Word Level I B</td>
<td>1</td>
</tr>
</tbody>
</table>
Business Administration Program Requirements

Associate in Applied Science Degree


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 150 Interpersonal Relations 2
- BUS 156 Essentials of Customer Service 1
- BUS 261 Business Law I 3
- CIT 100 Computers in Business-An Intro 3
- CIT 210 Electronic Spreadsheets 3
- MGT 241 Principles of Management 3
- MGT 251 Human Resources Management 3
- MKT 201 Principles of Marketing 3

Areas of Concentration 12-13

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

General Business 12

Any 12 credits from the other five concentration areas.

Computer Applications

- CIT 124A Microsoft PowerPoint I A 1
- CIT 124B Microsoft PowerPoint I B 1
- CIT 155 Personal Computer Maintenance 2
- CIT 212 Intro. to Database Management 3
- CIT 213 Networking Technologies 4
- CIT 215 Windows Server Environment 3
- CIT 216 Computerized Accounting Systems 2
- CIT 217 XHTML Programming 2
- CIT 233 Project Management 3
- CIT 290 CIT Internship 3

Entrepreneur

- BUS 262 Business Law II 3

(Continued on next page.)
CIT 216 Computerized Accounting Systems 2  
CIT 233 Project Management 3  
MGT 245 Principles of Entrepreneurship 3  
MKT 210 Principles of Selling 3  

**Insurance**  
BUS 111 Property and Casualty Insurance 3  
BUS 112 Life and Health Insurance 3  
BUS 113 Commercial Insurance 3  
Internship 3  

**Management**  
BUS 262 Business Law II 3  
BUS 290 Business Administration Internship 3  
CIT 124A Microsoft PowerPoint IA 1  
CIT 124B Microsoft PowerPoint IB 1  
CIT 216 Computerized Accounting Systems 2  
CIT 233 Project Management 3  
ECO 202 Principles of Microeconomics 3  
ENG 112 English Composition 4  
MGT 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 IA 1  
CIT 124B Microsoft PowerPoint IB 1  
ECO 202 Principles of Microeconomics 3  
ENG 112 English Composition 4  
MGT 245 Entrepreneurship 3  
MKT 210 Principles of Selling 3  
MKT 241 Principles of Advertising 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 Program Requirements

**Associate in Applied Science Degree**

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

**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  

*Continued on next page.*
To apply, use the three-digit NMC Code on your admissions application.

* 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 150 Interpersonal Relations 2  
BUS 156 Essentials of Customer Service 1  
BUS 261 Business Law I 3  
CIT 100 Computers in Business-An Intro 3  
CIT 210 Electronic Spreadsheets 3  
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 (workplace based - not online) 3  
CIT 212 Introduction to Database Management 3  
CIT 213 Networking Technologies 4  
CIT 217 XHTML Programming 2  
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 (opens in new browser window) for online course options.

**CAD-CAM Detailer Program Requirements**

**Associate in Applied Science Degree NMC Code 555**

General Education Requirements Credits: 21-22  
Communications: ENG 111 and ENG 112* or ENG 220 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.

**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

(Continued on next page.)
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 Drafting Drafter Program Requirements**

**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 Credits: 34**

DD 101 Print Reading and Sketching, Mfg 3
DD 110 Basic Metallurgy 3
DD 120 Comp. 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 and Assembly Modeling 4
DD 240 Advanced Part and Assembly Modeling 4
MFG 111 Math for Manufacturing 3
MFG 113 Machining I 3
MFG 114 Machining II 3
MTH 23 or placement into MTH 111 or higher (4)

**CAD-CAM Drafting Trainee Program Requirements**

**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 Credits: 18**

DD 101 Print Reading and Sketching, Mfg 3
DD 120 Comp. Aided Drafting (AutoCAD) 2
DD 125 Mechanical Drafting (AutoCAD) 2
DD 150 Detail Drafting 4
DD 170 Part and Assembly Modeling 4
MFG 111 Math for Manufacturing 3
MTH 23 or placement into MTH 111 or higher (4)

**Chemistry Program Requirements**

**NMC Code 727**

In addition to taking Chemistry courses, students with an emphasis in Chemistry gain a solid background in Math and Physics. Students planning on transferring to pursue a bachelor’s degree in Chemistry will pursue course work which includes credits selected from those listed here »
Child Development Program Requirements

**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.

The following classes are approved by the National Child Development Associates (CDA). They meet the required hours in the various functional areas. A chart showing the breakdown of hours is available in the Social Sciences 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 Credits: 34-35**

- CD 101 Early Childhood Education: 3 credits
- CD 202 Human Growth and Development: 5 credits
- CD 203 Guiding Young Children: 3 credits
- CD 204 Early Childhood Curriculum: 3 credits
- CD 206 Infant/Toddler Development: 3 credits
- CD 220 Childhood Program Management: 3 credits
- CD 230 Early Language and Literacy: 3 credits
- ENG 210 Children's Literature: 3 credits
- PSY 101 Intro to Psychology: 3 credits
- PSY 212 Psychology/Exceptional Child: 3 credits
- CD 290 Service Learning Internship Experience*: 2-3 credits

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

Clerical Support Program Requirements

**Certificate of Achievement (Level II) 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 credits
- BUS 101 Introduction to Business: 3 credits
- BUS 130 Mechanics of Business Writing: 3 credits
- BUS 150 Interpersonal Relations: 2 credits
- BUS 156 Essentials of Customer Service: 1 credit
- CIT 109B Keyboarding II: 2 credits
- CIT 122A Computer and Internet Basics I: 1 credit
- CIT 122B Computer and Internet Basics II: 1 credit
Communications Program Requirements

NMC Code 704

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.

CIT Developer Program Requirements

Associate in Applied Science Degree NMC Code 108

This program gives students a comprehensive background in developing desktop, web, and database applications for a computer. In addition, students receive a basic background in business and liberal arts. Successful Associate Degree graduates are qualified for entry-level positions as computer programmers, web application developers, and database analysts.

Students use state-of-the-art desktop computer hardware and software to create computer programs, construct databases, and implement Internet applications. Students work with advanced integrated development environment and peripherals including Visual Studio, graphics, color printers, laser printers, and a variety of networking equipment. Students considering transfer should see an advisor.

General Education Requirements Credits: 17-18

Communications: ENG 111 and either ENG 112 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
(EO 201 recommended)

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

Occupational Specialty Courses 51-52

ACC 121 Accounting Principles I 4
BUS 101 Introduction to Business or ACC 122 Accounting Principles II 4
BUS 150 Interpersonal Relations 2
BUS 231 Professional Communications 3
CIT 110 Programming Logic and Design 2
CIT 140 .NET Application Programming 3
CIT 155 Personal Computer Maintenance 2
CIT 210 Electronic Spreadsheets 3
CIT 212 Introduction to Database Management 3
CIT 213 Networking Technologies 4
CIT 217 XHTML Programming 2
CIT 218 Web App Programming ASP .NET 3
CIT 220 XML Programming 2
CIT 230 Systems Analysis and Design 3
CIT 233 Project Management 3
CIT 248 SQL Server Databases 3
CIT 255 .NET Object-Oriented Programming 3
CIT 290 CIT Internship 3
Program Requirements 68-70
## CIT General Program Requirements

**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 use state-of-the-art desktop computers and servers to develop computer programs, to access the Internet, and to gain experience with a Local Area Network utilizing Linux and Windows server operating systems. Students work with advanced features and peripherals including graphics, color printers, laser printers, and a variety of networking equipment. Students considering transfer should see an advisor.

### General Education Requirements Credits: 16-18

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications: ENG 111 and either BUS 231 or ENG 112</td>
<td>6-8</td>
</tr>
<tr>
<td>Humanities: PHL 202 or PHL 105</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics: Placement into MTH 121 or higher, or completion of MTH 111*</td>
<td>4</td>
</tr>
<tr>
<td>Science: Any Group 1 course with a lab</td>
<td>(4)</td>
</tr>
<tr>
<td>Social Sciences: Any Group 1 course (ECO 201 recommended)</td>
<td>3</td>
</tr>
</tbody>
</table>

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

### Occupational Specialty Requirements: 48-49

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ACC 121 Accounting Principles I</td>
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<tr>
<td>BUS 101 Introduction to Business or ACC 122</td>
<td>3-4</td>
</tr>
<tr>
<td>Accounting Principles II</td>
<td></td>
</tr>
<tr>
<td>CIT 110 Programming Logic &amp; Design</td>
<td>3</td>
</tr>
<tr>
<td>CIT 140 .NET Application Programming</td>
<td>3</td>
</tr>
<tr>
<td>CIT 156 CompTIA A+® Certification I</td>
<td>3</td>
</tr>
<tr>
<td>CIT 157 CompTIA A+® Certification II</td>
<td>3</td>
</tr>
<tr>
<td>CIT 255 .NET Object-Oriented Programming</td>
<td>3</td>
</tr>
<tr>
<td>CIT 210 Electronic Spreadsheets or CIT 233 Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CIT 212 Introduction to Database Management</td>
<td>3</td>
</tr>
<tr>
<td>CIT 213 Networking Technologies</td>
<td>4</td>
</tr>
<tr>
<td>CIT 215 Windows Server Environment</td>
<td>3</td>
</tr>
<tr>
<td>CIT 217 XHTML Programming</td>
<td>2</td>
</tr>
<tr>
<td>CIT 230 Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>CIT 248 SQL Server Databases</td>
<td>3</td>
</tr>
<tr>
<td>CIT 256 Linux Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIT 290 CIT Internship*</td>
<td>3</td>
</tr>
</tbody>
</table>

Program Requirements 64-67

### Ferris State University Requirements: 30

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ISYS 411 Project Management</td>
<td>3</td>
</tr>
<tr>
<td>ISYS 470 Database Administration</td>
<td>3</td>
</tr>
<tr>
<td>ISYS 488 Systems Design &amp; Implementation</td>
<td>3</td>
</tr>
<tr>
<td>ISYS 489 Adv. Systems Design &amp; Implementation</td>
<td>3</td>
</tr>
<tr>
<td>BUSN 499 Interdisciplinary Experience</td>
<td>3</td>
</tr>
<tr>
<td>FINC 322 Financial Management I</td>
<td>3</td>
</tr>
<tr>
<td>ISYS 321 Business Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

MGMT 370 Quality/Operations Management 3
PLSC 300+ Social Awareness Elective 300/400 non-economic 3
NGL 325 Advanced Writing in Business 3

Other NMC courses for Bachelor's degree are: 36

ACC 122 Principles of Accounting II 3
BUS 216 Business Law I 3
MGT 241 Principles of Management 3
MKT 201 Principles of Marketing 3
COM 111 Public Speaking 4
ENG 112 English Composition 4
Science Class 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 Requirements Minimum 126Contact the Ferris State University-University Center Office for updates at (231) 995-1166.

CIT Infrastructure Program Requirements

**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 and MCITP - Microsoft Certified Information

**Technology Professional**
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, please call (231) 995-1166. Students considering transfer should see an advisor.

**General Education Requirements Credits: 16-18**
Communications: ENG 111 and either ENG 112 or ENG 220 6-8
Humanities: PHL 105 or PHL 202 3
Mathematics: Placement into MTH 121 or higher, or completion of MTH 111* (4)
Science: Any Group 1 course 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.

(Continued on next page.)
Occupational Specialty Courses 51

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 150 Interpersonal Relations</td>
<td>2</td>
</tr>
<tr>
<td>CIT 247 Windows Server Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIT 156 CompTIA A+® Certification I</td>
<td>3</td>
</tr>
<tr>
<td>CIT 157 CompTIA A+® Certification II</td>
<td>3</td>
</tr>
<tr>
<td>CIT 160 Cisco Internetworking I</td>
<td>4</td>
</tr>
<tr>
<td>CIT 161 Cisco Internetworking II</td>
<td>4</td>
</tr>
<tr>
<td>CIT 213 Networking Technologies</td>
<td>4</td>
</tr>
<tr>
<td>CIT 215 Windows Server Environment</td>
<td>3</td>
</tr>
<tr>
<td>CIT 233 Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CIT 240 Network Security Management</td>
<td>3</td>
</tr>
<tr>
<td>CIT 242 Windows Client Administration</td>
<td>2</td>
</tr>
<tr>
<td>CIT 246 Windows Server Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>CIT 256 Linux Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIT 260 Cisco Internetworking III</td>
<td>4</td>
</tr>
<tr>
<td>CIT 261 Cisco Internetworking IV</td>
<td>4</td>
</tr>
<tr>
<td>CIT 290 CIT Internship **</td>
<td>3</td>
</tr>
</tbody>
</table>

** Two competencies are required for the Internship Class: 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 67-69

Computer Studies Infrastructure Specialist I Program Requirements

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 Security+® 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: 17

For CompTIA A+® Certification:
CIT 156 CompTIA A+® Certification I 3
CIT 157 CompTIA A+® Certification II 3
CIT 242 Windows Client Administration 2
BUS 150 Interpersonal Relations 2

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

For CompTIA Security+ Certification:
CIT 240 Network Security Management 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: 33

Completion of Infrastructure Specialist I certificate I 17
CIT 160 Cisco Internetworking I 4
CIT 161 Cisco Internetworking II 4
CIT 260 Cisco Internetworking III 4
CIT 261 Cisco Internetworking IV 4

Computer Studies - Infrastructure Specialist III

Certificate of Achievement (Level III) NMC Code 024

Students completing the Infrastructure Specialist II certificate may elect to continue their education and obtain a level III certificate. The Microsoft MCTS and MCITP certifications are industry-recognized focusing in server and infrastructure environments.

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

Certificate Requirements Credits: 51

Completion of Infrastructure Specialist I certificate I 17
Completion of Infrastructure Specialist II certificate 16
For Microsoft MCTS and MCITP Certification*
CIT 215 Windows Server Environment 3
CIT 246 Windows Server Infrastructure 3
CIT 247 Windows Server Administration 3
Occupational Requirements
CIT 233 Project Management 3
CIT 256 Linux Administration 3
CIT 290 CIT Internship 3

Computer Studies Industry Certifications

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 open/online training classes in Word, Excel, Access, Outlook and PowerPoint. For additional information on testing and/or training, please call (231) 995-2247.

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

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 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 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 indicates a foundation in, and apprentice knowledge of networking. CCNA certified professionals can install, configure, and 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.

(Continued on next page.)
Cisco Internetworking I through Cisco Internetworking IV are courses offered by the NMC Cisco Networking Academy and provide training for the CCNA Exam. Comp-TIA (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 Program Requirements

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 Certified Applications 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CIT 120A</td>
<td>Microsoft Word Level I A</td>
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<tr>
<td>CIT 120B</td>
<td>Microsoft Word Level I B</td>
<td>1</td>
</tr>
<tr>
<td>CIT 121A</td>
<td>Microsoft Word Level II A</td>
<td>1</td>
</tr>
<tr>
<td>CIT 121B</td>
<td>Microsoft Word Level II B</td>
<td>1</td>
</tr>
<tr>
<td>CIT 128</td>
<td>Microsoft Excel Level I</td>
<td>2</td>
</tr>
<tr>
<td>CIT 129</td>
<td>Microsoft Excel Level II</td>
<td>2</td>
</tr>
<tr>
<td>CIT 124A</td>
<td>Microsoft PowerPoint Level I A</td>
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<tr>
<td>CIT 124B</td>
<td>Microsoft PowerPoint Level I B</td>
<td>1</td>
</tr>
<tr>
<td>CIT 125</td>
<td>Microsoft Outlook or CIT 126 Microsoft Access</td>
<td>2</td>
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<td></td>
<td>Access Level I</td>
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</table>

Electives Credits: 4

Choose from the following:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ACC 121</td>
<td>Accounting Principles I</td>
<td>4</td>
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<tr>
<td>CIT 109A</td>
<td>Keyboarding I</td>
<td>2</td>
</tr>
<tr>
<td>CIT 122A</td>
<td>Computer &amp; Internet Basics I</td>
<td>1</td>
</tr>
<tr>
<td>CIT 122B</td>
<td>Computer &amp; Internet Basics II</td>
<td>1</td>
</tr>
<tr>
<td>CIT 125</td>
<td>Microsoft Outlook</td>
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<tr>
<td>CIT 126</td>
<td>Microsoft Access Level I</td>
<td>2</td>
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<tr>
<td>CIT 127</td>
<td>Microsoft Access Level II</td>
<td>2</td>
</tr>
<tr>
<td>CIT 155</td>
<td>Personal Computer Maintenance</td>
<td>2</td>
</tr>
</tbody>
</table>

Computer Studies Support Specialist Program Requirements

Certificate of Achievement (Level III) NMC Code 006

Students complete course work in business and computer operations leading to a certificate. Graduates are qualified for positions as help-desk computer technicians, office specialists, and other entry-level IT related positions.

Students use state-of-the-art computers, Microsoft Office Suite, and gain experience with a Local Area Network using the Windows operating system. Students work with advanced features and peripherals including graphics, color printers, and laser printers.

Certificate Requirements Credits: 47-50

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 101</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 105</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 150</td>
<td>Interpersonal Relations</td>
<td>2</td>
</tr>
<tr>
<td>BUS 231</td>
<td>Professional Communications</td>
<td>3</td>
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<tr>
<td>CIT 120A</td>
<td>Microsoft Word Level I A</td>
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<tr>
<td>CIT 120B</td>
<td>Microsoft Word Level I B</td>
<td>1</td>
</tr>
<tr>
<td>CIT 121A</td>
<td>Microsoft Word Level II A</td>
<td>1</td>
</tr>
<tr>
<td>CIT 122A</td>
<td>Computer and Internet Basics I</td>
<td>1</td>
</tr>
</tbody>
</table>

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT 122B</td>
<td>Computer and Internet Basics II</td>
<td>1</td>
</tr>
<tr>
<td>CIT 124A</td>
<td>Microsoft PowerPoint Level I A</td>
<td>1</td>
</tr>
<tr>
<td>CIT 124B</td>
<td>Microsoft PowerPoint Level I B</td>
<td>1</td>
</tr>
<tr>
<td>CIT 155</td>
<td>Personal Computer Maintenance or CIT 156</td>
<td>2-3</td>
</tr>
<tr>
<td>CIT 157</td>
<td>CompTIA A+® Certification II</td>
<td>3</td>
</tr>
<tr>
<td>CIT 159</td>
<td>CompTIA A+® Certification II</td>
<td>3</td>
</tr>
<tr>
<td>CIT 210</td>
<td>Electronic Spreadsheets or CIT 128</td>
<td>3-4</td>
</tr>
<tr>
<td>CIT 211</td>
<td>Microsoft Excel Level I and CIT 129 Microsoft Excel Level II</td>
<td></td>
</tr>
<tr>
<td>CIT 212</td>
<td>Introduction to Database Management or CIT 126 Microsoft Access Level I</td>
<td>2-3</td>
</tr>
<tr>
<td>CIT 213</td>
<td>Networking Technologies</td>
<td>4</td>
</tr>
<tr>
<td>CIT 215</td>
<td>Windows Server Environment</td>
<td>3</td>
</tr>
<tr>
<td>CIT 233</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CIT 292</td>
<td>Support Specialist</td>
<td>3</td>
</tr>
<tr>
<td>ENG 220</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>PHL 105</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
</tbody>
</table>

**Computer Studies Web Developer I Program Requirements**

**Computer Studies - Web Developer I**

**Certificate of Achievement (Level I) NMC Code 039**

The progressive Web Developer certificates provide skills to develop interactive, data-driven web sites combined with the tools used in the industry. These certificates, combining hands-on coursework from CIT and VCA course offerings, are selected to give students a well-rounded experience that builds as the courses and certificates are completed. Students interested in these offerings are usually those who love attention to detail, are self-directed and results oriented, and enjoy working with both people and technology. The certificates be completed as stand-alone certificates taken in order, or they can be applied to the electives or major area requirements for an Associate in General Studies or an Associate in Applied Science.

**Level I Certificate Requirements Credits: 16**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 131</td>
<td>2-D Design</td>
<td>3</td>
</tr>
<tr>
<td>CIT 110</td>
<td>Programming Logic and Design</td>
<td>2</td>
</tr>
<tr>
<td>CIT 217</td>
<td>XHTML Programming</td>
<td>2</td>
</tr>
<tr>
<td>VCA 123</td>
<td>Photoshop I</td>
<td>2</td>
</tr>
<tr>
<td>VCA 147</td>
<td>Web Design I</td>
<td>3</td>
</tr>
<tr>
<td>VCA 150</td>
<td>Digital Graphic Design I</td>
<td>4</td>
</tr>
</tbody>
</table>

**Computer Studies - Web Developer II**

**Certificate of Achievement (Level II) NMC Code 040**

Prerequisites: Completion of all courses listed in the Web Developer Certificate Level I (16 credits)

**Level II Certificate Requirements: 33**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 231</td>
<td>Professional Communications or BUS 150</td>
<td>3</td>
</tr>
<tr>
<td>BUS 156</td>
<td>Interpersonal Relations and Essentials of Customer Service</td>
<td></td>
</tr>
<tr>
<td>CIT 140</td>
<td>.NET Application Programming</td>
<td>3</td>
</tr>
<tr>
<td>CIT 212</td>
<td>Intro. to Database Management</td>
<td>3</td>
</tr>
<tr>
<td>CIT 220</td>
<td>XML Programming</td>
<td>2</td>
</tr>
<tr>
<td>CIT 218</td>
<td>Web Programming with ASP .NET</td>
<td>3</td>
</tr>
</tbody>
</table>

(Continued on next page.)
VCA 146 Interactive Animation 3

**Computer Studies - Web Developer III**

**Certificate of Achievement (Level III) NMC Code 041**

Prerequisites: Completion of all courses listed in the Web Developer Certificate Level I (16 credits) and Web Developer Certificate III (17 credits)

**Level III Certificate Requirements: 48**

- CIT 233 Project Management 3
- CIT 248 SQL Server Databases 3
- CIT 255 .NET Object-Oriented Programming 3
- CIT 291* Web Internship 3
- VCA 250 Time Based Media I 3

*Two competencies are required for the Internship course: a 3.0 GPA in CIT classes (with 20 CIT credits and an overall GPA 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.

---

**Construction Technology - Carpentry Program Requirements**

**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 Carpentry Technology 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. For more information call (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 Program Requirements**

**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 Electrical Technology 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. For more information call (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

(Continued on next page.)
Construction Technology Facilities Maintenance Program Requirements

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 Facilities Maintenance 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. For more information call (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

Construction Technology HVACR Program Requirements

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 HVAC/R Technology 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. For more information call (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 - Plumbing Technology Program Requirements

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 Plumbing Technology 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. For more information call (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
Criminal Justice Program Requirements

NMC Code 706

Offered through The Michigan Community College Virtual Learning Collaborative by Delta College, Northwestern Michigan College, and West Shore Community College.

Students who complete the program are prepared to transfer to a four-year college or university and continue study toward a bachelor’s degree in criminal justice, law, security, public service, and law enforcement. There are a variety of career opportunities at the local, state and national level in criminal justice; the profession is turning to college-educated personnel. Students completing this program will receive an Associate in Science and Arts degree from Northwestern Michigan College. It is recommended that students wishing to transfer to a 4-year college review the transfer guides for the colleges of choice since transfer requirements may differ between institutions.

Required courses

All courses listed are offered online. Some of the Criminal Justice courses are offered at partnering colleges. To enroll in courses not offered at NMC, go to vcampus.mccvlc.org

MACRAO Requirements (32 credits)

Communications (Both required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 English Composition I</td>
<td>4</td>
</tr>
<tr>
<td>ENG 112 English Composition II</td>
<td>4</td>
</tr>
</tbody>
</table>

Humanities (8 credits taken from 2 different departments required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 210 Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 241 Mythology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 271 Adolescence and Culture Diversity</td>
<td>3</td>
</tr>
<tr>
<td>HST 101 Western Civilization to 1500 AD</td>
<td>4</td>
</tr>
<tr>
<td>HST 111 US History to 1865</td>
<td>4</td>
</tr>
<tr>
<td>HST 112 US History since 1865</td>
<td>4</td>
</tr>
<tr>
<td>HST 212 African-American History</td>
<td>3</td>
</tr>
<tr>
<td>HST 213 American Women's History</td>
<td>3</td>
</tr>
<tr>
<td>HST 230 A History of Michigan</td>
<td>3</td>
</tr>
<tr>
<td>MUS 110 Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>PHL 202 Contemporary Ethical Dilemmas</td>
<td>3</td>
</tr>
</tbody>
</table>

OR an other Group 1 Humanities course

science/math (8 credits taken from 2 different departments required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 106 Human Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHM 101 Introduction to Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>MTH 131 Intro to Probability &amp; Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHY 105 Physics of the World Around Us</td>
<td>4</td>
</tr>
</tbody>
</table>

OR an other Group 1 Science/Math course. One must be a Science lecture-lab.

social science (8 credits required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 201 Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 202 Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>PLS 101 Survey of American Government</td>
<td>3</td>
</tr>
<tr>
<td>PSY 101 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 250 Abnormal Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

OR an other Group 1 Social Science course.

(Continued on next page.)
criminal justice requirements (24 credits)

CJ 101-Intro to Criminal Justice (NMC) 3
CJ 111-Police Administration (Delta) 3
CJ 112-Delta Police Operations (Delta) 3
TLCJ 210-Intro to Corrections (West Shore) 3
CJ 210-Intro to Criminal Investigation (Delta) 3
CJ 211-Criminal Law (NMC) 3
CJ 242-Evidence and Criminal Procedures (NMC)
TLCJ 211-Juvenile Delinquency (West Shore) 3

Electives: 8 additional credit hours required from courses of levels 100 or above for a total of at least 64 credit hours (minimum degree requirement).

Notes:

# To graduate at NMC, 64 credit hours with a 2.0 or higher cumulative grade point average must be achieved.
# There is also a Math competency requirement: COMPASS placement into MTH121 - College Algebra or higher, or successful completion of MTH 111- Intermediate Algebra. We do offer the Intermediate Algebra online.
# There is an English competency requirement, but it is obtained with English Composition I - ENG 111.

