

# INTERDISCIPLINARY AND INDIVIDUALLY CREATED PROGRAMS

## Interdisciplinary and Individually Created Programs at NMU

Interdisciplinary programs are those that are co-sponsored by two or more departments. Generally a student chooses an adviser from one of the sponsoring departments. Individually created programs are developed by a student and a faculty member to meet an individual need or interest not offered in a formalized program.

Northern offers three interdisciplinary baccalaureate degree programs: secondary education integrated science, social science, and technical communications.

Also within the interdisciplinary area are a two-year associate degree in general university studies, two minor programs in gender studies and labor studies, and a one-year certificate in labor leadership.

Northern offers students two opportunities to individually create programs: a baccalaureate degree and a certificate.

## BACHELOR DEGREE PROGRAMS

*Liberal Studies: Complete information on the liberal studies requirements and additional graduation requirements, including the health promotion requirement, is in the "Liberal Studies Program and Graduation Requirements" section of this bulletin (38-44).*

*Courses within each major that can be used to satisfy liberal studies requirements are listed with the roman numeral (in brackets) that coincides with the liberal studies division the course falls under.*

### Secondary Education Integrated Science Major (pending state approval)

The Biology, Chemistry, Education, Geography and Physics departments cooperatively offer this program to students interested in certification to teach science at the secondary school level from an integrated science perspective. Students with this major must minor in either biology education, chemistry education, earth science education, or physics education. The major prepares students to be endorsed both in integrated science and in the specific discipline of the major.

Students in this program must maintain a minimum grade point average of 2.70 with no grade below a "C" in the professional education sequence, the major and/or minor and required cognates combined.

### Secondary Education Integrated Science Major

<b>Total Credits Required for Degree</b>	<b>127-133</b>
<b>Liberal Studies</b>	<b>30-40</b>
<b>Health Promotion</b>	<b>2</b>
<b>General Science Major/Minor</b> <i>(See options I-IV below)</i>	<b>56-62</b>
<b>Professional Education</b>	<b>37</b>
ED 201 Introduction to Education	2
ED 231 Teaching and Learning in the Secondary Classroom	4
ED 301 Dimensions of American Education	2
ED 319 Teaching of Reading for Secondary Teachers	3
ED 349 Teaching for Diversity, Equity and Social Justice in the Secondary School Community	2
ED 361 Special Education and the General Classroom Teacher	2
ED 483 Educational Media Technology	2
ED 430 Teaching in the Secondary School	11
ED 450 Seminar in Teaching	1
MSED 340 Fundamental Concepts in Science	4
MSED 350 Methods and Materials in Teaching Science Education	4
<i>MA 104 College Algebra with Applications or MA 105 College Algebra for Calculus Preparation is required for many of the courses in this program.</i>	

Depending upon the minor chosen, students complete their 56-62 credits of general science curriculum as follows:

### Option I: Integrated Science Major with Biology Minor

<b>Total Credits Required for Major</b>	<b>56</b>
<b>Biology Education Minor</b>	<b>20</b>
<b>Chemistry Electives</b>	
CH 111 General Chemistry I [III]	5
CH 112 General Chemistry II [III]	5
CH 215 Chemistry of the Elements	4
<b>Earth Science Electives</b>	
AS 103 Observational and Solar System Astronomy [III]	4
GC 255 Physical Geology [III]	4
GC 385 Weather and Climate	4
<b>Physics Electives</b>	
PH 201 College Physics I [III]	5
PH 202 College Physics II [III]	5

**Option II: Integrated Science Major with Chemistry Minor**

**Total Credits Required for Major** 60

**Chemistry Education Minor** 22

**Biology Electives**

BI 111 Introductory Biology: Principles [III]	4
BI 112 Introductory Biology: Diversity [III]	4
BI 210 Principles of Ecology	4
BI 312 Genetics	4

**Physics Electives**

PH 201 College Physics I (or PH 220) [III]	5
PH 202 College Physics II (or PH 221) [III]	5

**Earth Science Electives**

AS 103 Observational and Solar System Astronomy [III]	4
GC 255 Physical Geology [III]	4
GC 385 Weather and Climate	4

**Option III: Integrated Science Major with Earth Science Minor**

**Total Credits Required for Major** 62

**Earth Science Education Minor** 22

**Biology Electives**

BI 111 Introductory Biology: Principles [III]	4
BI 112 Introductory Biology: Diversity [III]	4
BI 210 Principles of Ecology	4
BI 312 Genetics	4

**Chemistry Electives**

CH 111 General Chemistry I [III]	5
CH 112 General Chemistry II [III]	5
CH 215 Chemistry of the Elements	4

**Physics Electives**

PH 201 College Physics I [III]	5
PH 202 College Physics II [III]	5

**Option IV: Integrated Science Major with Physics Minor**

**Total Credits Required for Major** 62

**Physics Education Minor** 20

**Biology Electives**

BI 111 Introductory Biology: Principles [III]	4
BI 112 Introductory Biology: Diversity [III]	4
BI 210 Principles of Ecology	4
BI 312 Genetics	4

**Chemistry Electives**

CH 111 General Chemistry I [III]	5
CH 112 General Chemistry II [III]	5
CH 215 Chemistry of the Elements	4

**Earth Science Electives**

AS 103 Observational and Solar System Astronomy [III]	4
GC 255 Physical Geology [III]	4
GC 385 Weather and Climate	4

**Social Science Major**

The Economics, Geography, History, Political Science and Public Administration, and Sociology and Social Work departments cooperate to offer this major. Areas of concentration correspond with each cooperating department. Advisement is provided to students by the department selected as the concentration.

**Total Credits Required for Degree** 124

**Liberal Studies** 30-40

**Health Promotion** 2

**Major**

*Choose one of the following concentrations:*

**Economics Concentration** 36

EC 201 Microeconomic Principles	4
EC 202 Macroeconomic Principles	4
Economics Electives	12
Electives	16

*Choose 8 credits from two of the following four areas: geography\*, history, political science or sociology*

**Geography Concentration** 36

GC 164 Human Geography [IV]	4
GC 200 North America	4
GC 220 Economic Geography	4

*Choose from the following:* 8

GC 300 Regional Studies: World Cultures [IV]

GC