Culinary Arts Program Requirements

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 four culinary labs including a bakery, introductory and food skills kitchen, an advanced cooking kitchen, a garde manger kitchen, a beverage management outlet 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 fewer than 150 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: 16-18

Communications: ENG 111 and either BUS 231 or ENG 112 6-8
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 Introduction to Baking 4

(Continued on next page.)
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.

Program Requirements 72-73

Culinary Arts Program Requirements

Certificate of Achievement (Level III) NMC Code 029

Certificate Requirements Credits: 53

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 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 Kitchen and Dining Room Management 3
CUL 218 Advanced Baking 4
CUL 295 Contemporary Service and 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.

Customer Energy Specialist Program Requirements

Certificate of Achievement (Level III) NMC Code 023

Program includes customer contact in providing and designing services for gas and electricity, knowledge of construction processes and business procedures, and use of computer systems for Computer Aided Design and data retrieval. Sponsored by Consumers Energy, students may apply for a paid internship with Consumers Energy, while completing business, technical, and communications courses.

Certificate Requirements Credits: 48

ACC 121 Accounting Principles I 4
BUS 101 Introduction to Business 3
BUS 150 Interpersonal Relations 2
BUS 156 Essentials of Customer Relations 1
BUS 261 Business Law 3
CIT 100 Computers in Business-An Intro 3
DD 120 Computer Aided Drafting (AutoCAD) 2
DD 130 Architectural Drafting I (AutoCAD) 2

(Continued on next page.)
EET 103 Electrical Studies I 3
EET 104 Electrical Studies II 3
ENG 111 English Composition 4
ENG 220 Technical Writing 3
MKT 201 Principles of Marketing 3
MTH 111 Intermediate Algebra 4
PHY 105 Physics of the World Around Us 4

Directed Electives: 4
CIT 128 Microsoft Excel Level I 2
EET 221 Industrial Controls 3
EET 232 Programmable Logic Controllers 3
MGT 241 Principles of Management 3
MGT 251 Human Resources Management 3

* May substitute Electrical Distribution Design courses offered by Consumers Energy.

Dance Program Requirements

NMC Code 707

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

Dental Assistant Program Requirements

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 degree and certificate programs are accredited by the American Dental Association (ADA) 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, summer 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: 22-24

Communications: ENG 111 and ENG 112 6-8
Humanities: Any Group 1 course 3
Mathematics: Placement into MTH 111 or higher, or completion of MTH 23* (4)
Science: BIO 106 4
Social Science: PSY 101 3
Electives: Group 1 or 2 courses 4-8

* These credits do not count toward degree requirements.

Occupational Specialty Requirements: 40.5-42.5

BUS 150 Interpersonal Relations or COM 111 Public Speaking 2-4
HAH 120 Infection Control 2
HDA 101 Introduction to Dentistry 2
HDA 112 Dental Materials 2

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

To apply, use the three-digit NMC Code on your admissions application.

HDA 113 Dental Materials Lab 1
HDA 120 Dental Anatomy 3
HDA 140 Oral Pathology/Pharmacology 2
HDA 150 Dental Office Management 2
HDA 160 Dental Emergencies 1
HDA 170 Preventive Dentistry 2
HDA 240 Chairside Procedures 5
HDA 241 Chairside Procedures Lab 2
HDA 242 Dental Radiography 2
HDA 243 Dental Radiography Lab 1.5
HDA 251 Dental Assistant Internship I 4
HDA 252 Dental Assistant Internship II 4
HDA 282 CDA/RDA Written Exam Prep 2
HDA 286 RDA Clinical Exam Prep 1

Note: A 2.0 grade or higher is required in all HDA and HAH courses.

Program Requirements 64

Dental Assistant Program Requirements

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: 40.5-42.5

BUS 150 Interpersonal Relations or COM 111 Public Speaking 2-4
HAH 120 Infection Control 2
HDA 101 Introduction to Dentistry 2
HDA 112 Dental Materials 2
HDA 113 Dental Materials Lab 1
HDA 120 Dental Anatomy 3
HDA 140 Oral Pathology/Pharmacology 2
HDA 150 Dental Office Management 2
HDA 160 Dental Emergencies 1
HDA 170 Preventive Dentistry 2
HDA 240 Chairside Procedures 5
HDA 241 Chairside Procedures Lab 2
HDA 242 Dental Radiography 2
HDA 243 Dental Radiography Lab 1.5
HDA 251 Dental Assistant Internship I 4
HDA 252 Dental Assistant Internship II 4
HDA 282 CDA/RDA Written Exam Prep 2
HDA 286 RDA Clinical Exam Prep 1

(Continued on next page.)
Note: A 2.0 grade or higher is required in all HDA and HAH courses.

### Economics Program Requirements

**NMC Code 712**

The most basic and enduring strength of economics is that it provides a logical, ordered way of looking at various problems and 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. Students interested in this field of study will select courses from among those listed here ».

### Education Program Requirements

**NMC Code 708**

NMC offers an introductory course to teaching as a career and prepares students for further study in education at transfer institutions. Transfer requirements vary greatly. More »

### Electronics Technology Courses

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.

**Credits**

- EET 103 Electrical Studies I 3
- EET 104 Electrical Studies II 3
- EET 221 Industrial Controls 3
- EET 232 Programmable Logic Controllers 3

### Engineering Program Requirements

**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. (Continued on next page.)
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 Program Requirements

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 listed here »

Entrepreneurship Program Requirements

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 Credits: 16

ENG and MTH courses may be required based on placement scores.

ACC 121 Accounting Principles I 4
BUS 101 Introduction to Business 3
BUS 156 Essentials of Customer Service 1
CIT 216 Computerized Accounting Systems 2
MGT 245 Principles of Entrepreneurship 3
MKT 201 Principles of Marketing 3

Certificate of Achievement (Level II) NMC Code 052

Level ICertificate Requirements Credits: 16

Certificate Requirements: 17

BUS 105 Business Math 3
BUS 150 Interpersonal Relations 3
BUS 261 Business Law I 3
BUS 295 Entrepreneurship Internship 3
MKT 210 Principles of Selling or 3
MKT 241 Principles of Advertising 3
Required Elective, Any one of the following:
BUS 262 Business Law II 3
CIT 233 Project Management 3
MGT 241 Principles of Management 3
MGT 251 Human Resource Management 3
Total Credits for Level II 33
Environmental Science Program Requirements

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 listed here. 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.

General Studies Program Requirements

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: 16-18

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 and ENG 112 or BUS 231 or ENG 220</td>
<td>6-8</td>
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<tr>
<td>Social Science Group 1</td>
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<td>Science Lab</td>
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<tr>
<td>Humanities Group 1</td>
<td>3</td>
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<tr>
<td>Math competency of AAS degree</td>
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</tr>
</tbody>
</table>

Geography Program Requirements

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 Information Systems (GIS) is offered. Students planning on pursuing a rewarding career in Geography will select courses from those listed here.

Geology Program Requirements

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 Program Requirements

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.

Insurance Program Requirements

Certificate of Achievement (Level I) NMC Code 055
Today, many of the best jobs in finance are nowhere near Wall Street; 2.5 million Americans work in the trillion-dollar insurance industry. Insurance jobs include assisting companies and individuals in guarding themselves against loss. Those in the insurance business can expect a stimulating, lucrative environment. As an insurance professional, you will guide customers in identifying the type and level of insurance necessary, and help them purchase the correct policy. Positions in an Insurance Agency include sales representative, underwriter, customer service representative, asset manager, and actuary.

(Continued on next page.)
Level I Certificate Requirements Credits: 17

ACC 121 Accounting Principles I 4
BUS 101 Introduction to Business 3
BUS 111 Personal Insurance 3
CIT 100 Computers in Business-An Introduction 3
ENG 111 English Composition 4

Certificate of Achievement (Level II) NMC Code 056

Prerequisites: Completion of all courses listed in the Insurance Certificate Level I (17 credits)

Level II Certificate Requirements: 16

ACC 121 Accounting Principles II 4
BUS 105 Business Math 3
BUS 112 Life and Health Insurance 3
BUS 231 Professional Communications 3
BUS 261 Business Law 3
Total Credits for Level II 33

Certificate of Achievement (Level III) NMC Code 057

Prerequisites: Completion of all courses listed in the Insurance Certificate Levels I and II (33 credits)

Level III Certificate Requirements: 16

BUS 156 Essentials of Customer Service 1
ECO 201 Principles of Macroeconomics 3
MGT 241 Principles of Management 3
BUS 113 Commercial Insurance 3
MKT 201 Principles of Marketing 3
PHL 202 Contemporary Ethical Dilemmas or PHL 201 Ethics 3
Total Credits for Level III 49

Law Enforcement Program Requirements

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 counselor 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 program’s second year, or upon completing first year requirements or 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: 19-21

Communications: ENG 111 and ENG 112 6-8
Humanities: PHL 201 or PHL 202 3
Mathematics: Placement into MTH 111 or higher, or completion of MTH 23 3
Science: Any Group 1 course with lab (4)
Social Sciences: PLS 101 or PLS 132 4

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

Additional Core Course: PSY 101 3
* These credits do not count toward degree requirements.

**Occupational Specialty Requirements:** 46

- CJ 101 Introduction to Criminal Justice 4
- HAH 200 Emergency Assessment and Intervention 3
- LWE 102 Police Operations 4
- LWE 210 Cultural Awareness/Diversity 2
- LWE 212 Criminal Investigation 3
- LWE 214 Firearms 4
- LWE 215 Defensive Driving 3
- LWE 216 Traffic Enforcement and Investigation 3
- LWE 218 Physical Training/Wellness 4
- LWE 225 Defensive Tactics 4
- LWE 226 Michigan Criminal Law 3
- LWE 227 Criminal Procedures 3
- PSY 250 Abnormal Psychology or SOC 231 Deviance and Criminal Behavior 3
- SOC 101 Introduction to Sociology 3

**Recommended Courses:**
- LWE 195* Police Practicum 4
- LWE 228** Police Radar/PBT Operation 3
* Required for students that have not experienced the police field.**Recommended for job placement.

Program Requirements 65-67

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**Legal Assistant Program Requirements**

**Associate in Applied Science Degree NMC Code 353**

Upon completion of this program, the legal assistant will be qualified to do many law-related tasks under the supervision of an attorney, including researching the law, preparing drafts of legal documents, and interviewing clients. The degree also assists the graduate looking for a position in law-related areas such as government, insurance, or real estate.

The Legal Assistant Program’s outcomes include the development of an understanding of the U.S. legal system and of the major areas of substantive and procedural law, the development of an understanding of the role of the legal assistant within a law office and of the ethical responsibilities of attorneys and legal assistants, and the development of critical thinking, problem solving and communication skills. Students should contact the program director for academic advising. This program is approved by the American Bar Association.

Subject to the review and approval of the program director, students may transfer a maximum of 12 credits with a 2.0 (C) grade or higher in legal specialty (PAR) courses from another institution toward a legal assisting degree. An additional policy is that at least 24 credits must be through NMC courses in order for the student to receive an NMC degree.

**General Education Requirements Credits:** 18

- Communications: ENG 111 and ENG 112 6-8
- Humanities: PHL 105 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: PLS 101 or PLS 132 3
- Additional General Education Course: 0-2

* These credits do not count toward degree requirements.

**Occupational Specialty Requirements**

- ACC 121 Accounting Principles I 4
- BUS 130 Mechanics of Business Writing 3

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

BUS 231 Professional Communications 3
BUS 261 Business Law I 3
BUS 262 Business Law II 3
CIT 100 Computers in Business-An Intro 3
CJ 211 Criminal Law or CJ 242 Evidence and Criminal Procedures 3
PAR 101 Intro to Legal Assisting 3
PAR 102 Legal Research and Writing I 3
PAR 103 Legal Research and Writing II 3
PAR 106 Litigation 2
PAR 112 Torts 2
PAR 210 Probate 2
PAR 211 Real Estate Law 2
PAR 220 Family Law 2
PAR 221 Law Office Management 2
PAR 222 Legal Drafting 2
PAR 230 Legal Assistant Internship* 2
* A 2.0 GPA in PAR courses is required for this internship.

Program Requirements 65

Liberal Arts Program Requirements

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 courses listed here.

Machine Tool Program Requirements

Certificate of Achievement (Level II) NMC Code 008

The courses required for the Machine Tool Certificate offer the student the opportunity to acquire the knowledge and develop the fundamental skills for a career in a variety of skilled occupations. Precision machining skills are the common elements in the occupations of tool maker, mold maker, die maker, machine builder, and CNC programmer and operator. Knowledge of machining operations is also a key element in the development of mechanical drafters and designers.

The program includes courses in machining, related mathematics, printreading, metallurgy, computer aided drafting (CAD), and computer aided machine programming (CNC and CAM). The machining courses include classroom work to support lab assignments on the lathe, mill, and grinders. This series of courses may be used to prepare the student for entry level machining positions or to upgrade the skills of someone with previous manufacturing experience. The courses may also be included in an employer's training plan for apprentices. Machining lab hours and most courses are available for day time and evening scheduling. The courses may also be applied to an AAS degree in Manufacturing Technology.

Certificate Requirements Credits: 38

DD 101 Print Reading and Sketching, Mfg 3
DD 110 Basic Metallurgy 3
DD 120 Computer Aided Drafting (AutoCAD) 2
DD 125 Mechanical Drafting 2
DD 150 Detail Drafting 4
DD 160 Tolerancing and GD&T 3
MFG 111 Math for Manufacturing 3
MFG 113 Machining I 3
MFG 114 Machining II 3
MFG 211 CNC Programming 3

(Continued on next page.)
Program Information

MFG 212 Computer Aided Machining (CAM) 3
MFG 215 Machining III, Lathe 3
MFG 216 Machining IV, Mill & Grind 3

Manufacturing Technology Program Requirements

Associate in Applied Science Degree NMC Code 584

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 either ENG 112 or ENG 220* 6-8
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

Maritime Program Requirements

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 commercial ships 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 training we have provided since 1969. Curricula range from seamanship, navigation and piloting to steam and diesel engineering together with 276 days of commercial 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 100% employment and exceptional salaries upon graduation, the time is now to consider a career as a professional mariner. The Admissions Office is open weekdays from 8:30 a.m. to 5 p.m. Please visit www.nmc.edu/maritime for additional information.

(Continued on next page.)
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 or possess an Alien Registration Card (Green Card).
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 testing.
4. United States Coast Guard physical, vision and moral character standards as established by federal law and all requirements for licensing as a United States Merchant Marine Officer.

Great Lakes Maritime Academy requires applicants to go to www.nmc.edu/maritime and submit an online application. The application opens a Ferris State University window. Select “Great Lakes Maritime Academy,” complete and submit. 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.” This is a federal requirement.

**Department of Naval Science**

The Department of Naval Science is staffed by active duty Navy personnel. The Department offers training designed to acquaint the cadet with the mutual dependence of the Navy and Merchant Marine in accomplishing their common objectives. This instruction is provided through two courses, MNS 100 and MNS 200.

**Graduation Requirements**

In addition to NMC graduation requirements, Academy cadets must:

1. Successfully complete the prescribed Academy program.
2. Pass the U.S. Coast Guard license exam in the objective pursued.
3. Achieve a 2.0 (76%) grade or better in all courses.
4. Complete a minimum of 24 months at the Great Lakes Maritime Academy, as mandated by federal law.

**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 commercial ships. Sea time is arranged by the Academy and spread over the four-year 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 Program Requirements

Associate in Applied Science Degree w/Bachelor of Science - Business Administration through Ferris State University NMC Code 550

General Education Requirements Credits: 23

Communications: ENG 111 and ENG 112 or ENG 220
Humanities: Any Group 1 course/FSU
Mathematics: MTH 141 or MTH 132 (FSU) 3-5
Science: PHY 105
Social Science: ECO 201

General Education Requirements Credits: 23

Communications: ENG 111 and ENG 112 or ENG 220
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 Piloting 2
MDK 222 River Piloting 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

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

**Ferris State University Requirements: 30**

- BLAW 301 Legal Environment of Business 3
- COMM221 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 Great Lakes Maritime Academy web site for Ferris course descriptions.

**Program Requirements 145**

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**Maritime Engineering Program Requirements**

**Associate in Applied Science Degree w/Bachelor of Science - Business Administration through Ferris State University NMC Code 551**

**General Education Requirements Credits: 23**

Communications: ENG 111 or either ENG 112 or ENG 220 6-8

Humanities: Any Group 1 course 3

Mathematics: MTH 141 or MTH 132 (FSU) 3-5

Science: PHY 121 4

Social Science: ECO 201 3

**Maritime Requirements: 89**

- ECO 202 Principles of Microeconomics 3
- MDK 100 Survival at Sea 1
- MDK 149 Damage Control & Safety 2
- MDK 241 Ship Construction 2
- MDK 250 Stability for the Engineer 1
- MDK 330 STCW Elementary First Aid 2
- MGT 241 Principles of Management 3
- MGT 251 Human Resources Management 3
- MGT 201 Principles of Marketing 3
- MKT 100 Introduction to Marine Engineering 1
- MNG 104 Engine Systems Graphics 2

(Continued on next page.)
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 Electronics Fundamentals 4
MNG 235 Electric Machines and Controls 4
MNG 236 Electric Machines and Controls Lab 2
MNG 250 Unloading Systems 3
MNG 315 Engineering Sea Project I 6
MNG 316 Engineering Sea Project II 9
MNG 355 Watchstanding 2
MNG 366 Engine Room Business 2
MNG 396 License Preparation Engine 2
MNS 100 Naval Science 2
MTH 131 Intro to Probability & Statistics 3
PHY 122 General Physics II 4

Ferris State University Requirements: 37

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 6
Machining 2
Welding 2

* See Great Lakes Maritime Academy web site for Ferris course descriptions.

Program Requirements 149

Maritime Power Plant Facilities Operator Program Requirements

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 waster, 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 minor 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.

First Year

Fall - 17 credits

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

ENG 111 English Composition 4
MTH 121 College Algebra 4
MNG 100 Intro to Marine Engineering 1
MNG 104 Engine System Graphics '95 2
MNG 105 Shipboard Information Systems 3
MNG 110 Engineering Mechanics '95 3

Spring - 18 credits
ENG 112 English Composition 4
MTH 122 Trigonometry 3
MNG 221 Marine Boilers '95 3.5
MNG 222 Marine Turbines '95 2.5
MNG 223 Steam Lab '95 1
MNG 234 Electronic Fundamentals '95 4

Summer - 5 credits
MNG 290 Power Systems Internship 5

Second Year

Fall - 19 credits
PHY 105 Physics of the World 4
MGT 241 Principles of Management 3
MNG 175 Refrigeration 3
MNG 235 Electric Machines & Controls '95 4
MNG 236 Electric Machines & Controls Lab '95 2
Group 1 Humanities Course 3

Spring - 16 credits
MNG 210 Diesel Engineering 7
MNG 250 Unloading Systems 3
MNG 270 Issues in Power Production 3
Group 1 Social Science Course 3

Other Suggested Courses:
MFG 113 Machining I 3
MGT 251 Human Resource Management 3
WPT 100 Oxy-Fuel Process 3
WPT 130 SMAW (ARC) Welding I 3

Program Requirements Credits: 74

Mathematics Program Requirements

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.
Program Information

Music Program Requirements

NMC Code 716

The first two years of NMC’s music curriculum provides a solid foundation for continued study at the transfer institution of choice and in some cases, such as audio technology courses, to immediately enter a music profession.

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 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.

Many students who participated in their high school music programs may wish to continue doing so through one of NMC’s performance ensembles.

Colleges and universities and music trade schools provide widely varied coursework leading to a bachelor’s degree and beyond. NMC can tailor the choice of music courses to best accommodate your needs. This is done through the Music Advisor.

Standard coursework for most professional positions 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 230B, Ensembles-Recording Practicum. Please see course descriptions for more information on all music courses.

*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 in the areas of Theory, Sight-Singing/Ear Training and Piano.

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 State Board 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 and 108 may be taken ahead of program admission if course prerequisites are met. Consideration for admission is on a competitive 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. Completed applications must be submitted to the Admissions Office.

The following are required for application:

1. A 2.5 College GPA. A Transferred College GPA may be computed on Nursing Program prerequisite courses alone.
2. A 2.0 or above in each of the following prerequisite courses and/or demonstrated competency or equivalent college course transfer (with minimum GPA of 2.5)- English Composition (ENG 111) - Introduction to Psychology (PSY 101) - Introductory Chemistry (CHM 101) or equivalent college chemistry course with 2.0 or above within the last 10 years. Students with a year of high school chemistry or college chemistry older than 10 years may waive the CHM 101 requirement by passing the Chemistry Department competency examination.
3. Human Anatomy & Physiology I (BIO 227) within the past 5 years. 2.5 GPA required.

(Continued on next page.)
4. COMPASS test scores:- Reading-82 or above, - Writing-70 or above, - 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 past 5 years).

5. ACT Test Scores:- ACT of 24 in math - ACT of 19 in reading and writing, (or equivalent course work) within five years of program entry.

Recommended courses to take prior to Nursing Program Admission

- # BIO 228 Anatomy and Physiology II - 2.5 GPA required.
- # BIO 240 Normal and Clinical Nutrition
- # HNR 100 and108 - 2.0 GPA required. Any HNR course failure counts as one program failure. Students are permitted only two program failures.** See information below regarding Anatomy and Physiology transfer.

Upon admission, students must have a criminal background check and DHS clearance completed. Certain criminal charges as stated in Public Acts 27, 28 and 29 of 2006, may deem a student ineligible for admission to the Nursing Program.

A physical examination and completion of Health Occupations Certificate of Health documenting good mental and physical health must be completed prior to clinical course work. The student must be able to perform the physical tasks required of a nurse. Current CPR certification must be documented by the start of the first clinical day, and maintained throughout the remainder of the program.

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. Students are required to achieve and maintain a grade point average of 2.0 in their course of study with no less than a grade of 2.0 in each HNR course. Failure to meet these requirements may result in the student's dismissal from the program until the requirements are met.

General Education Requirements Credits: 25-27

<table>
<thead>
<tr>
<th>Communications: ENG 111 and ENG 112</th>
<th>6-8</th>
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<tbody>
<tr>
<td>Humanities: PHL 202</td>
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<tr>
<td>Mathematics: Placement into MTH 121 or higher, or completion of MTH 111*</td>
<td>(4)</td>
</tr>
<tr>
<td>Science: BIO 227, 228, 240**</td>
<td>13</td>
</tr>
<tr>
<td>Social Sciences: PSY 101</td>
<td>3</td>
</tr>
</tbody>
</table>

* 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 & Physiology, and one semester of Microbiology with a 2.5 or better within the last 5 years.

Occupational Specialty Requirements 45

<table>
<thead>
<tr>
<th>CIT 122A Computers and Internet Basics</th>
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<tbody>
<tr>
<td>HAH 100C Informatics Essentials</td>
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<tr>
<td>HNR 100 Introduction to Nursing</td>
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<tr>
<td>HNR 101 Fundamentals of Nursing-Lecture</td>
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<tr>
<td>HNR 102 Fundamentals of Nursing-Clinical</td>
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<td>HNR 108 Pharmacology</td>
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<td>HNR 125 Nursing Across the Lifespan-Lecture</td>
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<td>HNR 126 Nursing Across the Lifespan-Clinical</td>
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<td>HNR 241 Adv. Maternal Child Nursing-Lecture</td>
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<td>HNR 242 Adv. Maternal Child Nursing-Clinical</td>
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<td>HNR 243 Nrsg Mgmt of Complex Patients I-Lecture</td>
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<td>HNR 244 Nrsg Mgmt of Complex Patients I-Clinical</td>
<td>4</td>
</tr>
<tr>
<td>HNR 251 Mental Health Nursing-Lecture</td>
<td>2</td>
</tr>
<tr>
<td>HNR 252 Mental Health Nursing-Clinical</td>
<td>1</td>
</tr>
</tbody>
</table>

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

Program Information

To apply, use the three-digit NMC Code on your admissions application.

HNR 261 Nrsg Mgmt of Complex Patients II-Lecture 3
HNR 262 Nrsg Mgmt of Complex Patients II-Clinical 4

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.

Program Requirements 70-72

Online Nursing Option

NMC offers an online alternative for students pursuing an Associate Degree in Nursing. The option begins each fall semester and will include hands-on clinical and lab experiences in addition to online classes. Students must be available at times to take tests and exams at the college.

For more information, contact the Director of Nursing or the Health Occupations Office Manager.

Next Steps »

Nursing - Completion Program Requirements

Completion Program for Licensed Practical Nurses Associate Degree in Nursing NMC Code 302

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 experience in acute or extended care or who has graduated within the past five 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 the State Board 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 competitive 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 or better within the last 10 years. Students with a year of high school chemistry or college chemistry older than 10 years may waive the CHM 101 requirement by passing the Chemistry Department competency examination.
4. COMPASS Test scores: Reading-82 or above, Writing-70 or above, 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, or ACT of 19 for reading and writing, ACT of 24 for math.
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
To apply, use the three-digit NMC Code on your admissions application.

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or better in BIO 227 and BIO 228 (BIO 227 and 228 within five years of program entry), a min. grade of 2.0 is required in ENG 111 and PSY 101. Upon admission, students must have a criminal background and DHS clearance completed. Certain criminal charges as stated in Public Acts 27, 28 and 29 of 2006, may deem a student ineligible for admission to the Nursing Program. A physical examination and completion of a Certificate of Health documenting good mental and physical health must be completed and submitted prior to clinical course work. The student must be able to perform the physical tasks required of a nurse. Current CPR certification must be maintained throughout the program. LPNs seeking admission to the ADN-Completion Program should schedule an appointment with the Nursing Department Director in order to complete an evaluation of previous course work and experience and prepare a plan of study. All nursing courses for the ADN program must be completed within five years.

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. Students are required to achieve and maintain a grade point average of 2.0 in their course of study with no less than a grade of 2.0 in each HNR course. Failure to meet these requirements will result in the student’s suspension from the program until the requirements are met.

General Education Requirements Credits: 25-27

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications: ENG 111 and ENG 112</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>Humanities: PHL 202</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Mathematics: Compass Placement into MTH 121 or higher, or completion of MTH 111*</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>Science: BIO 227, 228, 240**</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Social Sciences: PSY 101</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

* These credits do not count toward degree requirements. ** A 2.5 grade or higher is required in BIO 227 and 228.

For an equivalent transfer of BIO 227 and BIO 228 from another institution, students must have completed a full year of Anatomy & Physiology, and one semester of microbiology with a 2.5 or better within the last 5 years.

Occupational Specialty Requirements: 45

<table>
<thead>
<tr>
<th>Level One Nursing Coursework</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT 122A Computers and Internet Basics</td>
<td>1</td>
</tr>
<tr>
<td>HAH 100C Informatics Essentials</td>
<td>1</td>
</tr>
<tr>
<td>HNR 200 LPN to ADN Transition</td>
<td>3</td>
</tr>
<tr>
<td>HNR 241 Adv. Maternal Child Nursing-Lecture</td>
<td>3</td>
</tr>
<tr>
<td>HNR 242 Adv. Maternal Child Nursing-Clinical</td>
<td>2</td>
</tr>
<tr>
<td>HNR 243 Nursing Management of Complex Patients I-Lecture</td>
<td>3</td>
</tr>
<tr>
<td>HNR 244 Nursing Management of Complex Patients I-Clinical</td>
<td>4</td>
</tr>
<tr>
<td>HNR 251 Mental Health Nursing-Lecture</td>
<td>2</td>
</tr>
<tr>
<td>HNR 252 Mental Health Nursing-Clinical</td>
<td>1</td>
</tr>
<tr>
<td>HNR 261 Nursing Management of Complex Patients II-Lecture</td>
<td>3</td>
</tr>
<tr>
<td>HNR 262 Nursing Management of Complex Patients II-Clinical</td>
<td></td>
</tr>
</tbody>
</table>

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.

Program Requirements 70-72

Next Steps »
Nursing - Practical Program Requirements

Certificate of Achievement (Level II) NMC Code 010

The Practical Nursing (PN) program is a course of study that qualifies the student to take the LPN licensure exam. All nursing courses must be completed within five years. The program prepares graduates to work in long-term and geriatric facilities, general hospitals, clinics, doctors’ offices and in other patient care areas. The Licensed Practical Nurse always works under the supervision of a physician, registered nurse, or dentist. Student clinical experiences may include assignments at Grand Traverse Pavilions, Munson Medical Center, and other selected clinical 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 of this program are eligible to apply for the State Board 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 and 108 may be taken ahead of program admission if course prerequisites are met. Consideration for admission is on a competitive 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. A 2.0 College GPA for Nursing Program Prerequisite courses. A Transferred College GPA may be computed on Nursing Program prerequisite courses alone.

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.

3. Courses required for admission consideration.- CHM 101 competency or equivalent college chemistry course at a 2.0 or better within the past 10 years. Students with a year of high school chemistry or with college chemistry older than 10 years, may waive the CHM 101 requirement by passing the Chemistry Department competency exam. - BIO 227 - Anatomy and Physiology I - 2.5 GPA required. Must be taken within the last 5 years. If not taken within last 5 years, students may retake BIO 227 and BIO 228 or successfully complete a competency exam. BIO 227 has specific prerequisites that may require additional coursework.--For an equivalent transfer of BIO 227 and BIO 228 from another institution, students must have completed a full year of Anatomy & Physiology, and one semester of Microbiology with a 2.5 grade or better within the last 5 years.

4. Courses recommended to be completed prior to starting the PN program. - BIO 228 - Anatomy & Physiology II - 2.5 GPA required. - BIO 240 Normal & Clinical Nutrition - HNR 100 and108 - GPA 2.0 required. - Any HNR course failure counts as one program failure. - Students are permitted only two program failures. See a counselor or advisor for details.

Upon admission, students must have a criminal background check and DHS clearance check completed. Certain criminal charges as stated in Public Acts 27, 28 and 29 of 2006, may deem a student ineligible for admission to the Nursing Program. A physical examination and completion of Health Occupations Certificate of Health documenting good mental and physical health must be completed prior to clinical course work. Students must be able to perform the physical tasks required of a nurse. CPR certification must be documented by the start of the first clinical day, and maintained throughout the remainder of the program. 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. Students are required to achieve and maintain a grade point average of 2.0 in their course of study with no less than a grade of 2.0 in each HNR course. Failure to meet these requirements will result in the student’s suspension from the program until the requirements are met.

Certificate Requirements Credits: 33

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNR 100 Introduction to Nursing</td>
<td>1</td>
</tr>
<tr>
<td>HNR 101 Fundamentals of Nursing-Lecture</td>
<td>4</td>
</tr>
</tbody>
</table>

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

HNR 102 Fundamentals of Nursing-Clinical 4
HNR 108 Pharmacology 3
HNR 125 Nursing Across the Lifespan-Lecture 5
HNR 126 Nursing Across the Lifespan-Clinical 5
HNR 145 Practical Nursing Role & Issues 1
CIT 122A Computer and Internet Basics I 1
HAH 100C Informatics Essentials 1

Note: A 2.0 grade or higher is required in HAH 100C and all Nursing (HNR) courses.

Next Steps »

Philosophy & Religion Program Requirements

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 listed here »

Physical Education Program Requirements

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 to pursue a Physical Education major or minor.

Physics Program Requirements

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 listed here. These students should also include Calculus I, II, & III, Differential Equations, and General Chemistry I & II.

Plant Science, Applied Program Requirements

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 Commercial Horticultural Operations, Landscape and Nursery, Commercial Turfgrass Operations or Viticulture 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: 16-19

Communications: ENG 111 and ENG 112 6-8
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.

(Continued on next page.)
## Occupational Specialty Requirements 20-22

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 101</td>
<td>Introductory Chemistry (CHM 150 General Chemistry required if students elect to pursue a Bachelor’s degree)</td>
<td>4</td>
</tr>
<tr>
<td>CIT 100</td>
<td>Computer in Business-An Intro (or equivalent)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives (see program coordinator for appropriate selection)</td>
<td>13-15</td>
</tr>
</tbody>
</table>

Note: A minimum of 24 of the 64 credits must be completed through NMC.

## MSU North / University Center Requirements 28-31

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 293</td>
<td>Professional Internship in Ag Technology</td>
<td>3</td>
</tr>
<tr>
<td>PLP 210</td>
<td>Plant Diseases and Pathogens</td>
<td>3</td>
</tr>
<tr>
<td>ENT 110</td>
<td>Applied Entomology</td>
<td>3</td>
</tr>
<tr>
<td>CSS 210</td>
<td>Fund. of Soils &amp; Landscape Science</td>
<td>3</td>
</tr>
<tr>
<td>HRT 213</td>
<td>Landscape Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>HRT 215</td>
<td>Landscape Industry Seminar</td>
<td>1</td>
</tr>
<tr>
<td>HRT 218</td>
<td>Landscape Irrigation</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Commercial Turfgrass Operations core &amp; electives or</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Commercial Horticulture Operations core &amp; electives or</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Landscape and Nursery core and electives</td>
<td>12</td>
</tr>
</tbody>
</table>

* See program coordinator to assure core and elective requirements are met.

## Program Requirements 64-72

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.

## Political Science Program Requirements

### 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 pursuing 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 areas such as education, policy research, law and international business.

## Psychology Program Requirements

### 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.

## Respiratory Therapy Program Requirements

### Associate in Applied Science Degree through Muskegon Community College NMC Code 712

This collaborative program leads 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.

(Continued on next page.)
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
- Proficiency testing in Beginning Algebra
- 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 6-10 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.

Science & Arts Program Requirements

**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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 and ENG 112</td>
<td>8</td>
</tr>
<tr>
<td>Group 1 Courses from two different Social Science Disciplines</td>
<td>8</td>
</tr>
<tr>
<td>Group 1 Courses from two different Humanities Disciplines</td>
<td>8</td>
</tr>
<tr>
<td>Group 1 Courses from two different Science/Math Disciplines</td>
<td>8</td>
</tr>
<tr>
<td>Math competency of ASA degree*</td>
<td>4</td>
</tr>
</tbody>
</table>

*COMPASS placement into MTH 121 or higher, or* Successful completion of MTH 111 or higher with a 2.0

Social Work Program Requirements

**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 bachelor's degree 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. 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.

Sociology Program Requirements

**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.

Technical Management Administration Program Requirements

**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.

(Continued on next page.)
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**

**Occupational Specialty Requirements: 32**

- ACC 121 Accounting Principles I 4
- ACC 122 Accounting Principles II 4
- BUS 101 Introduction of Business 3
- BUS 231 Professional Communications 3
- BUS 261 Business Law I 3
- CIT 100 Computers in Business-An Intro 3
- MGT 241 Principles of Management 3
- MGT 251 Human Resource Management 3
- MKT 201 Principles of Marketing 3
- Any Business Course 3

---

**Theater Program Requirements**

**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 listed here.

**Visual Communications - Commercial Art Program Requirements**

**Associate in Applied Science Degree NMC Code 351**

This degree 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 may complete the Associate in Science and Arts degree requirements.

**General Education Requirements Credits: 17-19**

- Communications: ENG 111 and ENG 112 6-8
- Humanities: ART 112 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

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

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
Elective Course 0-2

Program Requirements: 64

Visual Communications-Management in Art Direction Program Requirements

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

ENG 221 Creative Writing or ENG 222 Creative Writing 3
MGT 255 Small Business Management and 3
BUS 156 Essentials of Customer Service or 1
COM 111 Public Speaking or COM 201 Mass Communication and Culture 4
ENG 220 Technical Writing 3
MKT 201 Principles of Marketing or MKT 210 Principles of Selling 3
VCA 147 Web Design 3
VCA 146 Interactive Animation 3
VCA 250 Time Based Media 3
ART 175 Digital Photography 3
ART 213 Modern Art History 3
VCA 290 Visual Communications Internship 4

Welding Technology Program Requirements

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

(Continued on next page.)
includes Oxyacetylene, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW), on both ferrous and nonferrous materials.

Certificate Requirements 34

- DD 101 Print Reading and Sketching 3
- DD 110 Basic Metallurgy 2
- MFG 111 Math for Manufacturing 3
- MFG 113 Machining I 3
- MFG 114 Machining II 3
- WPT 110 Oxy-Fuel Processes 3
- WPT 120 GTAW (TIG) Welding I 2
- WPT 121 GTAW (TIG) Welding II 2
- WPT 130 SMAW (Arc) Welding I 3
- WPT 131 SMAW (Arc) Welding II 2
- WPT 140 GMAW (MIG) Welding I 2
- WPT 141 GMAW (MIG) Welding II 2
- WPT 142 Flux Cored Arc Welding 2
- WPT 160 Welding Qualification Prep 2

Freshwater Studies Program Requirements

General Education Requirements Credits: 32

Communications: ENG 111 and ENG 112 8
Humanities: PHL 105; PHL 202; Group 1 course 8
Mathematics and Science: Combination of Group 1 courses (MTH 121 or 131; BIO 105 or BIO 107) 8
Social Sciences: GEO 109 and two other Group 1 Courses 8

Core Requirements Credits: 22

- ENV 105 Introduction to Freshwater Studies 2
- ENV 140 Watershed Science 4
- ENV 117 Meteorology and Climatology or ENV 103 Earth Science 4
- ENV 131 Oceanography 4
- ENV 115 Introduction to GIS 3
- ENV 270 Field Experience 2
- ENV 290 Internship 3

Areas of concentration

- Economy and Society 15
- BUS 101 Introduction to Business 3
- ECO 201 Principles of Microeconomics 3
- MGT 241 Principles of Management 3
- MGT 245 Principles of Entrepreneurship 3
- ENG 256 Environmental Literature 3
- Global Policy and Sustainability 16
- MLS 121 Beginning Spanish I 4

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

Renewable Energy Technology - Electrical Program Requirements

**Associate in Applied Science Degree NMC Code 655**

**General Education Requirements Credits: 26**

- Communications: ENG 111 and ENG 112 or ENG 220 Technical Writing 7-8
- Humanities: PHL 202 Contemporary Ethical Dilemmas 3
- Mathematics: MTH 111 Intermediate Algebra and MTH 121 College Algebra 8
- Science: ENV 117 Meteorology/Climatology or PHY 121 General Physics I (4/6) or ENV 103 Earth Science (4/5) 4
- Social Sciences: Any Group 1 course 3

**Technical Core Requirements Credits: 9**

- EGY 101 Principles of Renewable Energy 3
- EGY 105 Sustainable Building Design 3
- EGY 115 Residential Energy Efficiency 3

**Electrical Track Requirements Credits: 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

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

**Renewable Energy Technology- Electrical Program Requirements**

**Certificate of Achievement (Level II) NMC Code 065**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 101 Introduction to Electrical</td>
<td>3</td>
</tr>
<tr>
<td>EGY 101 Principles of Renewable Energy</td>
<td>3</td>
</tr>
<tr>
<td>MTH 111 Intermediate Algebra</td>
<td>4</td>
</tr>
<tr>
<td>ELE 105 Residential Electrical</td>
<td>3</td>
</tr>
<tr>
<td>EGY 105 Sustainable Building Design</td>
<td>3</td>
</tr>
<tr>
<td>EGY 115 Residential Energy Efficiency</td>
<td>3</td>
</tr>
<tr>
<td>ELE 121 Electrical Applications</td>
<td>3</td>
</tr>
<tr>
<td>EGY 141 Solar Photovoltaic Technology I</td>
<td>3</td>
</tr>
<tr>
<td>ELE 125 Electrical Components</td>
<td>3</td>
</tr>
<tr>
<td>EGY 161 Wind Power Technology</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3</td>
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</tbody>
</table>

Degree total: 34

**Renewable Energy Technology- HVAC**

**Associate in Applied Science Degree NMC Code 656**

**General Education Requirements Credits: 26**

<table>
<thead>
<tr>
<th>Category</th>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Communications</td>
<td>ENG 111 and ENG 112 or ENG 220 Technical Writing</td>
<td>7-8</td>
</tr>
<tr>
<td>Humanities</td>
<td>PHL 202 Contemporary Ethical Dilemmas</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>MTH 111 Intermediate Algebra and MTH 121 College Algebra</td>
<td>8</td>
</tr>
<tr>
<td>Science</td>
<td>ENV 117 Meteorology/Climatology or PHY 121 General Physics I (4/6) or ENV 103 Earth Science (4/5)</td>
<td>4</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Any Group 1 course</td>
<td>3</td>
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**Technical Core Requirements Credits: 9**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EGY 101 Principles of Renewable Energy</td>
<td>3</td>
</tr>
<tr>
<td>EGY 105 Sustainable Building Design</td>
<td>3</td>
</tr>
<tr>
<td>EGY 115 Residential Energy Efficiency</td>
<td>3</td>
</tr>
</tbody>
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**HVAC Track Requirements Credits: 18**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EGY 143 Solar Thermal Technology I</td>
<td>3</td>
</tr>
<tr>
<td>EGY 145 Geothermal Technology</td>
<td>3</td>
</tr>
<tr>
<td>HVA 101 Introduction to HVAC/R</td>
<td>3</td>
</tr>
<tr>
<td>HVA 105 Thermodynamics of HVAC/R</td>
<td>3</td>
</tr>
<tr>
<td>HVA 121 Fundamentals of Heating</td>
<td>3</td>
</tr>
<tr>
<td>HVA 125 A/C Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

**Technical electives -- HVAC Track**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CMT 103 Construction Safety</td>
<td>1</td>
</tr>
</tbody>
</table>

(Continued on next page.)
To apply, use the three-digit NMC Code on your admissions application.

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

Degree total: 64

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.
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

For course availability, refer to [www.nmc.edu/schedule](http://www.nmc.edu/schedule) or the Schedule of Classes.
Reading a Course Description

The semester credit hours followed by (contact hours) are listed on the first line of the course description. Student tuition is based on the course contact hour. At the end of the description the course is identified by group number. See graduation requirements on page 58.

In addition to the courses listed in this section, each instructional area within the college may offer the following three courses:

290A-E Academic Internships
An 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, and gain practical experience for resume building. Service Learning Internships specifically provide an opportunity to earn credits while giving some of your talents to the community as a volunteer. All internships can be arranged in all liberal and occupational studies areas for one to four hours of elective credit. A maximum of four credits will count toward associate degree requirements. Group 2 course.

291 Special Topics
Seminars, lectures, etc. on a selected topic within a field are sometimes offered as special courses. Students may enroll in more than one Special Topics offering but not all four-year schools accept special topics credits. Group 2 course.

297 Independent Study
This option provides an opportunity for a student with a good scholastic record to pursue independently the study of a subject under the guidance of an instructor. This option may be arranged for one, two or three credits. This option may be repeated for NMC credit but not all four-year schools accept independent study credits. Group 2 course.

NMC Course Descriptions

Course descriptions are listed alphabetically on pages 102-231.
2010 - 2011 NMC CATALOG

ACC-121 — Accounting Principles I
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 23 or placement into MTH 111.
Co-requisites = N/A
Recommended prerequisites = BUS 105

ACC-122 — Accounting Principles II
Second semester accounting continues with plant assets and related expenses, partnerships, corporations, bonds, cash flow statements, and statement analysis. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = ACC 121
Co-requisites = N/A
Recommended prerequisites = N/A

ACC-221 — Intermediate Accounting I
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = ACC 122
Co-requisites = N/A
Recommended prerequisites = N/A

ACC-222 — Intermediate Accounting II
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ACC-225 — Cost/Management Accounting
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) budgets and standard costing, and 4) study of internal control systems in a manufacturing setting. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ACC-290 — Accounting Internship
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 at least one month prior to the semester in which they will complete the internship. Required: 12 semester credits of accounting in addition to a spreadsheet course. A minimum GPA of 3.0 in accounting. Approval of accounting instructor required. Minimum of 8 hours per week. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
(Continued on next page.)
ANT-102 — Underwater Archaeology
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ANT-113 — Intro to Cultural Anthropology
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ART-100 — Art Appreciation
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ART-111 — History of Western Art I
The 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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111

ART-112 — History of Western Art II
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111

ART-116 — World Cultures
This course explores the art 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, and cultural rituals, and social customs of each region. Group 1 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
(Continued on next page.)
ART-121 — Drawing I

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 proportions, 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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ENG 111
Co-requisites = N/A
Recommended prerequisites = N/A

ART-122 — Drawing II

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 be explored in this course. Assignments will include still life and object studies designed by both the instructors and students. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 121
Co-requisites = N/A
Recommended prerequisites = N/A

ART-131 — 2-D Design

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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ART-132 — 3-D Design

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 modes, e.g. architecture, sculpture, package design, display, etc. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ART 131

ART-151 — Ceramics I

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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ART-152 — Ceramics II

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/sourcebook documentation of research and design will be required. Group 2 course.
Credit Hours = 3; Contact Hours = 4
(Continued on next page.)
ART-161 — Painting I
This 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 two self-directed paintings which make application of learned concepts. Oils and acrylics will be used. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 151
Co-requisites = N/A
Recommended prerequisites = N/A

ART-162 — Painting II
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 on 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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 161
Co-requisites = N/A
Recommended prerequisites = N/A

ART-165 — Watercolor Painting I
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ART-166 — Watercolor Painting II
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 165
Co-requisites = N/A
Recommended prerequisites = N/A

ART-171 — Photo I Lecture/Lab
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. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ART-173 — Photography II
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 most needed and develop, with the aid of the instructor, a plan for addressing those needs. Group 2 course.
Credit Hours = 3; Contact Hours = 3
(Continued on next page.)
ART-175 — Digital Photography I
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 171
Co-requisites = N/A
Recommended prerequisites = N/A

ART-181 — Printmaking I
Printmaking I is an introductory survey course that introduces 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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ART 121

ART-182 — Printmaking II
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 181
Co-requisites = N/A
Recommended prerequisites = N/A

ART-213 — Modern Art History
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111

ART-214 — Women in Art
This course will provide a historical study of selected European and American women painters, sculptors, architects and craftpersons from the 17th through 20th Centuries. Art works will be examined within the social and cultural context of each century. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111

ART-221 — Life Drawing I
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 121
Co-requisites = N/A
Recommended prerequisites = ART 122
ART-222 — Life Drawing II
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 of the model. Life Drawing II will include the introduction of color and wet media. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 221
Co-requisites = N/A
Recommended prerequisites = N/A

ART-252 — Art Education
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ART-275 — Digital Photography II
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 imagesetters (slides, negatives, art prints, etc.). Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 175
Co-requisites = N/A
Recommended prerequisites = N/A

AST-100 — Observational Astronomy
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 coordinate 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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AST-109 — Planetary Astronomy
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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = ENG 99 or placement into ENG 11/111
Co-requisites = AST 109L
Recommended prerequisites = MTH 111

AST-109L — Planetary Astronomy Lab
See AST 109 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = ENG 99 or placement into ENG 11/111
Co-requisites = AST 109L
Recommended prerequisites = MTH 111
AST-119 — Astronomy

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.

Credit Hours = 4; Contact Hours = 5
Required prerequisites = ENG 99 or placement into ENG 11/111
Co-requisites = AST 119L
Recommended prerequisites = MTH 111

AST-119L — Astronomy Lab

See AST 119 for course description.

Credit Hours = 0; Contact Hours = 0
Required prerequisites = ENG 99 or placement into ENG 11/111
Co-requisites = AST 119L
Recommended prerequisites = MTH 111

AT-100 — Automotive Service Basics

This is the first course in the 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 its 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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-110 — Automotive Brake Systems

This course covers theory, components, nomenclature, and service of automotive brake systems. Students will use standard skills to diagnose hydraulic systems, drum and disk brake systems, power assist units and systems. The study and repair of modern ABS 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.

Credit Hours = 5; Contact Hours = 7
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-120 — Automotive Electrical I

This course covers basic electricity, circuits, testing equipment, and solid state electronics. In addition, course will 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.

Credit Hours = 5; Contact Hours = 8
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-130 — Engine Performance I

This course is designed to familiarize the student with the theory and operation of the automotive ignition system and fuel system. The course includes topics such as 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.

Credit Hours = 5; Contact Hours = 8
Required prerequisites = N/A

(Continued on next page.)
AT-140 — Suspension and Steering

This course is designed to familiarize the student with the nomenclature, theory, and service techniques for the modern steering and suspension system. Includes 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.

Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-150 — Automatic Transmissions

This course is designed to familiarize the student with hydraulic theory, internal transmission 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.

Credit Hours = 6; Contact Hours = 9
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-160 — Engine Repair

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. The lab work will include diagnosis, replacement of external parts and tear down and overhaul of actual failed engines. Group 2 course.

Credit Hours = 6; Contact Hours = 8
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-170 — Heating and Air Conditioning

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 systems and the electronic controls for them. The student 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.

Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-180 — Manual Drivetrain and Axles

This course covers the basic operating principles, construction, power flow and repair of clutches, manual transaxles, and drive shafts. Differential 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. Prerequisite: AT 100 or taken concurrently.

Credit Hours = 6; Contact Hours = 9
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-190 — Auto Facility Orientation

This is an automotive repair facility internship experience that will focus on students learning about the day-to-day duties of an auto repair technician, learning about 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. (Continued on next page.)
AT-200 — Service Department Management

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-220 — Automotive Electrical II

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.

Credit Hours = 5; Contact Hours = 8
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AT-230 — Engine Performance II

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.

Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-111 — Private Flight

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 certificate. Note: Approximately 5 hours of the 40 will be accomplished in a flight simulator. Group 2 course.

Credit Hours = 5; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-118 — Instrument Flight I

This course is the beginning stage of the Instrument Pilot License. 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
AVF-130 — Instrument Flight II
The aircraft and the simulator will be used to teach the required skills. 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 and will be signed off for the FAA Instrument check ride. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-230 — Commercial Flight I
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-232 — Commercial Flight II
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 Certificate. 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-234 — Commercial Flight III
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 Certificate. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-271 — Multi-Engine Flight
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = Private Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-274 — Tailwheel Flight
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = Private Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A
AVF-275 — Seaplane Flight
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = Private Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-283 — Upset Maneuver Training
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = Private Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-284 — Instrument Flight Instructor
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVF-382 — Flight Instructor 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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = Commercial Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A

AVG-101 — Private Ground School
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.
Credit Hours = 5; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVG-161 — Mechanics for Pilots
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = Private Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A
AVG-190 — Aviation Weather
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.
Credit Hours = 3; Contact Hours = 3
Recommended prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVG-202 — Advanced Aircraft Systems
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, first, in a general overview and then for a specific model, large transport category, jet aircraft. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = AVG 101

AVG-204 — Airline Aircraft Ground School
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

AVG-240 — Corporate Aviation Ground
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = Private Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A

AVG-251 — Commercial Ground School
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 reviewed with emphasis on commercial pilot operations. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = Private Pilot Rating
Co-requisites = N/A
Recommended prerequisites = N/A

AVG-252 — Instrument Ground School
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
AVG-381 — Instructor Ground School
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.
Credit Hours = 5; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BIBU-148 — Facilitator Skills
Participants will enhance their team facilitation skills and increase the productivity of teams or work group to which they belong. The purpose is to train participants to become more effective team/group facilitators through training, discussion, practice, self-review, peer review, and trainer review.
Credit Hours = .1; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BIBU-158 — Team Skills Overview
Team Skills Overview will help participants learn the essential skills of positive team participation. They will be challenged to practice these skills during the training and in their work place. The focus is on understanding and reinforcing the behaviors that are required for highly successful team members.
Credit Hours = .1; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BIBU-178 — Leadership Skills
Leadership Skills includes leadership style assessment and application, listening skills, feedback/coaching skills, and conflict management/conflict mediation.
Credit Hours = .1; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BIDT-101 — Design of Experiments
This course will focus on experimental design, analysis of experiments, Taguchi approach, model building and confirm experiments, and ethics and presentations of experiments.
Credit Hours = .4; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BIO-100 — Food and Nutrition Biology
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. 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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
(Continued on next page.)
Co-requisites = BIO 100L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

**BIO-100L — Food and Nutrition Biology Lab**

See BIO 100 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 100L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

**BIO-105 — Living in the Environment**

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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = BIO 105L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

**BIO-105L — Living in the Environment Lab**

See BIO 105 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 105L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

**BIO-106 — Human Biology**

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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = BIO 106L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

**BIO-106L — Human Biology Lab**

See BIO 106 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 106L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

**BIO-108 — Plant Biology**

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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = BIO 108L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.
BIO-108L — Plant Biology Lab
See BIO 108 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 108L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

BIO-109 — Principles of Life Science
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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = BIO 109L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

BIO-109L — Principles of Life Science Lab
See BIO 109 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 109L
Recommended prerequisites = Students scoring below MTH 23 & ENG 111 on the placement test should plan on additional study time.

BIO-115 — Cell, Plant & Ecosystem Biology
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.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = BIO 115L
Recommended prerequisites = MTH 111

BIO-115L — Cell, Plant, Ecosystem Bio Lab
See BIO 115 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 115L
Recommended prerequisites = MTH 111

BIO-116 — Cell and Animal Biology
This lecture and lab course concentrates on cell division, classical genetics as well as evolution and speciation. It also covers the biology of organisms including 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.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = BIO 116L
Recommended prerequisites = BIO 115, MTH 111

BIO-116L — Cell and Animal Biology Lab
See BIO 116 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Recommended prerequisites = BIO 115, MTH 111
(Continued on next page.)
BIO-208 — Microbiology

Introductory microbe physiology emphasizes human response to disease and the importance of microbes in environmental cycles. Laboratory is included. Group 1 lab course. Prerequisites: ENG 111, MTH 111 and completion of any 100 level Biology course.

Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = BIO 208L
Recommended prerequisites = ENG 111, MTH 111, and completion of any 100-level Biology course.

BIO-208L — Microbiology Lab

See BIO 208 for course description.

Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 208L
Recommended prerequisites = ENG 111, MTH 111, and completion of any 100-level Biology course.

BIO-215 — Genetics

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 gene therapy, cloning, and stem cell research. Population genetics will also be covered. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111, MTH 111, and completion of any 100-level Biology course.

BIO-220 — Nutrition in Human Health

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111, MTH 23, and completion of any 100-level Biology course.

BIO-227 — Human Anatomy & Physiology I

This course is designed specifically for the ADN Nursing program and associated health science areas. This first semester will include an introduction to cells, histology, biochemistry, homeostasis, and the organ systems. In addition, the following systems will be discussed: circulatory, nervous, respiratory, and digestive. Lecture will be accompanied by lab work, which will stress the anatomy and histology 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.

Credit Hours = 5; Contact Hours = 7
Recommended prerequisites = ENG 111, CHM 101 EFFECTIVE SPRING 2011, MTH 111 WILL BE A REQUIRED PREREQUISITE
Co-requisites = BIO 227L
Recommended prerequisites = ENG 111, CHM 101 EFFECTIVE SPRING 2011, MTH 111 WILL BE A REQUIRED PREREQUISITE

BIO-227L — Human Anatomy & Phys I Lab

See BIO 227 for course description.

Credit Hours = 0; Contact Hours = 0
Required prerequisites = ENG 111, CHM 101 EFFECTIVE SPRING 2011, MTH 111 WILL BE A REQUIRED PREREQUISITE
Co-requisites = BIO 227L
(Continued on next page.)
BIO-228 — Human Anatomy & Physiology II
This is a course designed specifically for the ADN nursing program and associated health science areas. This is a continuation of BIO 227 and will include an introduction to metabolism, urinary system, fluid/electrolyte and acid/base balance, the immune system, skeletal system, special senses, muscle control, endocrine, reproduction and genetics. Lab work stressing the anatomy and histology of these topics will be included. Group 1 lab course.
Credit Hours = 5; Contact Hours = 7
Required prerequisites = BIO 227
Co-requisites = BIO 228L
Recommended prerequisites = N/A

BIO-228L — Human Anatomy & Phys II Lab
See BIO 228 course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = BIO 227
Co-requisites = BIO 228L
Recommended prerequisites = N/A

BIO-240 — Normal and Clinical Nutrition
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = BIO 227, MTH 08

BIO-250 — Natural History of Vertebrates
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.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = BIO 250L
Recommended prerequisites = ENG 111, MTH 111, and completion of any 100-level Biology course.

BIO-250L — Natural History of Vert. Lab
See BIO 250 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 250L
Recommended prerequisites = ENG 111, MTH 111, and completion of any 100-level Biology course.

BIO-260 — General Ecology
The course is an introduction to the study of the complex relationships of organisms with one another and with the physical and biological 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.
Credit Hours = 5; Contact Hours = 7
Required prerequisites = N/A
Co-requisites = BIO 260L
Recommended prerequisites = ENG 111, MTH 111, and completion of any 100-level Biology course.
BIO-260L — General Ecology Lab
See BIO 260 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = BIO 260L
Recommended prerequisites = ENG 111, MTH 111, and completion of any 100-level Biology course.

BIO-268 — Biochemistry
Study of the basic fundamentals of the chemical composition of living matter with application of concepts to normal and abnormal human function. Course is designed for ADN completion students. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = CHM 101
Co-requisites = N/A
Recommended prerequisites = BIO 227, MTH 23

BIO-270A — Ecological Field Studies
These are specialized studies of a Michigan ecosystem. The type of presentation varies by instructor. One or all of the following may be offered. Group 1 course.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BPC-092 — Bridge to Math
Bridge to Math is designed to help adult students make the transition into higher education math courses while at the same time prepares them for today's workplace math requirements.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BPC-094 — Bridge to Communications
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BPC-096 — Bridge to Technology
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 Microsoft Certified Applications Specialist (MCAS) certification.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
BPD-133 — Keyboarding Speed/Accuracy Dev

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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-101 — Introduction to Business

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-105 — Business Math

Apply basic mathematical principles to solve problems in modern business practice. Topics include trade discounts, markups and markdowns, payroll and payroll taxes, interest, annuities, sinking funds, installment buying, the cost of home ownership, and sales, excise and property taxes. It is designed for day-to-day business applications. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-112 — Life and Health Insurance

This course provides practical knowledge for a student entering the field of life and health insurance. It starts with an introduction of life and health insurance, continues to laws affecting these policies, and continues with annuities, disability income and accidental death. It concludes by studying group concepts of life and health insurance. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-130 — Mechanics of Business Writing

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-150 — Interpersonal Relations

To be well prepared for employment in a global society, employees will require a greater understanding of human relations principles and practices. Employees in the 21st Century are discovering that interpersonal skills represent an important category of “transferable” skills valued by employers. Topics include “people” skills and attitude traits contributing to success on the job. This course is designed to help you develop a greater understanding of the causes of interpersonal conflict and to make wiser choices when people-related problems arise. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A

(Continued on next page.)
BUS-156 — Essentials of Customer Service

This course covers the essentials of customer service needed to excel in interactions with internal and external customers. The insights, ideas, and skills that are developed or enhanced in the course will transfer to any work-related situation. Students will learn to create rapport with customers or co-workers and work toward positive outcomes. The primary focus is to help students build personal skills and confidence in their ability to provide customer service that exceeds customers' expectations. Group 2 course.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-231 — Professional Communications

Communicating professionally is a critical skill in a global society. 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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-251A — Lean Office Facilitation

Through structured classroom and hands-on skill building, the student will learn the concepts and application of Lean Office philosophies, processes and tools. These include team chartering, problem solving, and facilitating improvement teams. Group 2 course.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-251B — Lean Office Intro to VSM

Through structured classroom and hands-on skill building, the student will learn the concepts and application of Lean Office philosophies, processes and tools. This course includes an introduction to creating value stream maps and data gathering. Group 2 course.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-251C — Lean Office Advanced VSM

Through structured classroom and hands-on skill building, the student will learn the concepts and application of Lean Office philosophies, processes and tools. These include analyzing value stream maps, measuring and documenting results. Group 2 course.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-251D — Lean Office 5S Workplace Org

Through structured classroom and hands-on skill building, the student will learn the concepts and application of Lean Office philosophies, processes and tools. These include records and file management, creating standardized work, and ergonomics. Group 2 course.

Credit Hours = 1; Contact Hours = 1

(Continued on next page.)
BUS-251E — Lean Office Cell Flow & Hoshin
Through structured classroom and hands-on skill building, the student will learn the concepts and application of Lean Office philosophies, processes and tools. These include workflow optimization, planning deployment, and culture change. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-251F — Lean Office Coaching & PDCA
Through structured classroom and hands-on skill building, the student will learn the concepts and application of Lean Office philosophies, processes and tools. These include leading change, problem solving, and project coaching. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-261 — Business Law I
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-262 — Business Law II
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 agency, partnerships, corporations, franchises, property, and employer-employee relationships. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = BUS 261

BUS-290 — Business Admin Internship
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. Prerequisite(s): 20 credits of business courses with a GPA of 3.0
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

BUS-292 — Int'l Work Experience Intern
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. American students to Germany (Summer... July-August) 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. Students should contact the work experience coordinator before May 1.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**CAR-101 — Introduction to Carpentry**

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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = CAR 101
Co-requisites = N/A
Recommended prerequisites = Placement into MTH 23 and ENG 11/111

**CAR-105 — Residential Framing**

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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = CAR 105
Co-requisites = N/A
Recommended prerequisites = N/A

**CAR-121 — General Carpentry Practices**

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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = CAR 105
Co-requisites = N/A
Recommended prerequisites = N/A

**CD-101 — Early Childhood Education**

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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**CD-202 — Human Growth and Development**

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 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.
Credit Hours = 5; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
CD-203 — Guiding Young Children
This course examines the preparation of a positive learning environment. The development and use of equipment with children 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CD-204 — Early Childhood Curriculum
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CD-206 — Infant/Toddler Development
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 and their families. Course includes time in class and hours outside class doing observation and applicable in-service work. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CD-220 — Childhood Program Management
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CD-230 — Early Language and Literacy
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
CD-290A — Academic Service/Internship

Placement in a daycare, nursery school, early elementary grades in grade school or other agencies that deal with children, birth through 12 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CD-290B — Academic Service/Internship

Placement in a daycare, nursery school, early elementary grades in grade school or other agencies that deal with children, birth through 12 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CD-290C — Academic Service/Internship

Placement in a daycare, nursery school, early elementary grades in grade school or other agencies that deal with children, birth through 12 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CHM-101 — Introductory Chemistry

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. Students scoring below ENG 111 levels on the COMPASS placement test should plan on additional study time. Group 1 lab course.

Credit Hours = 4; Contact Hours = 5
Required prerequisites = EFFECTIVE SPRING 2011, MTH 111 WILL BE A REQUIRED PREREQUISITE
Co-requisites = CHM 101L
Recommended prerequisites = N/A

CHM-101L — Introductory Chemistry Lab

See CHM 101 for course description.

Credit Hours = 0; Contact Hours = 0
Required prerequisites = EFFECTIVE SPRING 2011, MTH 111 WILL BE A REQUIRED PREREQUISITE
Co-requisites = CHM 101L
Recommended prerequisites = N/A

CHM-150 — General Chemistry I

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. Group 1 lab course.

Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = CHM 150L, CHM 150R

(Continued on next page.)
Recommended prerequisites = MTH 121

CHM-150L — General Chemistry I Lab
See CHM 150 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = CHM 150L, CHM 150R
Recommended prerequisites = MTH 121

CHM-150R — General Chemistry I, Recitatn
Problem solving quizzes and laboratory preparation to accompany lectures. Group 1 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = CHM 150L, CHM 150R
Recommended prerequisites = MTH 121

CHM-151 — General Chemistry II
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. Group 1 lab course.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = CHM 150
Co-requisites = CHM 151L, CHM 151R
Recommended prerequisites = N/A

CHM-151L — General Chemistry II Lab
See CHM 151 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = CHM 150
Co-requisites = CHM 151L, CHM 151R
Recommended prerequisites = N/A

CHM-151R — General Chemistry II Recitatn
Problem solving, quizzes and laboratory preparation to accompany lectures. Group 1 course. Prerequisite(s): CHM 150 Corequisite(s): CHM 151
Credit Hours = 1; Contact Hours = 2
Required prerequisites = CHM 150
Co-requisites = CHM 151L, CHM 151R
Recommended prerequisites = N/A

CHM-250 — Organic Chemistry I
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.
Credit Hours = 5; Contact Hours = 9
Required prerequisites = CHM 151
Co-requisites = CHM 250L
Recommended prerequisites = N/A
CHM-250L — Organic Chemistry I Lab
See CHM 250 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = CHM 151
Co-requisites = CHM 250L
Recommended prerequisites = N/A

CHM-251 — Organic Chemistry II
A followup to CHM 250. Topics include alcohols, aromatics, ethers and epoxides, arenes, carbonyls, 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.
Credit Hours = 5; Contact Hours = 9
Required prerequisites = CHM 250
Co-requisites = CHM 251L
Recommended prerequisites = N/A

CHM-251L — Organic Chemistry II Lab
See CHM 251 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = CHM 250
Co-requisites = CHM 251L
Recommended prerequisites = N/A

CIT-100 — Computers in Business-An Intro
A first exposure to the world of computers, this course covers basic concepts and terminology. It is suitable for the information systems student or anyone wishing to gain computer knowledge. Hands-on use of computer applications: word processing, spreadsheets, database, presentation graphics will be covered. In addition, exposure to the Windows operating system and web page development will be a part of the class. Topics such as hardware, software, data communications, programming development and languages, the development of computing, and emerging trends will be covered. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = Keyboarding skills

CIT-109A — Keyboarding I
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. This class is offered in the OPEN and/or online format. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-109B — Keyboarding II
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. This is offered in the OPEN and/or online format. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
CIT-110 — Programming Logic and Design
This course will prepare the student for programming courses. Topics covered include flow charting, pseudocode, modularization, decisions and looping program constructs, control breaks, arrays, and file operations. Lecture topics will be reinforced with hands-on coding, testing, debugging, and documentation exercises. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-120A — Microsoft Word Level IA
A one-credit course that focuses on the basic skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in Word. The exam is separate from this course. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-120B — Microsoft Word Level IB
A one-credit course that continues focus on the basic skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in Word. The exam is separate from this course. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-121A — Microsoft Word Level IIA
A one-credit course that focuses on the advanced skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in Word and the exam is separate from this course. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-121B — Microsoft Word Level IIB
A one-credit course that continues to focus on the advanced Word skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in Word. The exam is separate from this course. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-122A — Computer & Internet Basics I
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 online courses. Group 2 course.
Credit Hours = 1; Contact Hours = 1
(Continued on next page.)
CIT-122B — Computer & Internet Basics II
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.
Credit Hours = 1; Contact Hours = 1
Recommended prerequisites = N/A
CIT-124A — Microsoft PowerPoint IA
A one-credit course that focuses on the basic PowerPoint skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in PowerPoint. The exam is separate from this course. Recommended competency: Basic keyboarding and Windows skills. Group 2 course.
Credit Hours = 1; Contact Hours = 1
CIT-124B — Microsoft PowerPoint IB
A one-credit course that continues to focus on the PowerPoint basic skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in PowerPoint. The exam is separate from this course. Group 2 course.
Credit Hours = 1; Contact Hours = 1
CIT-125 — Microsoft Outlook
A two-credit course that focuses on the Outlook skills sets for Microsoft Certified Applications Specialist (MCAS) certification. The skill sets include using Outlook for email, using calendar for scheduling, managing contacts, creating tasks and notes, and customizing, integrating, and archiving Outlook components. The instructional goal of this course is to prepare students for the MCAS exam in Outlook. The exam is separate from this class. Recommended competency: Basic keyboarding and Windows skills. Group 2 course.
Credit Hours = 2; Contact Hours = 2
CIT-126 — Microsoft Access Level I
A two-credit course that focuses on the basic Access skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in Access. The exam is separate from this course. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Recommended prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
CIT-127 — Microsoft Access Level II

This course focuses on the advanced Access skill sets for Microsoft Certified Applications Specialist (MCAS) certification. The skills 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 MCAS exam in Access. The exam is separate from this course. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 126

CIT-128 — Microsoft Excel Level I

A two-credit course that focuses on the basic Excel skill sets for Microsoft Certified Applications Specialist (MCAS) 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 MCAS exam in Excel. The exam is separate from this course. Recommended competency: Basic math, keyboarding, and Windows skills. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = Basic math, keyboarding, and Windows skills.

CIT-129 — Microsoft Excel Level II

A two-credit course that focuses on the advanced Excel skill sets for Microsoft Certified Applications Specialist (MCAS) certification. The skill sets include advanced formatting, advanced functions and formulas, working with tables and data features, summarizing and consolidating 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 MCAS exam in Excel. The exam is separate from this class. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 128 or Excel Specialist Certificate

CIT-140 — .NET Application Programming

The student is introduced to .NET application development. Students use Visual Studio to develop MS Windows applications. Application features will include basic input and output, variables, collections, menus, and integration with databases. Object-oriented concepts, application design, program structure, and proper documentation are also covered. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = CIT 110
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-155 — Personal Computer Maintenance

This course presents a detailed look inside the personal computer. Maintenance and system upgrades will be performed. System resource management will be covered along with installation of hard drives, CD-ROM, sound cards and modems. Group 2 course.

Credit Hours = 2; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-156 — CompTIA A+ Certification I

This course, in conjunction with CIT 157, covers the objectives of the CompTIA A+ IT Technician Certification exams. CIT 156 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 and environmental issues, communication and professionalism. Group 2 course.

Credit Hours = 3; Contact Hours = 4
(Continued on next page.)
CIT-157 — CompTIA A+ Certification II
This course, in conjunction with CIT 156, covers the objectives of the CompTIA A+ IT Technician Certification exams. CIT 157 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 and environmental issues, communication and professionalism. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 155

CIT-160 — Cisco Internetworking I
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 following topics are covered in detail: The OSI Model, LAN topologies and protocols, logical addressing and internet working devices. This course is part of the Cisco Systems Networking Academy Program and will integrate online curriculum, class-room activities and hands-on lab exercises. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-161 — Cisco Internetworking II
This course, in conjunction with CIT 160, CIT 260 and CIT 261, provides the necessary preparation to pass the Cisco CCNA Exam (Cisco Certified Network Associate). The following 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 Academy Program and will integrate online curriculum, classroom activities and hands-on lab exercises. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = CIT 160
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-210 — Electronic Spreadsheets
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = BUS 105, MTH 23 or MTH 111

CIT-212 — Intro to Database Management
This course introduces database management using Microsoft Access. Students will create and modify Access objects including tables, queries, forms, and reports. Relational database concepts, including normalization and data integrity are stressed. An introduction to application development is also included. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 100 or CIT 110

CIT-213 — Networking Technologies
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...
CIT-215 — Windows Server Environment
Concepts of electronic business communications and local area networks will be covered. The current Windows Server operating system will be used and studied in this course. Installation of network operating system, setup of users and groups, files and folder trustee rights, and console management will be covered. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = CIT 213
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-216 — Computerized Acctg Systems
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. This is a fall semester offering. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ACC 121

CIT-217 — XHTML Programming
In this course students develop skills in HTML and XHTML web publishing. Students create web pages with variations in web browsers and accessibility requirements in mind. Students develop skills using cascading style sheets and briefly use JavaScript automation. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = CIT 110
Co-requisites = N/A
Recommended prerequisites = Windows file management skills

CIT-218 — Web APP Programming ASP .NET
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 140, CIT 212, CIT 217, and CIT 220

CIT-220 — XML Programming
Students will be introduced to Extensible Markup Language (XML) technology. You will learn to design field-specific markup language describing both the data and its structure. The resulting XML document will be presented in multiple formats by applying XSLT transformations. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 217
CIT-230 — Systems Analysis & Design

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. Note: Students should have successfully completed a minimum of 12 semester hours of CIT courses, including at least one programming course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-233 — Project Management

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, cost, and project progress. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = Windows knowledge

CIT-240 — Network Security Management

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = CIT 213
Co-requisites = N/A
Recommended prerequisites = CIT 161

CIT-242 — Windows Client Administration

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 161

CIT-246 — Windows Server Infrastructure

Students taking this course will learn how to set up, configure, and maintain a Windows Server Infrastructure. Topics covered include administering, diagnosing, and troubleshooting DHCP, DNS, network security, routing and remote access, and system performance. This course maps to the Microsoft MCSA Windows Server Infrastructure test objectives. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = CIT 215
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-248 — SQL Server Database

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
(Continued on next page.)
CIT-255 — .NET Object-Oriented Prog
The student builds on .NET programming fundamentals learned in CIT 140, 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = CIT 140
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-256 — Linux Administration
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 at 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = CIT 156, CIT 157, CIT 213
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-260 — Cisco Internetworking III
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 161

CIT-261 — Cisco Internetworking IV
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). The following topics are 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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CIT 260

CIT-290 — CIT Internship
Work experience is an integral part of the CIT student’s program. 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. Prerequisite(s): 20 credits with a minimum of 3.0 GPA in CIT courses and departmental approval or instructor permission.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
CIT-291 — Web Master Internship

Work experience is an integral part of the Web Master Certificate program. Students are placed in settings that utilize their web installation and development skills as well as business and CIT skills. Student 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 the internship placement, 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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CIT-292 — Support Specialist Internship

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.

Prerequisite(s): 27-30 hours in the Administrative Support Specialist Certificate or instructor permission.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CJ-101 — Intro to Criminal Justice

The student is introduced to the criminal justice system and the criminal justice process. Includes the history, present structure, current functions and contemporary problems of the police, the prosecution, the courts, corrections, and security agencies. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CJ-211 — Criminal Law

This course will study the history and nature of criminal law, defenses to criminal conduct, and substantive criminal offenses. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CJ-242 — Evidence & Criminal Procedures

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 decisions. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CMT-103 — Construction Safety

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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A

(Continued on next page.)
CMT-107 — Construction Supervision
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

COM-101 — Introduction to Communication
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

COM-111 — Public Speaking
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

COM-121 — Broadcasting Practicum I
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

COM-122 — Broadcasting Practicum II
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

COM-201 — Mass Communication and Culture
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
CUL-101 — Today's Hospitality Industry

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 tracts 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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CUL-110 — Safety and Sanitation

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CUL-111 — Professional Cookery

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.

Credit Hours = 6; Contact Hours = 12
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CUL 110

CUL-118 — Introduction to Baking

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. Also included are cakes, pies, tarts, and other desserts. Group 2 course.

Credit Hours = 4; Contact Hours = 8
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

CUL-121 — Purchasing and Receiving

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
**CUL-190 — Culinary Internship**

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.

Credit Hours = 2; Contact Hours = 2

Required prerequisites = N/A

Co-requisites = N/A

Recommended prerequisites = CUL 111, CUL 118, CUL 213

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**CUL-210 — Nutrition for Culinary Arts**

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.

Credit Hours = 2; Contact Hours = 2

Required prerequisites = N/A

Co-requisites = N/A

Recommended prerequisites = N/A

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**CUL-211 — Menu Planning**

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.

Credit Hours = 3; Contact Hours = 3

Required prerequisites = N/A

Co-requisites = N/A

Recommended prerequisites = N/A

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**CUL-213 — World Cuisine**

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 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.

Credit Hours = 6; Contact Hours = 12

Required prerequisites = CUL 111

Co-requisites = N/A

Recommended prerequisites = N/A

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**CUL-215 — Garde Manger**

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 at the Great Lakes Campus and at other special occasions. Group 2 course.

Credit Hours = 4; Contact Hours = 8

Required prerequisites = CUL 111, CUL 118, CUL 213

Co-requisites = N/A

Recommended prerequisites = N/A
CUL-217 — Kitchen and Dining Room Mgmt

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = CUL 101

CUL-218 — Advanced Baking

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.

Credit Hours = 4; Contact Hours = 8
Required prerequisites = CUL 118
Co-requisites = N/A
Recommended prerequisites = N/A

CUL-295 — Contemporary Service & Cuisine

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.

Credit Hours = 12; Contact Hours = 24
Required prerequisites = CUL 111, CUL 118, CUL 213
Co-requisites = N/A
Recommended prerequisites = Basic keyboarding and computer skills

DD-101 — Print Reading and Sketching

Students will learn to read engineering drawings of products and tooling used in today's manufacturing. Basic drawing 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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-110 — Basic Metallurgy

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
DD-120 — Comp Aided Drafting (AutoCAD)

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. Group 2 course.

Credit Hours = 2; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-125 — Mechanical Drafting (AutoCAD)

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.

Credit Hours = 2; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-130 — Architectural Draft I-AutoCAD

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.

Credit Hours = 2; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-131 — Architectural Draft II-AutoCAD

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.

Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-150 — Detail Drafting

Students learn to 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.

Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-160 — Tolerancing and GD&T

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.

Credit Hours = 3; Contact Hours = 3
(Continued on next page.)
DD-170 — Part and Assembly Modeling
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 bill of materials. Students must already possess basic computer aided drafting skills by successfully completing DD 125 or equivalent skills. Group 2 course.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-240 — Advanced Part & Assy Modeling
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, assembly design tables, assembly editing, troubleshooting, assembly problems, working with sub-assemblies, 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.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-290 — Drafting Internship
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 student 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 internship coordinator. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DD-295 — Advanced Manufacturing Project
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.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

DNC-101 — Beginning Dance:An Exploration
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.
Credit Hours = 2; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
DNC-110 — Modern Dance I

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.

Credit Hours = 2; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = DNC 101

DNC-111 — Modern Dance II

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 critical perspectives in dance will also be explored. Group 2 course.

Credit Hours = 2; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = DNC 110

DNC-120 — Choreography & Performance

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.

Credit Hours = 2; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = DNC 101

ECO-201 — Principles of Macroeconomics

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MTH 23

ECO-202 — Principles of Microeconomics

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MTH 23

EDU-101 — Introduction to Teaching

This course will serve as an introduction to teaching as a career. It will provide an overview of students' behaviors and effective teachers' responsibilities 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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
(Continued on next page.)
EET-103 — Electrical Studies I
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 multimeters and other test equipment. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

EET-104 — Electrical Studies II
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 will be taught. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

EET-221 — Industrial Controls
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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 105
Co-requisites = N/A
Recommended prerequisites = N/A

EET-232 — Programmable Logic Controllers
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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = EET 221
Co-requisites = N/A
Recommended prerequisites = N/A

EGR-101 — Introduction To Engineering
This course 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

EGR-113 — Engineering Graphics I
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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
(Continued on next page.)
Co-requisites = N/A
Recommended prerequisites = MTH 122 or MTH 140

**EGR-131 — Elementary Surveying**

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 the 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.

Credit Hours = 5; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = EGR 131L
Recommended prerequisites = MTH 122 or MTH 140

**EGR-131L — Elementary Surveying Lab**

See EGR 131 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = EGR 131L
Recommended prerequisites = MTH 122 or MTH 140

**EGR-201 — Statics**

This is the first in a three-course sequential in Engineering Mechanics. Students will learn 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 is used throughout the course. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = MTH 141
Co-requisites = N/A
Recommended prerequisites = ENG 111

**EGR-202 — Mechanics of Materials**

This is the second in a three-course sequential 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 is used throughout this course. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = EGR 201
Co-requisites = N/A
Recommended prerequisites = N/A

**EGR-203 — Dynamics**

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 is used throughout this course. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = EGR 201
Co-requisites = N/A
Recommended prerequisites = N/A

**EGY-101 — Principles of Renewable Energy**

This course highlights industry and governmental perspectives on geothermal, wind, solar, biomass, fuel cells, and other energy sources. Group 2 course. (Continued on next page.)
EGY-105 — Sustainable Building Design
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.
Credit Hours = 3; Contact Hours = 3
Recommended prerequisites = MTH 23 or placement into MTH 111, ENG 111

EGY-115 — Residential Energy Efficiency
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.
Credit Hours = 3; Contact Hours = 3
Recommended prerequisites = MTH 23 or placement into MTH 111, ENG 111

EGY-141 — Solar Photovoltaic Tech I
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.
Credit Hours = 3; Contact Hours = 4
Recommended prerequisites = MTH 23 or placement into MTH 111, ENG 111

EGY-143 — Solar Thermal Technology I
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. Recommended competencies: COMPASS placement into MTH 23 and ENG 111 or coenrollment in the recommended developmental course in the student's first semester.
Credit Hours = 3; Contact Hours = 4
Recommended prerequisites = MTH 23 or placement into MTH 111, ENG 111

EGY-145 — Geothermal Technology
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.
Credit Hours = 3; Contact Hours = 4
Recommended prerequisites = MTH 23 or placement into MTH 111, ENG 111

EGY-161 — Wind Power Technology
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. (Continued on next page.)
ELE-101 — Introduction to Electrical

This course provides an introduction to the electrical occupations. 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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MTH 23 or placement into MTH 111, ENG 111

ELE-105 — Residential Electrical

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

Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 101
Co-requisites = N/A
Recommended prerequisites = N/A

ELE-121 — Electrical Applications

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 105
Co-requisites = N/A
Recommended prerequisites = N/A

ELE-125 — Electrical Components

Through structured classroom and hands-on skill building, the student will learn the orientation to conductor installations, cable trays, terminations and splices, grounding and bonding, circuit breakers and fuses, control systems and fundamental concepts. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 121
Co-requisites = N/A
Recommended prerequisites = N/A

ELE-131 — Electrical Distribution

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 125
Co-requisites = N/A
Recommended prerequisites = N/A

ELE-135 — Motor Control Circuits

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.

Credit Hours = 3; Contact Hours = 4

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
ELE-135 — Motor Control Circuits
Through structured classroom and hands-on skill building, the student will learn how to calculate the power factor of any given circuit, sizing of conductors for proper load, selection and sizing of overcurrent protection, installation of raceways, boxes and fittings, and raceways and fittings for a given application, perform proper hand bending techniques, install conductors, describe the type of lighting, and conduit bending. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 125
Co-requisites = N/A
Recommended prerequisites = N/A

ELE-131 — Electrical Distribution
Through structured classroom and hands-on skill building, the student will learn the orientation to conductor installations, cable trays, through structured classroom and hands-on skill building, the student will learn how to calculate loads on branch and feeder circuits, 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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 135
Co-requisites = N/A
Recommended prerequisites = N/A

ELE-125 — Electrical Components
Through structured classroom and hands-on skill building, the student will learn the orientation to alternating current, motors, electric motors, complete cable tray assemblies using terminations and splices. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ELE 141
Co-requisites = N/A
Recommended prerequisites = N/A

ELE-121 — Electrical Applications
This course provides an introduction to the electrical occupations. 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. 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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = Based on placement testing. See advisor.
Co-requisites = ENG 111
Recommended prerequisites = N/A

ENG- 11 — English/Writing Methods
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. This course is to be taken concurrently with ENG 112 and will help to facilitate the objectives of ENG 112. Special attention is given to individual student needs in the conventions of standard written prose, argumentation, and research.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = ENG 111
Co-requisites = ENG 112
Recommended prerequisites = N/A

ENG- 97 — Fundamentals of Writing
This is a developmental writing course that focuses on the process of writing but specifically emphasizes elements of sentence structure, with focus on grammar and punctuation, proceeding to topic sentence analysis, paragraph and essay development. Classroom and laboratory instruction will focus on specific individual skill needs. In addition, students will be guided to effective ways to approach reading so they can prepare written responses and discussions. Students are required to schedule ten one-hour tutoring sessions through the Writing Center.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = Based on placement testing. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A

ENG- 99 — Intro College Reading/Writing
This is an integrated reading and writing course that gives students the literacy skills they need for college level academic work. Course focus in writing is on the development of organization and clarity, mechanical correctness and sentence structure and variety. Course focus in reading is on the development of vocabulary and comprehension, and reading strategies. Students are required to schedule eight one-hour tutoring sessions through the Writing Center. (Continued on next page.)
ENG-107 — Academic Study Methods

This course is designed to provide students with the opportunity to develop and improve basic college academic survival skills and study methods. Topics include: introduction to student's own 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.

Credit Hours = 6; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 97

ENG-108 — Reading & Learning Strategies

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. Students may elect this course as a helpful "entry to college" course. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = Based on placement testing. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-110 — Grammar and Writing

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 either missed or acquired unconsciously. While developing/intensifying syntactical skill, students will also develop a sound and reasonable language about language. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = ENG 99
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-111 — English Composition

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-112 — English Composition

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = ENG 111
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-210 — Children's Literature

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.

Credit Hours = 3; Contact Hours = 3
(Continued on next page.)
ENG-211 — Introduction to Linguistics
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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = ENG 112
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-220 — Technical Writing
This course introduces students to a variety of technical writing situations in business, industry, science, and education. It emphasizes audience awareness, research methods, problem solving, critical thinking, professional ethics, and patterns of typical proposals, descriptions, and the requirements of formal reports used in professional writing. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = ENG 111
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-221 — Creative Writing
Study and practice of the basic techniques of effective, imaginative writing, focusing on short fiction but with considerable allowance for individual interests. This introductory 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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = ENG 112
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-222 — Advanced Creative Writing
An advanced course in imaginative prose narration, ENG 222 provides an intense seminar in which the features of narrative art—characterization, story content, plot development, setting, point of view, and theme—will be developed by using professional models, weekly writing and workshop methods. The course will also rely on frequent on-on-one conferences about each student's writing projects. This course is primarily intended for students and members of the community who are interested in writing for publication and already possess basic competence in prose narration, editing, and responding to manuscripts in progress. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = ENG 221
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-223 — Apprentice Poetry Workshop
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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = ENG 112
Co-requisites = N/A
Recommended prerequisites = N/A
ENG-224 — Journalism Fundamentals

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111

ENG-228 — Advanced Writing and Rhetoric

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 analyses will rely on working knowledge of classical rhetoric (terms and concepts discussed early in the semester). Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = ENG 112
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-240 — Introduction to Literature

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. Prerequisite: Completion of ENG 111 and 112 strongly recommended or instructor permission. Strongly recommended as the FIRST college literature course for those with little or no prior literary study experience.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-241 — Mythology

This course features a study of 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 culture 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. This course is recommended as the FIRST college literature course for those with little or no prior literary study experience. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-242 — Women in Literature

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-245 — Native American Literature

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 socioeconomic 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. (Continued on next page.)
ENG-254 — Shakespeare
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-256 — Environmental Literature
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. Humanities or English credit. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-261 — British Literature
This course features an intensive reading of works from British authors ranging from the entire span of this literary tradition and including works in various genres. It develops a sense of the evolution of British literature and a facility in careful literary criticism. Humanities or English credit. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-262 — American Literature
Students in this course study the American tradition, early and modern, in prose and poetry. Selections will emphasize the cultural and intellectual background giving rise to our national literature, the major phases or movements in that literature, and how certain writers transcended those movements to create work of universal value. Humanities or English credit. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-264 — Detective Fiction
The primary emphases of this course are reading and writing about detective fiction and the historical and cultural development of this genre of literature. Multimedia story formulas analyzed include avenger stories, private eye fiction, police procedurals, gentlemen thieves, psychic detectives, stories of magician detectives and spy fiction. Humanities or English credit. Group 1 course. Completion of ENG 111 and 112 strongly recommended or instructor permission.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-265 — Science Fiction and Fantasy
The primary emphasis of this course are reading and writing about Science Fiction and Fantasy stories as they are found in a range of cultural tests like print, motion pictures, radio drama, television, and more. Students will learn to identify and discuss mythologies

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
and related symbols, and genre and formula conventions such as icons, stereotypes, rituals, plots, motifs, settings, and more as they investigate the social history of these stories. Humanities or English credit. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-266 — Popular Culture

The primary emphases of this course center on the critical reading of and writing about popular culture and its historical development in U.S. and world cultures. Topics to be addressed include myth and mythmaking, iconography, stereotypes, rituals, genres and formulas, the mass media and more. Humanities or English credit. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-267 — Film as Literature

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENG-271 — Adolescence/Cultural Diversity

This course provides a study of universal and diverse themes and ideas expressed through adolescent literature. It features protagonists and authors from a variety of cultures both within and outside of the United States, and emphasizes the relationship between culture and the lives of young people. Humanities or English credit. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

ENV-103 — Earth Science

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.

Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = ENV 103L
Recommended prerequisites = MTH 08

ENV-103L — Earth Science Lab

See ENV 103 for course description.

Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = ENV 103L
Recommended prerequisites = MTH 08

ENV-104 — Life of the Past

This course introduces non-science students to the record of life on Earth. The roles of global change, origins, 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
invertebrates and vertebrates are highlighted. Appearance, evolution, and disappearance of dinosaurs during the Mesozoic Era, human and related symbols, and genre and formula conventions such as icons, stereotypes, rituals, plots, motifs, settings, and more as they

ENV-104 — Life of the Past
See ENV 104 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = ENV 104L
Recommended prerequisites = MTH 08

ENV-105 — Intro to Freshwater Studies
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MTH 23

ENV-111 — Physical Geology
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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = ENV 111L
Recommended prerequisites = MTH 111

ENV-111L — Physical Geology Lab
See ENV 111 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = ENV 111L
Recommended prerequisites = MTH 111

ENV-112 — Historical Geology
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 excursion to Elliot Lake, Ontario). Group 1 lab course.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = ENV 112L
Recommended prerequisites = ENV 111, MTH 111

ENV-112L — Historical Geology Lab
See ENV 112 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
(Continued on next page.)
ENV-115 — Introduction to GIS
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MTH 111

ENV-117 — Meteorology & Climatology
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.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = ENV 117L
Recommended prerequisites = N/A

ENV-117L — Meteorology & Climatology Lab
See ENV 117 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = ENV 117L
Recommended prerequisites = N/A

ENV-131 — Oceanography
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 shall also explore plant and animal life within the oceans including impacts of human activities on the marine environment. Group 1 lab course.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = ENV 131L
Recommended prerequisites = MTH 23

ENV-131L — Oceanography Lab
See ENV 131 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = ENV 131L
Recommended prerequisites = MTH 23

ENV-140 — Watershed Science
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. Basic scientific principles will be incorporated throughout the course. Group 1 lab course.
Credit Hours = 4; Contact Hours = 5

(Continued on next page.)
Group 1 lab course.

ENV-140 — Watershed Science

This course is designed for the learner who wishes to gain an in-depth understanding of watersheds. It will focus on the physical properties of the watershed and its impact on our local water resources. The laboratory portion of the course will place emphasis on the analysis of data and water samples collected. Basic scientific principles will be incorporated throughout.

Recommended prerequisites = MTH 23
Co-requisites = ENV 140L
Required prerequisites = N/A
Credit Hours = 0; Contact Hours = 0

ENV-140L — Watershed Science Lab

See ENV 140 for course description.
Credit Hours = 0; Contact Hours = 0
Recommended prerequisites = N/A
Co-requisites = ENV 140L
Required prerequisites = MTH 23

ENV-270A — Michigan Basin Geology

This is a five-day study of the Michigan Basin. The class concentrates on Paleozoic rock layers and their included fossils. There is also a section on relationships of rock layers to more recent geologic processes and their associated deposits and landforms. Group 1 course.

Required prerequisites = N/A
Co-requisites = N/A
Credit Hours = 2; Contact Hours = 3

ENV-270B — Field Mapping Techniques

This course is a one-week field course. It will focus on the fundamentals of map interpretation and generation. Students will gain a basic understanding of the principles of cartography and field mapping techniques employed by various disciplines in the acquisition of spatial data. Group 1 course.

Required prerequisites = N/A
Co-requisites = N/A
Credit Hours = 2; Contact Hours = 3

GEO-101 — Introduction to Geography

This course emphasizes both the physical and cultural aspects of geography. Physical factors such as weather and 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 an understanding of the ways in which people have used and misused their resources. Group 1 course.

Required prerequisites = N/A
Co-requisites = N/A
Credit Hours = 3; Contact Hours = 3

GEO-105 — Physical Geography

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. Group 1 course.

Required prerequisites = N/A
Co-requisites = GEO 105L
Credit Hours = 3; Contact Hours = 3

GEO-105L — Physical Geography Lab

The lab emphasizes the application of selected physical elements through means of field work, map and aerial photo interpretation. Group 1 lab course.

Required prerequisites = N/A
Credit Hours = 1; Contact Hours = 2

(Continued on next page.)
GEO-108 — Geography of U S & Canada

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

GEO-109 — World Regional Geography

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HAH-100C — Informatics Essentials

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 will be offered in a hybrid online and face-to-face format. Group 2 course.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HAH-101 — Medical Terminology

This course is designed to help the student learn the basic construction of medical words through the use of medical prefixes, suffixes, and combining root words. This foundation will facilitate the understanding of new medical vocabulary encountered in other course work or work situations. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HAH-120 — Infection Control

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HAH-121 — Medical Coding

This course is a practical hands-on approach to develop medical coding resources utilization techniques. The course is designed to assist the student in mastery of medical coding concepts and skills. Emphasis is placed on proficient use of medical coding tools to organize and translate written medical documentation into numeric codes and process the information for reimbursement and statistical purposes. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
(Continued on next page.)
HAH-200 — Emergency Assess. & Interventio

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 C.P.R., and HAZMAT, may be earned in cooperation with state and/or national agencies. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HDA-101 — Introduction to Dentistry

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HDA-112 — Dental Materials

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.

Corequisite(s): HDA 113
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = HDA 113
Recommended prerequisites = HDA 120, HAH 120

HDA-113 — Dental Materials Lab

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.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = HDA 112
Recommended prerequisites = HDA 112, HDA 120, HAH 120

HDA-120 — Dental Anatomy

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 and size of the individual teeth. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
HDA-140 — Oral Pathology/Pharmacology

This course will 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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HDA-150 — Dental Office Management

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HDA-160 — Dental Emergencies

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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HDA-170 — Preventive Dentistry

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HDA-240 — Chairside Procedures

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.

Credit Hours = 5; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = HDA 241
Recommended prerequisites = HDA 101, HDA 120, HDA 242, HDA 243, HAH 120

HDA-241 — Chairside Procedures Lab

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.

Credit Hours = 2; Contact Hours = 4

(Continued on next page.)
HDA-242 — Dental Radiography

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = HDA 240
Recommended prerequisites = HDA 120, HAH 120

HDA-243 — Dental Radiography Lab

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.

Credit Hours = 1.5; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = HDA 242
Recommended prerequisites = N/A

HDA-251 — Dental Internship I

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 be taken any semester with the permission of instructor. Included is a one-hour, bi-weekly seminar session. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = HDA 240, HDA 241

HDA-252 — Dental Internship II

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 in four specialty settings: oral surgery, orthodontics, periodontics, and endodontics. May be taken any semester with permission of instructor. Included is a one hour, bi-weekly seminar session. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = HDA 251

HDA-282 — CDA/RDA Written Exam Prep

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. Co- and or prerequisites: HDA 112, HDA 113, HDA 140, HDA 170, HDA 240, HDA 241

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HDA-286 — RDA Clinical Exam Prep

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. Co-
and/or pre-requisites: HDA 112, HDA 113, HDA 140, HDA 170, HDA 240, HDA 241.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = HDA 282
Co-requisites = N/A
Recommended prerequisites = N/A

HF-101 — Fitness Circuit I
Introduction to beginning aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction includes individual
fitness evaluation, aerobic fitness, strength training, flexibility, and endurance. Course meets in the NMC Health and Fitness Center
using strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week. Offered summers only. Group
2 course.
Credit Hours = .5; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-102 — Fitness Circuit II
Continuing beginning aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction includes individual
fitness evaluation, aerobic fitness, strength training, flexibility, and endurance. Course meets in the NMC Health and Fitness Center
using strength training equipment, exercise bicycles, and other aerobic equipment. Two hours per week. Offered summers only. Group
2 course.
Credit Hours = .5; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-105 — Personal Trainer Certification
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-111 — Fitness Circuit I
Introduction to aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction includes individual fitness
evaluation, strength training, flexibility, and endurance with an emphasis on aerobic conditioning. Course meets in the NMC Health and
Fitness Center using strength training equipment, exercise bicycles, and other aerobic equipment. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-112 — Fitness Circuit II
Continuation of aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction emphasizes individual
strength training and flexibility. Course meets in the NMC Health and Fitness Center using strength training equipment, exercise
bicycles, and other aerobic equipment. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
HF-113 — Fitness Circuit III

Continuation of aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction emphasizes individual aerobic fitness options and the reduction of stress. Course meets in the NMC Health and Fitness Center utilizing strength training equipment, exercise bicycles, and other aerobic equipment. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-114 — Fitness Circuit IV

Continuation of aerobic conditioning through a fitness circuit designed for varying fitness levels. Instruction emphasizes individual fitness evaluation/workout, weight control, and nutrition. Course meets in NMC Health and Fitness Center using strength training equipment, exercise bicycles, and other aerobic equipment. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-116 — Yoga

Yoga is postural work emphasizing precise and 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.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-118 — Continuing Yoga

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, sketetal, 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 a bath towel. Group 2 course. Prerequisite(s): HF 116 or instructor permission.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-118A — Bikram Yoga

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. Prerequisite: Good heart health and not pregnant. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-118B — Bikram Yoga II

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. Students must be in good heart health and not pregnant. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A

(Continued on next page.)
HF-121 — Aerobic Dance I
Through choreographed dance movements and contemporary music, cardiovascular endurance, flexibility, strength and coordination is promoted. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-122 — Step Aerobics I
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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-124 — Aerobic Dance
Through choreographed dance movements and contemporary music, cardiovascular endurance, flexibility, strength and coordination is promoted. Offered summers only. Group 2 course.
Credit Hours = .5; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-126 — Lap Swim
Use of basic strokes for fitness is reviewed. Emphasis is on aerobic and muscular endurance through swimming a variety of laps. Group 2 course. Prerequisite(s): Ability to swim repeated laps across a pool.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-127 — Lap Swim II
A continuation of the Lap Swim program. Emphasis is on increasing aerobic and muscular endurance through swimming a variety of laps. Group 2 course. Prerequisite(s): HF 126
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-131 — Aerobic Dance II
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. Prerequisite(s): HF 121
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
HF-132 — Step Aerobics II

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. Prerequisite(s): HF 122
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HF-133 — Pilates

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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HNR-100 — Introduction to Nursing

Introduces the attitudes and behaviors desired in nurses. Discusses nursing education, nursing organizations, roles and career opportunities, the health care delivery system and the roles of other health care personnel. Presents the history of nursing and 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. Also introduces cultural diversity, cultural considerations, and the impact of illness on the individual and his/her significant others. Covers beginning communication skills and basic teaching/learning principles. This course may be taken before admission to the nursing program. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111, MTH 111

HNR-101 — Fundamentals of Nursing-Lectur

Fundamentals of Nursing-L 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. Prequisite(s): BIO 227, MTH 111 or equivalent Corequisite(s): HNR 100, HNR 102, HNR 106, and BIO 228.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = HNR 100, BIO 228 w/grade of 2.5 or better
Co-requisites = HAH 100C, HNR 102
Recommended prerequisites = N/A

HNR-102 — Fund of Nursing-Clinical

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. Group 2 course. Prerequisite(s): BIO 227 Corequisite(s): HNR 100, 101, 108 if not completed, BIO 228, CIT 122A, HAH 100C.
Credit Hours = 4; Contact Hours = 12
Required prerequisites = N/A
Co-requisites = HAH 100C, HNR 101
Recommended prerequisites = N/A

HNR-108 — Pharmacology

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. Pre-requisites: MTH 111 and CHM 101 with GPA of 2.0 or higher, or equivalent transfers five years old or less. (Continued on next page.)
HNR-125 — Lifespan Nursing Lecture
This course presents basic concepts of nursing management for adult medical and surgical patients including alterations in fluid and electrolyte balance, endocrine regulation, circulation, respiratory gas exchange, neurological sensation and perception, mobility, nutrition and elimination, and the immune system. Basic concepts of uncomplicated pregnancy, birth, neonatal care, and pediatric management are introduced. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = BIO 227 w/grade of 2.5 or better; MTH 111 w/grade of 2.0 or better; CHM w/grade of 2.0 or better
Co-requisites = N/A
Recommended prerequisites = HNR 100, BIO 228 w/grade of 2.5 or better

HNR-126 — Lifespan Nursing-Clinical
This course provides clinical experience opportunities to apply patient care principles studied in HNR 125. Students spend time on medical, surgical, and specialty units for a total of 225 hours. Group 2 course.
Credit Hours = 5; Contact Hours = 15
Required prerequisites = HNR 101, HNR 102, HNR 108, BIO 228 w/grade of 2.5 or better, CIT 122A, BIO 240
Co-requisites = HNR 125
Recommended prerequisites = N/A

HNR-145 — Practical Nursing Roles & Issues
Reviews ethical/legal responsibilities of the LPN. Covers issues related to LPN organizations, continuing education, and licensure. Discusses occupational opportunities and provides information on employment search and job-seeking skills. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = HNR 125, HNR 126
Co-requisites = N/A
Recommended prerequisites = N/A

HNR-241 — Adv Maternal Child Nursing-Lec
This course will expose the student to the complex problems facing families coping with complications of the child-bearing, 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 period. The course also covers selected complex health problems during childhood along with nursing approaches to death and dying in childhood. A major theme throughout the course will be the use of the nursing process to prevent crisis and promote optimal functioning in at-risk families. Supportive community resources will be identified. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = HNR 125, HNR 126
Co-requisites = HNR 242
Recommended prerequisites = N/A

HNR-242 — Adv Maternal Child Nursing-Cli
This course provides for the clinical application of the principles presented in HNR 241. Students will be assigned to selected community or hospital settings where they will participate by observing and/or directly providing care to at-risk families coping with child-bearing and/or child-rearing issues. Risk factors could include developmental and psychosocial factors and physical alterations or complications. Students will also participate in a group seminar each week where various clinical experiences will be discussed. Group 2 course.
Credit Hours = 2; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = HNR 241
Recommended prerequisites = N/A
HNR-243 — Adv Nursing of Adults-Lecture
Presentation of nursing interventions required for clients with complex medical and/or surgical disorders. Emphasizes advanced assessment, analysis, decision-making, critical thinking, and nursing accountability. The focus is on clients with multiple complex requirements. Geriatric considerations are presented and integrated throughout. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = HNR 125, HNR 126
Co-requisites = HNR 244
Recommended prerequisites = N/A

HNR-244 — Adv Nursing of Adults - Clinic
Clinical experience providing opportunities to apply principles presented in HNR 243. Emphasis is upon refinement of organization, decision-making, and priority-setting skills in the care of multiple clients with complex medical/surgical disorders. Group 2 course.
Credit Hours = 3; Contact Hours = 9
Required prerequisites = N/A
Co-requisites = HNR 243
Recommended prerequisites = N/A

HNR-247 — Complex Patient Mgmt I-Lecture
Presentation of nursing interventions required for clients with complex medical and/or surgical disorders. This course emphasizes advanced nursing assessment, analysis, decision making, critical thinking, and nursing accountability. The focus is on clients with multiple complex requirements. Geriatric considerations are integrated and presented throughout the course. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = HNR 125, HNR 126
Co-requisites = HNR 248
Recommended prerequisites = N/A

HNR-248 — Complex Patient Mgt I-Clinical
Clinical experience providing opportunities to apply principles presented in HNR 247. Emphasis is upon refinement of organization, decision-making, and priority-setting skills in the care of multiple clients with complex medical/surgical disorders. Recommended competencies: Admission to the nursing program and successful completion of prerequisite nursing courses as determined by a minimum GPA of 2.0 in each HNR course. Group 2 course.
Credit Hours = 4; Contact Hours = 12
Required prerequisites = HNR 125, HNR 126
Co-requisites = HNR 247
Recommended prerequisites = N/A

HNR-251 — Mental Health Nursing - Lec
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 for individuals. Group 2 course. Prerequisite(s): HNR 125, HNR 126, PSY 101, BIO 228, BIO 240 Corequisite(s): HNR 252 or instructor permission.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = HNR 241, HNR 242, HNR 247, HNR 248
Co-requisites = HNR 252
Recommended prerequisites = N/A

HNR-252 — Mental Health Nursing-Clinical
Apply principles presented in HNR 251 in a variety of local clinical agencies and mental health treatment settings. Emphasis is placed upon understanding a broad range of mental health diagnoses and therapeutic nursing modalities for clients experiencing these issues. Group 2 course.
Credit Hours = 1; Contact Hours = 3
Required prerequisites = N/A
(Continued on next page.)
HNR-261 — Complex Patient Mgmt II-Lec

This course introduces principles of leadership and management as these relate to the delivery of nursing care to a group of clients. Also discussed are a variety of nursing management concepts including delegation, team building, managing change, and conflict resolution. It integrates the quality improvement process, evidence-based practice, legal and ethical practice issues, and recent trends in nursing practice. Students build on theory constructs from HNR 244 to deepen their understanding of nursing care for complex medical and surgical patients in addition to management strategies. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = HNR 247, HNR 248, HNR 251, HNR 252
Co-requisites = HNR 262
Recommended prerequisites = ENG 112, PHL 202

HNR-262 — Nursing Management Clinical

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 critical thinking related to managing client caseloads. This is the final clinical course in the ADN program and is designed to promote successful role transition from student to entry level professional practice upon completion. Group 2 course.

Credit Hours = 4; Contact Hours = 12
Required prerequisites = HNR 247, HNR 248, HNR 251, HNR 252
Co-requisites = HNR 261
Recommended prerequisites = ENG 112, PHL 202

HPD-110 — BLS for Health 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. Admission to nursing program or instructor permission. Group 2 course.

Credit Hours = .5; Contact Hours = .5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HPD-120 — BLS for Prof.-Recertification

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. Required: Admission to the Nursing Program and current American Heart Association Health Care Provider or American Red Cross Life Support for Professional Provider certification. Group 2 course.

Credit Hours = .2; Contact Hours = .2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-101 — Western Civilization to 1500AD

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
HST-102 — Western Civilization from 1500

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-111 — U S History to 1865

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-112 — U S History Since 1865

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 both individuals and groups in America. Group 1 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-211 — Native American History

A study of Native American culture and society from the pre-Columbian period to the post World War II era. The main instructional goal is to have students demonstrate an understanding of the many diverse societies and cultures found in the Americas. Students will understand how Native Americans have interacted with European cultures throughout their development. Students will also examine many of the 500 Indian tribes that lived across the Americas at the time of the arrival of the Europeans. Additionally, students will identify the achievements and limitations of Native American societies and develop an awareness of how contemporary problems were caused by past forces. As students achieve these goals, they will develop skills in communications and critical thinking. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-212 — African-American History

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 the 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. As students achieve this goal, they will develop skills in analysis, critical thinking, historical reasoning, and writing. Group 1 course.

Credit Hours = 3; Contact Hours = 3

(Continued on next page.)
HST-213 — American Women's History
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 the 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. As students achieve this goal, they will develop skill in analysis, critical thinking, historical reasoning, and writing. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-225 — American Civil War
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. As students achieve this goal they will develop skills in analysis, critical thinking, historical reasoning, and writing. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-228 — The Vietnam War
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. As students achieve this goal, they will develop skills in analysis, critical thinking, historical reasoning, and writing. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HST-230 — A History of Michigan
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." As students achieve this goal, they will develop skills in analysis, critical thinking, historical reasoning, and writing. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

HUM-101 — Introduction to Humanities
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111
HUM-101 — Introduction to Humanities

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-Classical, Romantic, Realistic, and Modern periods. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111

HUM-116 — World Cultures

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ENG 111

HVA-101 — Introduction to HVAC/R

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = Placement into MTH 23 and ENG 11/111

HVA-105 — Thermodynamics of HVAC/R

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = HVA 101
Co-requisites = N/A
Recommended prerequisites = N/A

HVA-121 — Fundamentals of Heating

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = HVA 105
Co-requisites = N/A
Recommended prerequisites = N/A

HVA-125 — A/C Applications

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. This course, or its equivalency, is required as a pre-requisite to HVA 131. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = HVA 121
Co-requisites = N/A
Recommended prerequisites = N/A
**HVA-131 — Gas Heating Diagnostics**

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = HVA 125
Co-requisites = N/A
Recommended prerequisites = N/A

**HVA-135 — Commercial HVAC/R**

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. This course, or its equivalency, is required as a pre-requisite to enroll in the Advanced HVAC/R Certificate Program. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = HVA 131
Co-requisites = N/A
Recommended prerequisites = N/A

**LWE-102 — Police Operations**

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. Student must be registered with LWE coordinator prior to class enrollment. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**LWE-195 — Police Practicum**

The 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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**LWE-210 — Cultural Awareness/Diversity**

This course will 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. Student must be registered with LWE coordinator prior to class enrollment. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**LWE-212 — Criminal Investigation**

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. Student must be registered with LWE coordinator prior to class enrollment. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
LWE-214 — Firearms
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. Student must be registered with LWE coordinator prior to class enrollment. Group 2 course.
Credit Hours = 4; Contact Hours = 8
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

LWE-215 — Defensive Driving
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. Student must be registered with LWE coordinator prior to class enrollment. Group 2 course.
Credit Hours = 3; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

LWE-216 — Traffic Enforcement & Invest
Traffic Enforcement and Investigation will include traffic control enforcement, the law and prosecution of operating under the influence of alcohol. Student must be registered with LWE coordinator prior to class enrollment. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

LWE-218 — Physical Training for Law Enf
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. Student must be registered with LWE coordinator prior to class enrollment. Group 2 course.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

LWE-225 — Defensive Tactics
Students learn subject control with new mandatory guidelines from MCOLES. Students will understand survival mindset, tactical communication, fear/anger management, and post force incident responsibilities. Student will demonstrate proficiency in 13 defensive tactics outcomes. Student must be registered with LWE coordinator prior to class enrollment and be in excellent physical condition. Group 2 course.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

LWE-226 — Michigan Criminal Law
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. Students must be registered with LWE coordinator prior to class enrollment. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A

(Continued on next page.)
LWE-227 — Criminal Procedures
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. Must be registered with LWE coordinator prior to class enrollment. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = LWE 226

LWE-228 — Police Radar/PBT Operation
This course will teach the legal and practical aspects of radar 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 radar and PBT use. Students will understand and demonstrate basic accident investigation and related accident evidence collection. Must register with the LWE coordinator prior to course enrollment. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-100 — Survival at Sea
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-104 — Rigging & Ship Maintenance Lab
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-106 — Watchstanding I
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. 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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MDK-111 — Marine Communications

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-112 — Rules of the Nautical Road

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. Prerequisite(s): MDK 100 or instructor permission.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-121 — Navigation I

An introduction to principles of piloting and marine navigation. Includes chart projection, the magnetic compass, chart usage, buoyage systems, aids to navigation, fixes and running fixes, and the use of standard tables. STCW '95. Group 2 course. Prerequisite: MATH 122 (FSU).

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = MDK 122
Recommended prerequisites = N/A

MDK-122 — Navigation I Lab

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. Prerequisite: MATH 122 (FSU).

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = MDK 121
Recommended prerequisites = N/A

MDK-149 — Damage Control & Safety

This course is designed to give the cadet a comprehensive knowledge of shipboard safety with particular emphasis on firefighting 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. Prerequisite: MDK 100 or instructor permission.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-200 — Ship Business & Labor Relation

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MDK-204 — Marine Supervisory Lab
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-206 — Watchstanding II
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.
Prerequisite(s): MDK 210 or instructor permission
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-210 — Sea Project Deck
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. Prerequisite(s): Must complete first academic year with a 2.0 or better in all required courses.
Credit Hours = 6; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-221 — Lakes Piloting
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-222 — River Piloting
An indepth 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-224 — Navigation III
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. Prerequisites: MDK 221, MATH 122 (FSU).
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MDK-231 — Electronic Navigation
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = MDK 232
Recommended prerequisites = N/A

MDK-232 — Electronic Navigation Lab
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. Note: Required course, must be successfully completed before student may receive Radar Observer Certificate. STCW '95. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = MDK 231
Recommended prerequisites = N/A

MDK-233 — Automatic Radar Plotting Aids
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = MDK 231, MDK 232
Recommended prerequisites = N/A

MDK-241 — Ship Construction
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. Prerequisite(s): MATH 122 (FSU), MNG 311; completion of first academic year with a 2.0 or better in all required courses.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-242 — Ship Stability
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. Prerequisites: MDK 210, MATH 122 (FSU).
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-244 — Dry Cargo Stowage
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
(Continued on next page.)
MDK-245 — Liquid Cargo Stowage
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-250 — Stability for the Engineer
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. Prerequisites: MATH 122 (FSU), MNG 100, MNG 104, MNG 106.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-311 — Sea Project Deck
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. Prerequisite(s): Completion of second academic year with a 2.0 or better in all required courses.
Credit Hours = 6; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-312 — Sea Project Deck
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.
Credit Hours = 6; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-330 — STCW Elementary First Aid
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-344 — Cargo Systems
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 shoreside operations. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A

(Continued on next page.)
MDK-346 — Bridge Team Management

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MDK-348 — Pilot/Mate License Prep.

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 license exam. Cadets must complete all MDK courses with a 2.0 or better. (This class is for GLMA cadets only.) Group 2 course. Prerequisite(s): MDK 312 or instructor permission

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MFG-111 — Math for Manufacturing

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = MTH 23 or placement into MTH 111.
Co-requisites = N/A
Recommended prerequisites = N/A

MFG-113 — Machining I

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.

Credit Hours = 3; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MFG-114 — Machining II

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.

Credit Hours = 3; Contact Hours = 6
Required prerequisites = MFG 113
Co-requisites = N/A
Recommended prerequisites = N/A

MFG-211 — CNC Programming

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
MFG-212 — Computer Aided Machining (CAM)
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 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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = MFG 211
Co-requisites = N/A
Recommended prerequisites = N/A

MFG-215 — Machining III, Lathe
This course offers machining lab experience for students who want to enhance the 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.
Credit Hours = 3; Contact Hours = 6
Required prerequisites = MFG 114
Co-requisites = N/A
Recommended prerequisites = N/A

MFG-216 — Machining IV, Mill and Grind
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.
Credit Hours = 3; Contact Hours = 6
Required prerequisites = MFG 114
Co-requisites = N/A
Recommended prerequisites = N/A

MGT-241 — Principles of Management
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = BUS 101

MGT-245 — Principles of Entrepreneurship
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MGT-251 — Human Resources Management

Human Resource managers are especially challenged today navigating employment waters that require expertise in employment legislation, recruitment, selection, training and development, compensation, 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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MKT-201 — Principles of Marketing

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 in this course. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = BUS 101

MKT-241 — Principles of Advertising

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 economies will be addressed along with ethical issues related to truth in advertising in today's society. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = MKT 201
Co-requisites = N/A
Recommended prerequisites = N/A

MLA-161 — American Sign Language I

Introduction to ASL is used by members of the Deaf community in the US and parts of Canada. This course 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 nonmanual components, including facial expressions and body language/postures and an intro to fingerspelling. 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 ASL. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MLA-162 — American Sign Language II

This is a continuation of 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, classifiers, body language/postures, and the signing space. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MLA-163 — American Sign Language III

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.

Credit Hours = 4; Contact Hours = 4

(Continued on next page.)
MLA-164 — American Sign Language IV
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MLF-101 — Elementary French I
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. For this course to be taught, a minimum enrollment of ten (10) students is required.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MLF-102 — Elementary French II
See course description for MLF 101. Group 2 course. For this course to be taught, a minimum enrollment of ten (10) students is required.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MLF 101 or one year of high school French

MLF-201 — Intermediate French I
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. For this course to be taught a minimum of ten (10) students is required.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MLF 102 or two years high school French

MLF-202 — Intermediate French II
See course description for MLF 201. Group 1 course. For this course to be taught a minimum enrollment of ten (10) students is required.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MLF 201

MLS-121 — Elementary Spanish I
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**

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MLS 122 or one year of high school Spanish

**MLS-221 — Intermediate Spanish I**

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.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MLS 122 or two years high school Spanish

**MLS-222 — Intermediate Spanish II**

See course description for MLS 221. Group 1 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MLS 221

**MNG-100 — Intro to Marine Engineering**

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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**MNG-104 — Engine Systems Graphics**

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = MNG 110
Recommended prerequisites = N/A
MNG-105 — Shipboard Information Systems
This course will introduce the student to the PC and its use as typically found aboard a Merchant Vessel. Basic computer setup, maintenance, and system troubleshooting are covered. Operating systems, communications programs, databases, word processors, spreadsheets, internet research, and CBT programs are discussed and demonstrated. The future of computers in the marine industry is explored. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-110 — Engineering Mechanics
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = MNG 104
Recommended prerequisites = N/A

MNG-175 — Refrigeration
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-210 — Diesel Engineering
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.
Credit Hours = 7; Contact Hours = 7
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-221 — Marine Boilers
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.
Credit Hours = 3.5; Contact Hours = 3.5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-222 — Marine Turbines
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.
Credit Hours = 2.5; Contact Hours = 2.5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MNG-223 — Steam Lab
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.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-234 — Electronic Fundamentals
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-235 — Electric Machines and Controls
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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = MNG 236
Recommended prerequisites = N/A

MNG-236 — Elect. Machines & Controls Lab
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = MNG 235
Recommended prerequisites = N/A

MNG-250 — Unloading Systems
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-315 — Engineering Sea Project I
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 with the various engineering...
duties and responsibilities. STCW ’95. Group 2 course. Prerequisite: Completion of the first academic year with a 2.0 or better in all required courses.
Credit Hours = 6; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-316 — Engineering Sea Project II
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. Prerequisite: Completion of the second academic year with a 2.0 or better in all required courses.
Credit Hours = 9; Contact Hours = 9
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-355 — Watchstanding
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-366 — Engine Room Business
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNG-396 — License Preparation Engine
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MNS-100 — Naval Science
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A (Continued on next page.)
MNS-200 — Naval Science II
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 naval missions and heritage as well as to assist the Merchant Marine officer make the transition from civilian to sailor. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-06 — Basic Numerical Skills
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = Based on placement score. See advisor.
Co-requisites = MTH 08
Recommended prerequisites = N/A

MTH-08 — Pre-Algebra
Small study groups work in write-in texts in guided discovery format, along with short lectures. Significant use and instruction of a 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 that are 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 unit of the course using the graph and table utilities of graphing calculator. Students are REQUIRED to have and learn to use a TI-84 graphing calculator for ALL math classes.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = Based on placement score. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-10 — Beginning Algebra Skills
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. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = MTH 08 with a 2.0 grade or better or appropriate placement score. See advisor.
Co-requisites = MTH 23
Recommended prerequisites = N/A

MTH-11 — Intermediate Algebra Skills
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. (Continued on next page.)
Problem solving and the function concept are integrated throughout. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = MTH 23 with a 2.0 grade or better or appropriate placement score. See advisor.
Co-requisites = MTH 111
Recommended prerequisites = N/A

MTH- 23 — Beginning Algebra

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. Students are REQUIRED to have and learn to use a TI-84 graphing calculator for ALL math classes.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 08 with a 2.0 grade or better or appropriate placement score. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-106 — Math for Elementary Teachers I

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. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 111 or higher (excluding MTH 131 & MTH 206) or appropriate placement score. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-111 — Intermediate Algebra

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. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 111 or higher (excluding MTH 131 and MTH 206) or appropriate placement score. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-116 — Intro to Computer Science

A high level computer language (currently Java) will be used to provide a thorough introduction to computer science, object-oriented programming, problem solving, and algorithm and data structure development. Illustrative applications and programming assignments will be given. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 111 or higher (excluding MTH 131 and MTH 206) or appropriate placement score. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A
**MTH-121 — College Algebra**

This course continues the development of algebraic skills begun in MTH 111. The topics covered include functions, mathematical models, solving equations algebraically and graphically, polynomial, logarithmic, exponential functions, inverse functions, and linear and non-linear systems of equations. Students are REQUIRED to have and learn to use a TI-84 graphing calculator for ALL math classes.

Group 1 course.

Credit Hours = 4; Contact Hours = 4

Required prerequisites = MTH 111 or higher (excluding MTH 131 and MTH 206) or appropriate placement score. See advisor.

Co-requisites = N/A

Recommended prerequisites = N/A

**MTH-122 — Trigonometry**

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. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 3; Contact Hours = 3

Required prerequisites = N/A

Co-requisites = N/A

Recommended prerequisites = MTH 121 or higher (excluding MTH 131 and MTH 206) or appropriate placement score. See advisor.

**MTH-131 — Intro to Prob & Stats**

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. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 3; Contact Hours = 3

Required prerequisites = N/A

Co-requisites = N/A

Recommended prerequisites = MTH 111 or higher (excluding MTH 206) or appropriate placement score. See advisor.

**MTH-140 — College Algebra & Trig**

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, and linear and non-linear systems of equations. Students receiving credit for MTH 121 and/or MTH 122 will not receive credit for MTH 140. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 5; Contact Hours = 5

Required prerequisites = Based on placement score. See advisor.

Co-requisites = N/A

Recommended prerequisites = High School Trigonometry

**MTH-141 — Calculus I**

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. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 5; Contact Hours = 5

Required prerequisites = MTH 121 & 122 or MTH 140 or higher (excluding MTH 206) or appropriate placement score. See advisor.

Co-requisites = N/A

Recommended prerequisites = N/A
MTH-142 — Calculus II

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'Hospital's Rule, improper integrals, parametric equations, polar coordinates, and infinite sequences and series are also investigated. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 5; Contact Hours = 5
Required prerequisites = MTH 141
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-206 — Math for Elementary Teachers II

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 principle, 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. The course also includes an introduction to the use of computer and/or graphing calculator software as learning tools for understanding concepts of informal geometry. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 2 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 106, MTH 111 or higher (excluding MTH 131), or appropriate placement score. See advisor.
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-241 — Calculus III

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. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 142
Co-requisites = N/A
Recommended prerequisites = N/A

MTH-251 — Differential Equations

Introduces the concepts of differential equations and of linear algebra. Topics include: solving linear and systems of linear differential equations, physical applications, slope fields, phase planes, Euler's method, and Laplace transformations. Solutions are found using analytical, numerical, and/or graphical techniques relating to quantitative modeling. Linear algebraic topics include: vector spaces, subspaces, spanning sets, linear dependence and independence, basis and dimensions, eigenvectors, and linear transformations. Students are REQUIRED to have and learn to use a TI-84 graphic calculator for ALL math classes. Group 1 course.

Credit Hours = 4; Contact Hours = 4
Required prerequisites = MTH 142 or MTH 241
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-090 — Applied Music—Remedial 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. 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
MUS-101 — Theory of Music

Theory of Music is a four-semester/two-year sequence of coursework 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. Prerequisite(s): An understanding of music fundamentals.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = MUS 103
Recommended prerequisites = N/A

MUS-102 — Theory of Music

This course in Theory of Music is the second semester of a four-semester/two-year sequence of coursework 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = MUS 101
Co-requisites = MUS 104
Recommended prerequisites = N/A

MUS-103 — Sight Singing & Ear Training

This is the first of a four-semester/two-year sequence of coursework designed for students who are pursuing music as an academic major or minor. The content of this course is 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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = MUS 101, MUS 106
Recommended prerequisites = N/A

MUS-104 — Sight Singing & Ear Training

This is the second of a four-semester/two-year sequence of coursework designed for students who are pursuing music as an academic major or minor. The content of 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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = MUS 102
Recommended prerequisites = MUS 101, MUS 103

MUS-106 — Class Piano I

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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-107 — Class Piano II

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. Prerequisite(s): MUS 106 or permission of instructor.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 106
MUS-110 — Music Appreciation Stand Lit

This course is a survey of the history of Western Music from antiquity 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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-111 — Music Appreciation Jazz

This course is an historical survey of Jazz from its earliest beginnings and influences through contemporary Jazz styles. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-112 — Class Guitar I

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-114 — NMC Grand Traverse Chorale

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. Previous chorale experience is required. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = Previous chorale experience

MUS-115 — NMC Grand Traverse Chorale

Open to all students with past choral experience or permission of the instructor. 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.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 114

MUS-116 — NMC Chamber Singers

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. Audition with instructor is required. Group 2 course.

Credit Hours = 1; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MUS-117 — NMC Chamber Singers
A continuation of skills begun in MUS 116. Previous or new audition with instructor is required. Group 2 course.
Credit Hours = 1; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 116

MUS-118 — NMC Concert Band
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. Students must have a high school level competency on a wind or percussion instrument and pass an initial competency/chair placement performance audition on a wind or percussion instrument. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-119 — NMC Concert Band
This course will provide a survey of significant concert and symphonic band repertoire. Students will continue to learn performance techniques on their instrument as are 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. Previous or new audition with instructor is required. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 118

MUS-120 — NMC Jazz Band
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. Audition with instructor is required. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-121 — NMC Jazz Band
A course for the music 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. Previous or new audition with instructor is required. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 120

MUS-122 — Ensembles in Applied Music I
This course prepares students for public performance and develops abilities in ensemble techniques. Students study individually and in small ensembles (duets, trios, quartets, quintets, and octets) under faculty direction. The course is designed for a year's participation and permission of the instructor is required. Group 2 course.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A

(Continued on next page.)
MUS-127 — Traverse Symphony Orchestra

The study and performance of orchestral literature, both standard 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-128 — Traverse Symphony Orchestra

The study and performance of orchestral literature, both standard 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.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 127

MUS-130A — Ensembles-Sound/Recording Tech

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, and which is best to use for a given application and how to create a sound file from a live recording session. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-130B — Ensembles-Signal Processing

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. It is highly recommended that students also enroll in MUS 102 (Music Theory), MUS 103 (Sight Singing and Ear Training), MUS 107 (Group Piano Instruction) and one credit of applied music and one credit of an NMC Music Ensemble. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-131A — Ensembles - Percussion I

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MUS-131B — Ensembles - Percussion I
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-132A — Ensembles - Guitar I
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-132B — Ensembles - Guitar I
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-133A — Ensembles - Jazz Wind I
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-133B — Ensembles - Jazz Wind I
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
(Continued on next page.)
MUS-134A — Ensembles - Small Jazz I

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-134B — Ensembles - Small Jazz I

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-135A — Ensembles - Vocal Opera I

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-136A — Ensembles - Vocal Jazz I

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-136B — Ensembles - Vocal Jazz I

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B
designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-137A — Ensembles - Strings I
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-137B — Ensembles - Strings I
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-138A — Ensembles - Chamber Quintet
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-139A — Ensembles - Brass
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MUS-139B — Ensembles - Brass
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Recommended prerequisites = N/A

MUS-140 — Applied Music - Violin
Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string, and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor 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 Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Note: 100 to 200 level courses may be taken three times.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Recommended prerequisites = N/A

MUS-141 — Applied Music - Viola
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Recommended prerequisites = N/A

MUS-142 — Applied Music - Cello
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Recommended prerequisites = N/A

MUS-143 — Applied Music - Double Bass
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A

(Continued on next page.)
MUS-144 — Applied Music - Flute
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-145 — Applied Music - Oboe
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-147 — Applied Music - Clarinet
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-149 — Applied Music - Bassoon
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-151 — Applied Music - Saxophone
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B
designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-152 — Applied Music - Trumpet
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-153 — Applied Music - French Horn
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-154 — Applied Music - Trombone
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-156 — Applied Music - Baritone
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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MUS-157 — Applied Music - Tuba

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-158 — Applied Music - Percussion

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-159 — Applied Music - Piano

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-160 — Applied Music - Voice

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-162 — Applied Music - Guitar

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
(Continued on next page.)
MUS-163 — Applied Music - Jazz Guitar

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-164 — Applied Music-Classical Guitar

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-165 — Applied Music - Electric Bass

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-166 — Applied Music - Organ

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 should keep the 12:25 p.m. hour on Wednesdays free 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. Course number suffix A designates fall semester and suffix B designates spring semester. Permission of instructor is required. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-206 — Class Piano III

This is the third 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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A

(Continued on next page.)
MUS-207 — Class Piano IV

This is the fourth of a four-semester/two-year sequence of the study of piano. Objectives are the cultivation of technical-musical awareness and keyboard playing ability. A continuation of MUS 206. Group 2 course.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 206

MUS-214 — NMC Grand Traverse Chorale

A continuation of study from MUS 115, the Grand Traverse Chorale is a mixed (SATB) choral ensemble that presents concerts 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. Emphasis is placed on tonal and ensemble artistry. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 115

MUS-215 — NMC Grand Traverse Chorale

A continuation of study from MUS 214, the Grand Traverse Chorale is a mixed (SATB) choral ensemble that presents concerts 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. Compositions with foreign language texts are included in the concert repertoire. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 214

MUS-216 — NMC Chamber Singers

A continuation of study from MUS 117, 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 of 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. Compositions with foreign language texts are included in the concert repertoire. Group 2 course.

Credit Hours = 1; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 117 or audition.

MUS-217 — NMC Chamber Singers

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 the 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. Compositions with foreign language texts are included in the concert repertoire. Group 2 course.

Credit Hours = 1; Contact Hours = 3
Required prerequisites = N/A

(Continued on next page.)
MUS-218 — NMC Concert Band
Open to students who have completed a year of Concert Band. See MUS 118 for course description. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 119

MUS-219 — NMC Concert Band
Open to students who have completed a year of Concert Band. See MUS 119 for course description. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 218

MUS-220 — NMC Jazz Band
A course for the musical 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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 120 or MUS 121

MUS-221 — NMC Jazz Band
A course for the musical 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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 220

MUS-227 — Traverse Symphony Orchestra
Open to students by audition who have completed one year of orchestra or collegiate equivalent as a transfer student. The study and performance of orchestral literature, both standard 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 concerts per year. Audition, rehearsal, and performance information is available through the music department. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = MUS 128

MUS-230A — Ensembles-Midi Processing
This course is designed to develop competencies in the theory and use of "music sequencing" and "virtual Midi instrument" software through their application to music composition created by the student in notation software. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
(Continued on next page.)
Recommended prerequisites = N/A

MUS-230B — Ensembles-Recording Practicum
This course applies all previous audio course work to a client-based need for a music track for application to blogs, websites, film/video, or audio based advertising. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-231A — Ensembles - Percussion II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course.
Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-231B — Ensembles - Percussion II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course.
Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-232A — Ensembles - Guitar II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course.
Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-232B — Ensembles - Guitar II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course.
Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MUS-233A — Ensembles - Jazz Wind II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-233B — Ensembles - Jazz Wind II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-234A — Ensembles - Small Jazz II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-235A — Ensembles - Vocal Opera II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-236A — Ensembles - Vocal Jazz II
A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
MUS-236B — Ensembles - Vocal Jazz II

A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-237A — Ensembles - Strings II

A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-237B — Ensembles - Strings II

A continuation of Ensembles, with emphasis on performance and repertoire. These ensembles are sometimes called upon to perform for college and community events. Students should keep the 12:25 p.m. hour on Wednesdays free from scheduling conflict to be able to perform in Convocation, a performance venue at Milliken Auditorium. Students are expected to perform at least two Convocations each semester. "A" designates fall semester and "B" designates spring semester. One credit for each semester. Group 2 course. Prerequisite(s): Permission of the music area coordinator.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-240 — Applied Music - Violin

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/ compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-242 — Applied Music - Cello

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/ compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MUS-242B — Applied Music - Cello

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-242C — Applied Music - Cello

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-243 — Applied Music - Double Bass

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-244 — Applied Music - Flute

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-245 — Applied Music - Oboe

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
(Continued on next page.)
MUS-247 — Applied Music - Clarinet

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-249 — Applied Music - Bassoon

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-251 — Applied Music - Saxophone

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-252 — Applied Music - Trumpet

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-253 — Applied Music - French Horn

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 -
MUS-254 — Applied Music - Trombone

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-256 — Applied Music - Baritone

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-257 — Applied Music - Tuba

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-258 — Applied Music - Percussion

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
MUS-259 — Applied Music - Piano
Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-260 — Applied Music - Voice
Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-262 — Applied Music - Guitar
Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-263 — Applied Music - Jazz Guitar
Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-264 — Applied Music-Classical Guitar
Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.
Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
(Continued on next page.)
MUS-265 — Applied Music - Electric Bass

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

MUS-266 — Applied Music - Organ

Private lessons in guitar, classical guitar, organ, piano, voice, percussion, traditional string and wind instruments are offered. An applied music instructor is assigned after the audition process is complete and entry level competencies have been proven. A pre-arranged lesson time with the assigned instructor is arranged and studies/compositions, as appropriate, are prepared for continuing musical development. A jury examination will be given at the end of the fall semester of 200 level instruction. Students are to keep 12:30 - 1:30 on Wednesdays clear to participate as audience and soloists in Convocation. Group 2 course. Prerequisite(s): A minimum of two semesters of 100 level applied instruction.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-112 — Winter Travel and Camping

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), camping, menu planning, clothing and gear selection, navigation, and shelter building. Prerequisite(s): Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is a high-participation course 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 meeting. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-125 — Backpacking I

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. Prerequisite(s): Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is a high-participation course 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 meeting. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-126 — Backpacking II

This course is for backpackers with prior experience. Its purpose is to broaden the student's knowledge of back packing techniques with special attention given to lightweight equipment, menu planning, itinerary planning, map and compass navigation, site selection, and other minimal impact considerations. Prerequisite(s): OUT 125 or three-day backpacking experience. Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is a high-participation course 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 meeting. Group 2 course. (Continued on next page.)
OUT-130 — Caving I

This course provides 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.
Prerequisite(s): Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is
a high-participation courses in which most material is learned through experience on off-campus weekend field trips. Students with
disabilities who need accomodations in order to complete these courses should contact the instructor prior to the first meeting. Group 2
course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-131 — Caving II

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. Prerequisite(s): OUT 130 or instructor permission.
Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is a high-participation
courses in which most material is learned through experience on off-campus weekend field trips. Students with disabilities who need
accomodations in order to complete these courses should contact the instructor prior to the first meeting. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-132 — Rock Climbing I

This course is a beginning rock climbing course to introduce students to climbing techniques, belaying, and safety practices related to
class five climbing. Prerequisite(s): Students should be at a reasonably good physical fitness level and without current exercise-limiting
injuries. This is a high-participation courses in which most material is learned through experience on off-campus weekend field trips. Students with disabilities who need accomodations in order to complete these courses should contact the instructor prior to the first meeting. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-133 — Rock Climbing II

Students will learn anchor selection, active and passive gear placement, and advanced belaying techniques, with an introduction to
lead climbing. Prerequisite(s): OUT 132 or instructor permission. Students should be at a reasonably good physical fitness level and
without current exercise-limiting injuries. This is a high-participation courses in which most material is learned through experience on
off-campus weekend field trips. Students with disabilities who need accomodations in order to complete these courses should contact the instructor prior to the first meeting. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-140 — Snowshoeing

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.
Prerequisite(s): Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is
a high-participation courses in which most material is learned through experience on off-campus weekend field trips. Students with disabilities who need accomodations in order to complete these courses should contact the instructor prior to the first meeting. Group 2 course. (Continued on next page.)
OUT-160 — Canoeing I

Instruction in various techniques of canoeing are introduced in flat water (lake) and moving water (river). Two one-day trips are planned. Prerequisite(s): Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is a 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 meeting. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

OUT-161 — Canoeing II

This course is for canoers with prior experience in river canoeing. Wilderness travel by canoe with an overnight camping trip is planned. Prerequisite(s): OUT 160 or instructor permission. Students should be at a reasonably good physical fitness level and without current exercise-limiting injuries. This is a 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 meeting. Group 2 course.

Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-101 — Intro to Legal Assisting

This is a survey course that explores various facets of legal assisting and identifies areas of specialization within the law. Emphasis will be placed on the ethical obligations of legal assistants and attorneys and on the Michigan Rules of Professional Conduct. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-102 — Legal Research & Writing I

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = PAR 101, ENG 111
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-103 — Legal Research & Writing II

This advanced course enhances the skills that students learned in Legal Research & 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 an appellate brief. This is a spring semester offering. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = PAR 102
Co-requisites = N/A
Recommended prerequisites = N/A

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
PAR-106 — Litigation
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = PAR 101
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-112 — Torts
This course provides a detailed study of the law of torts. Topics include negligence, strict liability, misrepresentation, defamation and trespass. This is a spring semester offering. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = PAR 101
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-210 — Probate
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = PAR 101
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-211 — Real Estate Law
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = PAR 101
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-220 — Family Law
This course covers the basics of family law. Topics will include antenuptial agreements, dissolution of marriage, child custody and child support. This is a spring semester offering. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = PAR 101
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-221 — Law Office Management
This course focuses on the management of a law office as a business. Students will examine forms of business structure, and office equipment and library needs. This course will also cover computer software commonly used in law offices. Various employment issues will also be discussed. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = PAR 101
Co-requisites = N/A
Recommended prerequisites = N/A

PAR-222 — Legal Drafting
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. (Continued on next page.)
PAR-230 — Legal Assistant Internship
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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = PAR 101, PAR 102, PAR 106, and instructor signature
Co-requisites = N/A
Recommended prerequisites = N/A

PE-101 — Swing, Latin & Slow Dancing I
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, and many swing moves that can be incorporated into any dance situation. Please wear slippery soled shoes. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-101A — Swing, Latin & Slow Dancing II
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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-102 — Hip-Hop Dance
Learn dance combinations used in the Hip-Hop dance style. Developes 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. Where clean, dry gym shoes. Group 2 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-102B — Hip-Hop Dance II
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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-105 — Volleyball I
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.
Credit Hours = 1; Contact Hours = 2
(Continued on next page.)
Required prerequisites = N/A  
Co-requisites = N/A  
Recommended prerequisites = N/A

**PE-106 — Volleyball II**

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. Prerequisite(s): PE 105

Credit Hours = 1; Contact Hours = 2  
Required prerequisites = N/A  
Co-requisites = N/A  
Recommended prerequisites = N/A

**PE-107 — Basketball I**

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.

Credit Hours = 1; Contact Hours = 2  
Required prerequisites = N/A  
Co-requisites = N/A  
Recommended prerequisites = N/A

**PE-108 — Basketball II**

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. Prerequisite(s): PE 107

Credit Hours = 1; Contact Hours = 2  
Required prerequisites = N/A  
Co-requisites = N/A  
Recommended prerequisites = N/A

**PE-135 — Weightlifting I**

Designed for students interested in building and maintaining muscular strength, size, tone, and trimming. Instruction in use of free weights as related to strength training and a total conditioning program. An individualized instructional approach will be used. Group 2 course.

Credit Hours = 1; Contact Hours = 2  
Required prerequisites = N/A  
Co-requisites = N/A  
Recommended prerequisites = N/A

**PE-136A — Weightlifting II**

Designed for students who wish to continue to build body size and muscular strength. Instruction will be given in the use of free weights as related to an advanced strength training and conditioning program. Group 2 course. Prerequisite(s): PE 135

Credit Hours = 1; Contact Hours = 2  
Required prerequisites = N/A  
Co-requisites = N/A  
Recommended prerequisites = N/A

**PE-138 — Weightlifting With Machines**

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.

Credit Hours = 1; Contact Hours = 2  
Required prerequisites = N/A  
Co-requisites = N/A  
Recommended prerequisites = N/A
PE-139 — Beginning Aikido I

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.
Credit Hours = .5; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-141 — Aikido

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 Yoskokai-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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-142 — Intermediate Aikido

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. Prerequisite(s): PE 141
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-143 — Continuing Aikido

Training at this level emulates regular Aikido practice in a private dojo (training facility). Focus is on mastery of advanced techniques, weapons, and Aikido philosophy. Group 2 course. Prerequisite(s): PE 142
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-144 — Tae Kwon Do (Karate) I

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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-145 — Tae Kwon Do (Karate) II

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. Prerequisite: PE 144 or instructor permission.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
PE-146 — Tae Kwon Do (Karate) III
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. Prerequisite(s): PE 145 or instructor permission.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-147 — Tae Kwon Do (Karate) IV
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. Prerequisite(s): PE 146 or instructor permission.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-148 — Kuntaw I
Introduction to the history and philosophy of the Filipino martial art form Maharlika 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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-149 — Kuntaw II
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. Prerequisite(s): PE 148 or instructor permission.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-150 — Kuntaw III
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. Prerequisite(s): PE 149
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-151 — Kuntaw IV
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. Prerequisite(s): PE 150
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
PE-164 — Judo
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.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PE-169 — Continuing Judo
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. Prerequisite(s): PE 164
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PHL-101 — Introduction to Philosophy
One of the primary goals of this course is to introduce the reader of Western philosophy to a number of its most important thinkers, and through this, to philosophical thinking in general. In the course of our study of these philosophers, we can hope to gain a better understanding of the influence their thinking has had on our culture and gain an awareness of what they have to say about the problems we encounter in our daily lives. We will read selections from the writing of many great thinkers, paying special attention to developing skills in critical thinking and the articulation of our thoughts in discussion and writing. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PHL-105 — Critical Thinking
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 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 arguments 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PHL-121 — Western Religions
A study of 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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PHL-122 — Eastern Religions
A study of 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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A
PHL-201 — Ethics

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 judgment 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. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PHL-202 — Contemporary Ethical Dilemmas

This course examines traditional ethical debates on a variety of social and moral issues. The major concepts and theories in moral philosophy are also presented in this course in order to address such issues as euthanasia, abortion, sexuality, affirmative action, the death penalty, ecology, or animal rights. Students are introduced to particular arguments and positions on these topics written by contemporary scholars. The texts, discussions, and assignments are designed to introduce the student to the major ethical theories of Western Philosophy, particularly those of Aristotle, Kant, Mill, as well as some modern concerns such as feminist ethics, to encourage the student to engage in the practice of ethical reasoning and discussion, and to consider critically any ethical standpoint, including their own position and views. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PHY-105 — Physics of the World Around Us

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 and optics. Computers are used for data collection and analysis. This course is offered in multiple formats such as online or traditional. Consult an advisor before enrolling. Students scoring below ENG 111 levels on the COMPASS placement test should plan on additional study time. Group 1 lab course.

Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = PHY 105L
Recommended prerequisites = N/A

PHY-105L — Physics/World Around Us Lab

See PHY 105 for course description.

Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = PHY 105L
Recommended prerequisites = N/A

PHY-121 — General Physics I

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 trigonometry. This course deals with mechanics, sounds, thermodynamics and fluids. The lab portion is designed to illustrate and reinforce the basic concepts of physics while familiarizing the student with laboratory hardware and the experimental nature of physics. Group 1 lab course.

Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = PHY 121L
Recommended prerequisites = N/A
PHY-121L — General Physics I Lab
See PHY 121 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = PHY 121L
Recommended prerequisites = N/A

PHY-122 — General Physics II
As a continuation of PHY 121, studies in electricity, magnetism, optics, and modern physics are included and reinforced in lecture as well as the laboratory setting. Group 1 lab course.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = PHY 121
Co-requisites = PHY 122L
Recommended prerequisites = N/A

PHY-122L — General Physics II Lab
See PHY 122 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = PHY 121
Co-requisites = PHY 122L
Recommended prerequisites = N/A

PHY-221 — Problems & Princ.of Physics I
This course is the first semester of a two-semester course sequence primarily intended for those students preparing for engineering, science, or math careers. Topics include linear motion, Newton's Laws, conservation of momentum, conservation of energy, rotational motion, oscillations, fluids, waves, and thermodynamics. The laboratory covers the preceding topics in parallel with the lecture whenever possible. Group 1 lab course.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = PHY 221L, PHY 221R
Recommended prerequisites = ENG 111

PHY-221L — Prob./Prin. of Physics I Lab
See PHY 221 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = N/A
Co-requisites = PHY 221L, PHY 221R
Recommended prerequisites = ENG 111

PHY-221R — Prob.& Princ. of Physics I Rec
This course is a recitation to accompany lecture PHY 221. Group 1 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = PHY 221L, PHY 221R
Recommended prerequisites = ENG 111

PHY-222 — Prob. & Princ. of Physics II
This course is a continuation of PHY 221. Topics include electricity and magnetism, electric circuits, and optics. The laboratory covers the preceding topics in parallel with the lecture whenever possible. Group 1 lab course.
Credit Hours = 4; Contact Hours = 5
Required prerequisites = PHY 221
Co-requisites = PHY 222L, PHY 222R
Recommended prerequisites = N/A

For course availability, refer to www.nmc.edu/schedule or the Schedule of Classes.
PHY-222L — Prob./Prin. of Physics II Lab
See PHY 221/222 for course description.
Credit Hours = 0; Contact Hours = 0
Required prerequisites = PHY 221
Co-requisites = PHY 222L, PHY 222R
Recommended prerequisites = N/A

PHY-222R — Prob. & Princ. of Physics II R
This course is a recitation class to accompany PHY 222. Group 1 course.
Credit Hours = 1; Contact Hours = 2
Required prerequisites = PHY 221
Co-requisites = PHY 222L, PHY 222R
Recommended prerequisites = N/A

PHY-291A — S/T Light & Laser Fundamentals
This course introduces the elements of a laser, operation of a helium-neon gas laser, laser physics, optical-cavities, properties of laser light, and a survey of laser systems. Safety procedures concerning lasers and related equipment are presented in this course. Group 2 course.
Credit Hours = 4; Contact Hours = 6
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PLS-101 — Intro to American Politics
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PLS-132 — Comparative Politics
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PLS-211 — International Relations
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
(Continued on next page.)
PLS-222 — Intro to Political Theory

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; analyses 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, Berlin, and Rawls. Group 1 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PLU-101 — Introduction to Plumbing

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = Placement into MTH 23 and ENG 11/111

PLU-105 — Plumbing Components

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = PLU 101
Co-requisites = N/A
Recommended prerequisites = N/A

PLU-121 — Commercial Plumbing

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = PLU 105
Co-requisites = N/A
Recommended prerequisites = N/A

PSY-100 — Career Exploration & Planning

Planning a career can be challenging because of the unknown. 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 2 course.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

PSY-101 — Introduction to Psychology

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; d) understanding of its methodology and limitations. Group 1 course. (Continued on next page.)
PSY-211 — Developmental Psychology
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = PSY 101
Co-requisites = N/A
Recommended prerequisites = N/A

PSY-212 — Psychology/Exceptional Child
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = CD 202 or PSY 101
Co-requisites = N/A
Recommended prerequisites = N/A

PSY-221 — Psychology of Personality
This course provides a presentation of the concepts, perspectives and terminology of major theorists in the field of personality psychology, as students explore the many psychological, physiological, social and cultural factors that affect personality development. Students are encouraged to evaluate personality theories in relation to current research and application. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = PSY 101
Co-requisites = N/A
Recommended prerequisites = N/A

PSY-223 — Intro to Social Psychology
This course is an introduction to social psychology theory and research. It covers the individual in the social context including how we perceive, judge, and are influenced by others. Topics such as conformity, attraction, liking, prejudice, attitudes, aggression, helping behavior, and interpersonal power are covered from a social psychological perspective. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = PSY 101 or SOC 101
Co-requisites = N/A
Recommended prerequisites = N/A

PSY-225 — Human Sexuality
Human Sexuality offers an introduction to all facets of the field, and involves discussions of theory, research, and practical information. The purpose of the course will be to develop a critical awareness of the dominant issues in the field and to refine the student's sense of sexual responsibility and integrity. This will be accomplished by exploring the biological, social, cultural, psychological, and personal elements of sexuality. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = PSY 101
Co-requisites = N/A
Recommended prerequisites = N/A
PSY-250 — Abnormal Psychology
This course is designed to give students a working vocabulary of the basic concepts of psychopathology, to help them critically evaluate theories and therapies in psychopathology, to develop an awareness of their own attitudes toward abnormal behavior, and acquire knowledge of the variety of techniques for overcoming interpersonal problems and living emotionally healthy lives. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = PSY 101
Co-requisites = N/A
Recommended prerequisites = N/A

SOC-101 — Introduction to Sociology
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

SOC-113 — Intro to Cultural Anthropology
The study of the role of society and culture in human adaptation to a variety of environments. A variety of cultures is studied, primarily non-Western, utilizing cross-cultural comparisons. Among other topics considered are field methods, theories of cultural evolution, the family, kinship, economics, religion, political organization and language. Group 1 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

SOC-201 — Modern Social Problems
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

SOC-211 — Marriage and the Family
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = SOC 101

SOC-220 — Gender and Society
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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = PSY 101 or SOC 101
SOC-231 — Deviance and Criminal Behavior

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.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = SOC 101

SOC-291C — S/T Nautical Archaeology I

This is the entry-level course to the Nautical Archaeology Society Training Program and is aimed at introducing nautical archaeology to divers and non-divers, and promoting their interest in the subject. It provides a broad-based view of the subject but concentrates on practical archaeological survey. The minimum diving qualification level for those taking part in the pool exercises is CMAS 1-Star or equivalent, e.g. BSAC Ocean Diver, SAA Open Water Diver, or PADI Open Water. Students must provide their own scuba equipment if they choose to dive. A NAS certificate is awarded upon the successful completion of the class. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

SOC-291D — S/T Nautical Archaeology II

The NAS Part II offers students the opportunity to put into practice some of the things they studied in NAS Part I and is a field archaeology course. Research projects of personal interest are encouraged but most students will carry out the work required for this qualification as part of a group or with other members of their local diving club. In addition to the survey work, the NAS Part II requires that the student demonstrate a commitment to understanding the discipline by attending archaeological conferences. The instructor will assist in project design and execution and students will be allowed to participate in larger projects within the Grand Traverse Bay Underwater Preserve. Foreshore projects will be developed for non divers. Group 2 course.

Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

SWK-121 — Introduction to Social Work

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.

Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = SWK 170
Recommended prerequisites = N/A

SWK-170 — Service Internship Orientation

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 class is done in class and seminar format, meeting one hour a week for five sessions, plus one eight hour seminar. Group 2 course.

Credit Hours = 1; Contact Hours = 1
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

SWK-211 — Social Interviewing Skills

Introduction to types, purposes and stages of interviewing. Basis 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.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = SWK 121, PSY 101, SOC 101
Co-requisites = N/A
Recommended prerequisites = N/A

**SWK-221 — Introduction to Social Welfare**

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 the clients in need of services. Group 2 course.
Credit Hours = 3; Contact Hours = 3
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**THR-151 — Basic Acting**

An introduction to acting technique and craftsmanship, this course emphasizes theory and practice in modern realistic theater. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**THR-152 — Acting II**

This course allows students to learn a variety of performance styles. Period style acting is a primary focus, beginning with Greek tragedy and comedy and working up through Shakespearian acting and ending with Restoration comedy. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**THR-211 — Play Production**

This course emphasizes theory and practice of dramatic production demonstrated through the public presentation of a play. It explores basic stagecraft. Students may repeat Play Production three additional times under the course numbers THR 212, 213, 214. To assure proper credit is received, please verify the 200-level theater course for which you are registering. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**THR-212 — Play Production**

See description for THR 211. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

**THR-213 — Play Production**

See description for THR 211. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A  (Continued on next page.)
THR-214 — Play Production

See description for THR 211.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

VCA-100 — Materials and Techniques

This course introduces students to commercial drawing techniques, with an emphasis on perspective, pen and ink, and color techniques in marker when illustrating a variety of different kinds of products and illustration formats. Creative media experimentation is encouraged. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = ART 121

VCA-123 — Photoshop I

Students' will learn the basics of Adobe Photoshop, a bitmap image manipulation tool used to create images for both print and the web. You will learn how to incorporate color, create type, use layers, create special effects, use filters, and utilize the variety of selection techniques for proper image editing. Students must have version 7.0 or newer of Adobe Photoshop software. Group 2 course.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

VCA-124 — Photoshop II

In this course you 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.
Credit Hours = 2; Contact Hours = 2
Required prerequisites = VCA 123
Co-requisites = N/A
Recommended prerequisites = N/A

VCA-125 — Typography I

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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 150
Co-requisites = N/A
Recommended prerequisites = VCA 123

VCA-126 — Typography II

This class serves as continuation to Typography I – 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 typography, current typographic trends and comparative analysis of typefaces that relate to the field of Visual Communications as well as printed matter. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 125
Co-requisites = N/A

(Continued on next page.)
VCA-146 — Interactive Animation
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 and the introduction of Macromedia FLASH MX software will emphasize creative and narrative web language. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 123, VCA 150
Co-requisites = N/A
Recommended prerequisites = N/A

VCA-147 — Web Design I
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.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 123, VCA 150
Co-requisites = N/A
Recommended prerequisites = N/A

VCA-150 — Digital Graphics Design I
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. 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.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

VCA-200 — Visual Communications II
Through this course, students will gain insight and an introduction to the theory of graphic design by practice in researching, brainstorming, creative problem solving, comping, and production of two and three dimensional graphic designs, logo marks, and three dimensional packaging-all the while embracing traditional and digital techniques and receiving constructive criticism of work and practice. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 131, VCA 100, VCA 123, VCA 125, VCA 150
Co-requisites = VCA 220
Recommended prerequisites = N/A

VCA-220 — Visual Communications III
To involve the student in a product or service campaign. Emphasis is on theory of advertising and the need for continuity of identification throughout the campaign and the realization of the opportunity of creativity through different medias. A written paper will document the student's thinking processes involved with each aspect of the campaign. Group 2 course.
Credit Hours = 3; Contact Hours = 4
Required prerequisites = ART 131, VCA 100, VCA 123, VCA 125, VCA 150
Co-requisites = VCA 200
Recommended prerequisites = N/A

VCA-225 — Visual Communications Studio
By the end of this course, students will have participated in two hands-on "real world" design projects in which they will have acted 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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 200, VCA 220
Co-requisites = VCA 230, VCA 235
Recommended prerequisites = N/A

VCA-230 — Visual Communications V

Students explore current visual communication job opportunities and set short-term and long-range occupational goals for themselves in order to develop and prepare related works for their professional portfolios. The emphasis in this course is that each student compiles a portfolio of works based on his/her occupational goals. Students develop those works individually as well as in teams. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 200, VCA 220
Co-requisites = VCA 225, VCA 230
Recommended prerequisites = N/A

VCA-235 — Visual Comm Portfolio

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 package based on his/her occupational and educational goals. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 200, VCA 220
Co-requisites = VCA 225, VCA 230
Recommended prerequisites = N/A

VCA-246 — Interactive Animation II

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 website building and basic game development. Students should be self-motivated since this advanced section involves independent projects. Group 2 course.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = VCA 146

VCA-250 — Time Based Media

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.

Credit Hours = 3; Contact Hours = 4
Required prerequisites = VCA 150
Co-requisites = N/A
Recommended prerequisites = N/A

VCA-252 — Time Based Media II

This is a multisensory, theory driven continuation and exploration of time-based visual communication environments in individual and team projects. The role of typography, image, sound, space, luminosity, nonlinear structure and narrative are assessed and used to create sequences of moving image. Students are exposed to tools, theories, the history of the medium, aesthetics and techniques used in time-based at a more advanced level using all the programs of Final Cut Studio 2. Students should be self-motivated since this advanced section involves independent projects. Group 2 course.

Credit Hours = 3; Contact Hours = 4
(Continued on next page.)
VCA-290 — Visual Comm Internship

This course is required for the Creative Management Art Direction program. The purpose of the internship is to provide on-the-job experience for the student who wishes to pursue a career in visual communications. The internship will be customized to meet the learning needs of the student and the job requirements of the sponsoring firms. Students spend 12 hours per week in this paid or non-paid, supervised training experience. In addition to the required 180 hours in a business site, students participate in bi-weekly reports and critiques with instructor. Students must apply one month prior to the semester in which they will complete the internship. Group 2 course.
Credit Hours = 4; Contact Hours = 4
Required prerequisites = N/A
Co-requisites = VCA 147, VCA 250
Recommended prerequisites = N/A

WPT-110 — Oxy-Fuel Process

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 their proficiency in these operations. Group 2 course.
Credit Hours = 3; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-120 — GTAW (TIG) Welding I

This course provides the student with the opportunity to learn and apply the theory of basic Gas Tungsten Arc Welding (GTAW) techniques on ferrous and non-ferrous metals in the flat and horizontal positions. Group 2 course.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = WPT 100 OR WPT 110
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-121 — GTAW (TIG) Welding II

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.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = WPT 120
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-130 — SMAW (ARC) Welding I

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.
Credit Hours = 3; Contact Hours = 5
Required prerequisites = N/A
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-131 — SMAW (ARC) Welding II

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. (Continued on next page.)
WPT-140 — GMAW (MIG) Welding I
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.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = WPT 130
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-141 — GMAW (MIG) Welding II
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 joint designs and welding positions. Group 2 course.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = WPT 140
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-142 — Flux Cored Arc Welding
This course provides students the opportunity to learn and apply safe welding techniques using the Flux Cored Arc Welding (FCAW) process. Group 2 course.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = WPT 140
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-160 — Welding Qualification Prep
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.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = Instructor signature
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-160A — Welding Qualification Prep
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.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = Instructor signature
Co-requisites = N/A
Recommended prerequisites = N/A

WPT-160B — Welding Qualification Prep
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.
Credit Hours = 2; Contact Hours = 3
Required prerequisites = Instructor signature
Co-requisites = N/A
Recommended prerequisites = N/A
Student Rights & Responsibilities – Process

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 are 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 for 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 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 lock or doorknob 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 for Student Services, or his/her designee.
      ii. Upon receiving such a report, the Dean for 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.
d. Procedures: Following an informal inquiry, if the Dean for 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. i. of the Student Code of Conduct shall apply. If the Dean for 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 for 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 for 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 for 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 for Student Services. This material will be held for a minimum of three years.

ii. If the Dean for 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 for 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; or (5) other individual as designated or confirmed by the Dean for 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 for 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 for Student Services.
      (i) The student may admit the alleged violation and be sanctioned accordingly.
      (ii) The student may request mediation, if the Dean for Student Services and other affected parties agree to mediation. If mediation fails or is not agreed to by the Dean for 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 for 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 for Student Services will, within a reasonable period of time, but not more than fifteen (15) college business days, begin the investigation process. The Dean for 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 for 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 for Student Services makes a finding, the Dean shall notify the student in writing.

e. 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 imposed. 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 psycho logical 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 for Student Services or by his/her designee without the filing of a complaint. Emergency Suspension will continue until reviewed by the Dean for 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 three (3) (seven (7)) college business days following the emergency suspension. Students who are suspended for disciplinary reasons will receive a grade of “F” 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 considered.

f. **Appeal:** An appeal of the Dean for Student Services’ finding that a violation occurred and/or the imposed sanction may be taken to the College Review Board. (See Section 7). A notice of appeal must be filed with the Office of the Dean for Student Services within ten (10) college business days after the student has received notice of the decision of the Dean for Student Services.

4. Residence Hall Code of Conduct

a. **Jurisdiction**

i. The Coordinator of Housing and Residence Life and the Dean for 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 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.

xv. 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.

xvi. 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.

xvii. Smoking inside any areas of the Residence Halls including individual rooms.

xviii. Instigating 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, rollerblading, and any kind of ball play.

xxxi. Not evacuating during a fire alarm.

xxsii. 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 Resident Hall Code of Conduct to the Coordinator of Housing and Residence Life.

ii. Upon receiving such a report, the Coordinator of Housing and Residence Life, 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 Coordinator of Housing and Residence Life, 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.

iv. Upon completion of an investigation, if the Coordinator of Housing and Residence Life, 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 Coordinator of Housing and Residence Life, 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 for Student Services. This material will be held for a minimum of three years.

v. If the Coordinator of Housing and Residence Life 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 Coordinator of Student Life 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 Coordinator of Housing and Residence Life.

(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 Coordinator of Housing and Residence Life 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 Coordinator of Housing and Residence Life.

(i) The student may admit the alleged violation and be sanctioned accordingly.

(ii) The student may request mediation, if the Coordinator of Housing and Residence Life and other affected parties agree to mediation. If mediation fails or is unacceptable to the Coordinator of Housing and Residence Life 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 Coordinator of Housing and Residence Life 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 Coordinator of Housing and Residence Life 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 for 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.

e. 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 damage.

(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 Coordinator of Housing and Residence Life. 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 Coordinator of Housing and Residence Life or by his/her designee without the filing of a complaint. Emergency Housing Suspension will continue until reviewed by the Coordinator of Housing and Residence Life. 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 for Student Services within three (3) college business days following the emergency suspension. A student may not appeal the decision of the Dean for Student Services. The decision of the Dean for Student Services is final.

f. Appeal

i. An appeal of the Coordinator of Housing and Residence Life decision may be taken to the Dean for 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.
The Dean for 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 for 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.

A student may not appeal the decision of the Dean for Student Services. The decision of the Dean for 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, 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 for 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 for Student Services determines that the act of academic dishonesty is egregious, then the Dean for Student Services may impose an appropriate sanction pursuant to Section 5, b. iii.

      iii. If the Dean for 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 in the college, normally with no opportunity for readmission.

c. Appeal: If the Dean for 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 for 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's 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 for 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 for Student Services. The conferences shall be held expeditiously.

   iv. If the conferences fail to resolve the dispute, the Dean for Student Services shall uphold the grade unless there is compelling evidence that warrants overruling the faculty member's decision. If a decision is made to overturn a grade, the Dean for 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 for Student Services to the Academic Review Board pursuant to Section 8. Notice of appeal must be submitted to the office for the Dean for 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 for 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 refuse the evidence and request a rehearing in front of the Dean for Student Services.

7. College Review Board
   a. Jurisdiction: Appellant jurisdiction over a student's appeal from a disciplinary decision made by the Dean for 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 for Student Services. The Dean for 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 for Student Services and support the penalty imposed.
         (b) Reverse the decision of the Dean for 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 for 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 for 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 for Student Services. The Dean for 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 for 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 for Student Services.
      ii. The Academic Review Board may reverse the decision of the Dean for 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 for Student Services and are available only to those approved by the Dean for Student Services and 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 for Student Services Office. The following procedures shall apply.

   b. Procedures
      i. The Dean for Student Services will receive a student’s verbal or written complaint. The Dean for 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 for 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 for 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 for 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 for Student Services. All decisions of the Dean for Student Services shall be in writing with rationale and are final. No further appeal will be considered.

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 Trustees and Student Government meetings are open to students.

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.

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 discreetly 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, students may contact the Dean for 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 these and other NMC policies in PDF format.
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. A daily crime log is available at www.nmc.edu/security. 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, 2008 to December 31, 2008. Go to www.nmc.edu/security to view statistics for the past three years.

Offenses On Campus

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<tr>
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<tr>
<td>Drug Law Violations/Disciplinary</td>
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<td>5</td>
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<tr>
<td>Drug Law Violations/Arrests</td>
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<td>0</td>
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<tr>
<td>Hate Crime (vandalism)</td>
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<tr>
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<td>Liquor Law Violations/Arrests</td>
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<tr>
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<tr>
<td>Robbery</td>
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<tr>
<td>Sex Offenses (including forcible rape)</td>
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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.

Smoke-Free Environment Policy
In the interest of providing a safe and clean environment for students, employees and visitors, NMC has prohibited smoking in all campus facilities and vehicles unless areas are specifically designated through college procedures.

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 for Student Services.................................(231) 995-1039
   - Housing Office.............................................(231) 995-1408
   - Counseling Center.........................................(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.
NMC Student Government Association Constitution

PREAMBLE
The purpose of the Student Government Association of Northwestern Michigan College is to create a student based government that encourages initiative, cooperation, and responsibility among students. The Student Government Association will promote common interests and general welfare of the student body to maintain and perpetuate high ideals at Northwestern Michigan College. The Student Government Association will serve as a liaison between the student body and the administration of the college. In order to do this the Student Government Association of Northwestern Michigan College will adopt and establish this constitution.

For the purposes of the constitution the Student Government Association will define the student body as ANYONE taking a course at Northwestern Michigan College.

ARTICLE I: MEMBERSHIP QUALIFICATIONS
Section 1: On or before the third Friday of the fall semester the Student Government Association must have their first meeting. This constitution will be given to each student at the first meeting and to anyone who requests a copy.

Section 2: Membership of the Student Government Association shall be open to any person, regardless of race, age, gender, sexual orientation or ability who turns in the required petition or has been chosen to represent an educational department. There will only be 15 voting members on the Student Government Association board.

Section 3: Members must be Northwestern Michigan College student with a cumulative GPA of 2.5 and can gain membership by being appointed by an academic department relevant to their area of study or have petitions completed with the required amount of signatures: 50 for full time students (12+ credits), 60 for part time students (6-11 credits), and 70 signatures for other students (1-5 credits).

Section 4: Members appointed by an academic department must have the required letter of recommendation by the fourth Friday of the fall semester. All petitions for membership must be completed and handed to the faculty advisor by the fifth Friday of the fall semester.

Section 5: Petitions are available at the Student Activities Office and signatures must be obtained from the student body only.

ARTICLE II: OFFICER ELECTIONS
Section 1: The electoral commission will administer ballots and make sure the elections are legitimate and fair.
   a. The electoral commission will be comprised of two members not running for office and the faculty advisor.

Section 2: Elections must be held no later than the fifth Friday of the semester. At this time the Student Government Association will elect a president, vice president, secretary, treasurer, and webmaster.

Section 3: Should there be a tie in the elections the chairperson will recount the ballots and if there is still a tie the top two candidates will present a two minute speech explaining why they would be the better officer with a second round of balloting to follow these speeches.

ARTICLE III: RECALLS AND VACANCIES
Section 1: 200 of the Northwestern Michigan College student body can petition to recall a Student Government Association member. If such petition is presented to the Student Government Association the member must vacate his or her seat. If the recalled member wants to remain in the Student Government Association they must collect 250 signatures from the student body to return to the Student Government Association as a member. If the recalled member held an office position his or her position will have been terminated upon the recall. The recalled member cannot be reelected to any officer position. Department appointed members cannot be reappointed by any department.

Section 2: If a department appointed member vacates his or her position then that department can choose to appoint another student. If the department doesn’t appoint another student within three weeks then the position will be an open chair that can be filled by any student fulfilling the membership requirements.

Section 3: If an open chair member vacates their position it can be filled by any student who fulfills the membership requirements.

Section 4: If an officer vacates their position, a current non-officer will be appointed by the remaining officers to temporarily fill the position. Three meetings later an election must be held to officially fill the officer position.

Section 5: If the president vacates his or her position the vice president will fill that position. The vice president position will be filled as per Section 4 above.

Section 6: In the event of the resignation of the entire Student Government Association, or failure of the general election to provide qualified candidates for the Student Government Association, the Vice President for Educational Services shall appoint an interim council of five members until the next general election.

ARTICLE IV: OFFICERS AND THEIR DUTIES
Section 1: All members shall have equal standing in the Student Government Association.

Section 2: The term of office for the members shall be one college academic year. Members may be re-elected or re-appointed in the next term and any subsequent terms.

Section 3: No wages will be allotted to Student Government Association members at any time.

Section 4: If an officer is unable to follow through with his or her duties outlined below then he or she will be subject for a motion for removal from office by the Student Government Association, at which time he or she will appeal to the board
ARTICLE V: MEETINGS AND ATTENDANCE

Section 1: Meetings will once a week for ninety minutes.
Section 2: In order to have a meeting where official Student Government Association business is conducted, a majority of the Student Government Association members must be present and a majority of those present shall be necessary to carry a motion in the Student Government Association.

a. The Student Government Association will define a majority as half the members plus one.

Section 3: Attendance is mandatory. Every member is allowed two excused absences and one unexcused absence per semester. After three absences, a member is subject to a motion for removal by the Student Government Association. At this time the member can appeal to the board, after which there will be a vote. If the Student Government Association votes to remove the member the termination is final for the rest of the term.

Section 4: Excessive tardiness and leaving early is unacceptable.

ARTICLE VI: AMENDMENTS

Section 1: To amend the constitution of the Student Government Association Robert’s Rules of order shall be followed.
Faculty & Staff

Board of Trustees

K. Ross Childs
Chair

Robert T. Brick
Vice-Chair

William D. Myers
Secretary

Douglas S. Bishop
Treasurer

Cheryl Gore Follette

Walter J. Hooper

Susan K. Sheldon

CHAIR EMERITUS
James J. Beckett ........................................... 1962-1996
Chair.......................................................... 1980-1994

TRUSTEE EMERITUS
Shirley S. Okerstrom .................................1978-2000
Chair.......................................................... 1994-1997

PRESIDENT EMERITUS
Preston N. Tanis ........................................1951-1972
Timothy G. Quinn .................................1989-1996
Ilse Burke.................................................. 1996-2001

VICE PRESIDENT EMERITUS
Lornie Kerr.................................................. 1970-1989

Faculty & Staff

Office of the President

Timothy J. Nelson
President
M.S., Michigan Technological University
B.S., Grand Valley State University

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B.S., Central Michigan University

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Ph.D., College of William and Mary
M.A., University of Connecticut
B.A., Adelphi University
A.A., Nassau Community College

Marguerite C. Cotto
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M.S., Michigan State University
Advanced Study, Institute for Advanced Studies
of Puerto Rico and the Caribbean
B.S., B.A., University of Puerto Rico, Mayaguez Campus

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Executive Director of NMC Foundation
Ph.D., M.S., Michigan State University
B.A., Alma College
Certified Fund Raising Executive (CFRE)

Cathy P. Jones
Vice President of Finance and Administration
M.B.A., Georgia College
B.B.A., West Georgia College
A.B.A., Gogebic Community College

Executive Staff

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Executive Director of NMC Dennos Museum Center
B.S., University of Wisconsin

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B.A., Michigan State University

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A.A.S., Northwestern Michigan College

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Multiengine Instructor (MEI)

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A.A.S., Northwestern Michigan College

Glidden, Nathan J.
Hagerty Center Director

Gorton, Holly J.
Administrative Coordinator - President’s Office

Greiner, Rhonda L.
Bookstore Manager
A.A.S., Northwestern Michigan College

Haselton, Dean C.
Beverage Manager/Great Lakes Campus Purchasing Coordinator

Hazelwood, Constanza C.
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Ph.D., M.A., Michigan State University
B.S., Universidad de Los Andes

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M.S., Ithaca College
B.A., Indiana University

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B.S., University of Colorado Boulder

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Certified Public Accountant (CPA)

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 Beardsee 1963-94
Walter Beardsee 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
Dianne Keelan 1974-01
Francis Kullman 1968-96
John Leishman 1968-94
Loretta Lockman 1964-84
William Long 1965-88
David Lovelad 1973-94
Keith MacPhee 1962-96
Kenneth Marek 1968-01
Kenneth Masck 1975-02
Michael McIntosh 1970-04
Richard Minor 1972-00
Hettie Molvang 1974-94
Henry Morgenstein 1971-00
Arlo Moss 1962-88
Peter Nelson 1964-88
Harry Oliver 1958-88
Jack Ozegovic 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
Allison Shumsky 1957-95
William Skinner 1961-88
James Spenceley 1957-80
Frederick Tank 1966-07
John Tanner 1974-95
Roberta Teachen 1975-01
Roy Terald 1964-94
David Terrell 1969-07
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David Vermetten 1962-96
Paul Welch 1964-87
Lila Wilkinson 1951-74
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  Bloomington

Kahler, Karen L.
  Social Sciences Instructor
  M.A., B.S., Michigan State University
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Instructor</th>
<th>Education</th>
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<tr>
<td>Kalish, Todd G.</td>
<td>Science/Math Instructor</td>
<td>M.S., University of Wisconsin - LaCrosse</td>
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<td>B.S., University of Wisconsin - Platteville</td>
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<td>Keller, Robert</td>
<td>Science/Math Instructor</td>
<td>B.S., Michigan State University</td>
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<td>Physical Education Instructor</td>
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<td>Social Sciences Instructor</td>
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<td>Klein, Leonard E.</td>
<td>Science/Math Instructor</td>
<td>M.Ed., Wayne State University</td>
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<td>Humanities Instructor</td>
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<td>Social Sciences Instructor</td>
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<td>LaCourse, Peter W.</td>
<td>Physical Education Instructor</td>
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<td>Laughlin, Frederick L.</td>
<td>Culinary Arts Instructor</td>
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<td>B.A., SUNY College - Postdam</td>
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<td>Laughlin, Linda</td>
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<td>Law, Barbara J.</td>
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<td>McDonald, Kristy B.</td>
<td>Business Instructor</td>
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<td>McKee, Carole J.</td>
<td>Health Occupations Instructor</td>
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<td>Mehl, Douglas K.</td>
<td>Physical Education Instructor</td>
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<td>Molby, Tanja C.</td>
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<td>Moody, Wayne A.</td>
<td>Automotive Instructor</td>
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<td>Master Certification, National Institute for Automotive Service Excellence</td>
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<td>Master Auto Mechanic, State of Michigan</td>
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<td>Morrison, Doris</td>
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<td>Humanities Instructor</td>
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<td>M.S., Portland State University</td>
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<td>Nadji, Taoufik</td>
<td>Science/Math Instructor</td>
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<td>Nelson, James D.</td>
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<td>Social Sciences Instructor</td>
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<td>Oliver, Janet W.</td>
<td>Business and Humanities Instructor</td>
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<td>Olson, Patty</td>
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<td>Owens, Dianne H.</td>
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<td>Peltola, Jeannette F.</td>
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<td>Phillips, Mark E.</td>
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<td>Pittinos, Christopher</td>
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<td>Poertner, Michelle L.</td>
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<td>Quick, Stephen H.</td>
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<td>Rand III, Charles S.</td>
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<td>Reisig, Terri</td>
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<td>Rhein, Martin J.</td>
<td>Humanities Instructor</td>
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<td>Richey, Michael A.</td>
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<td>Richmond, Joan G.</td>
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<td>Robinson, Erin M.</td>
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<td>Samarasinghe, Diane A.</td>
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<td>Sanborn, Gary K.</td>
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<td>Sanderson, Corey J.</td>
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<tr>
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Weiler, Robert S.
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Sixth Degree Black Belt
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Financial Aid Specialist

Barnes, Jenny L.
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A.A.S., Northwestern Michigan College

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Technical Assistant - Library
M.A., B.A., Ohio State University

Beer, Alan G.
Technician - Digital Media Systems
Support Staff

Barber, Duane E.
Cashier/Bookkeeper - Accounts Receivable
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Creighton, Dorian L.
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A.A., Oakland Community College

Denoyer, Susan C.
Assistant - President's Office

Farrier, Trisha J.
Bar Supervisor - Hagerty Center

Gallegos, Johanna E.
Banquet Supervisor - Hagerty Center

Garvin, Cheryl L.
Assistant - Admissions Office
A.A.S., Northwood University

Gourlay, Kimberly A.
Assistant - Accounting
A.A.S., A.A.S., Northwestern Michigan College

Griggs, Martha L.
Secretary - Institutional Advancement
Hall, Kathryn F.
Human Resources Secretary
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Certified Human Resources Specialist (CHRS), Michigan State University

Hallett, Kristi E.
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Hutchcraft, Suzanne L.
Bookkeeper Assistant - Payroll Services

Johnson, Jean H.
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Kalchik, Debra K.
Assistant - Extended Educational Services

McCready, Shyrl A.
Assistant - M-TECsm Welcome Desk
B.A., Western Michigan University

Palmer, Donna J.
Administrative Assistant - University Center

Paul, Cheryl L.
Secretary - Institutional Advancement
A.A.S., Macomb Community College

Rea, Linda L.
Secretary - Center for Instructional Excellence
A.A.S., Northwestern Michigan College

Reeves, Gail R.
Bookkeeper Assistant - Payroll Services/Accounts Payable

Rollin, Shelley L.
Assistant - Admissions
A.A.S., Northwestern Michigan College

Rumbach, Vicki L.
Assistant - Training and Research

Sanchez, Victoria A.
Assistant - Campus Services
A.G.S., Northwestern Michigan College

Schenk, Jackie A.
Office Assistant - Extended Educational Services

Sedlacek, Kathleen M.
Assistant - Records and Registration/Testing Coordinator

Summers, Nancy R.
Bookkeeper - Accounts Payable
B.A., Schiller International University

Zaremba, Carol A.
Administrative Assistant - Counseling
L.P.N., Northwestern Michigan College

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**Maintenance and Custodial Staff**

Beyer, Dennis L.
Warehouse Clerk

Blough Jr., Edwin C.
Groundskeeper

Christopher, Dennis P.
Custodian

Cook, Frederick P.
Custodian

Cook, Jerome L.
Custodian

Dalley, John
Custodian

Dunham, Dorthy M.
Custodian

Dunham, Ernest S.
Custodian

Egeler, Steven D.
Custodian

Fader, Timothy J.
Painter

Fewins, Stephen M.
Custodian

B.S., College of St. Francis

Gaylord, James C.
Custodian

Gordon, Kathy A.
Groundskeeper

Gray, James A.
Custodian

Haines, Todd A.
Maintenance Mechanic

Hansen, Anthony L.
Custodian

Hardy, William T.
Custodian

Harrand, Sandra M.
Custodian

Harvey, Kimberly K.
Groundskeeper

LaCroix, Christopher W.
Custodian

Lewis, Brian R.
Groundskeeper

MacGirr, Anthony J.
Custodian

Miller, Natalie J.
Custodian

Murphy, Daniel C.
Maintenance Mechanic

Residential Builder License

O’Malley, Sharon M.
Custodian

Pleva, Michael L.
Custodian

Reynolds, Valerie J.
Custodian

Rider, Robert M.
Maintenance Mechanic

Sabins, Jeffrey J.
Custodian

Schettek, Gary J.
Groundskeeper

Send, Jeffery M.
Boiler Maintenance Mechanic

Sexton, David A.
Maintenance Mechanic

Shattuck, Craig W.
Custodian

Sheffer, KanDee L.
Custodian

Spires, Richard K.
Custodian

Squires, Amber S.
Custodian

Steiger, Edward M.
Mail Courier
A.A., Northwestern Michigan College

Trowbridge, Philip J.
Custodian

VanSipe, Brian L.
Maintenance Mechanic

B.A., Spring Arbor College

A.A.S., A.A., Northwestern Michigan College

Yeider, Daniel W.
Maintenance Mechanic
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.

**Applied Science Degree**
An associate degree available at NMC which prepares students to enter the workforce immediately after graduation; students who may intend to transfer should see a counselor regarding course selection.

**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**
Assistance which students may receive from the Counseling Center regarding course selection, career planning, transfer advising and personal development or problems.

**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 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. A full complement of services including testing, financial aid, and advising is available to support new students attending the Orientation program.

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 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 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.

Quarter
An academic session lasting about 11 weeks.

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 equals the number of contact hours with the instructor multiplied by the student's tuition rate, which is based on his/her residency status.

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2010-2011 ACADEMIC CALENDAR

**Fall Semester 2010**
- Registration Begins: Wednesday, April 14
- Final Payment Due: Tuesday, August 10
- Opening Conference (Faculty and Staff): Monday, August 23
- Classes Begin: Saturday, August 28
- College Closed (Labor Day): Saturday, September 4 through Monday, September 6
- Faculty Professional Development (No classes day or evening): Tuesday, October 19
- Registration for Spring Begins: Wednesday, November 3
- College Closed (Thanksgiving): Wednesday, November 24 (5:00 p.m.) through Sunday, November 28
- Classes End: Sunday, December 19
- Grades Due by: Wednesday, December 22 (11:00 a.m.)
- College Closed (Christmas): Friday, December 24 through Monday, December 27
- College Closed (New Year): Thursday, December 30 (12:00 noon) through Friday, December 31

**Spring Semester 2011**
- Registration Begins: Wednesday, November 3, 2010
- Final Payment Due: Tuesday, January 4, 2011
- Opening Conference: Monday, January 10
- Classes Begin: Friday, January 14
- College Closed (Spring Break): Monday, March 28 through Sunday, April 3
- Registration for Fall Begins: Wednesday, April 13
- College Closed (Easter): Friday, April 22 through Sunday, April 24
- Classes End: Sunday, May 8
- Final Payment for Summer Due: Tuesday, May 10
- Grades Entered by: Wednesday, May 11 (11:00 a.m.)

**Summer Session 2011**
- Final Payment Due: Tuesday, May 10
- Classes Begin: Saturday, May 14
- College Closed (Memorial Day): Saturday, May 28 through Monday, May 30
- College Closed (Independence Day): July 4
- Classes End: Monday, August 8
- Final Payment for Fall Due: Tuesday, August 9
- Grades Entered by: Wednesday, August 10 (11:00 a.m.)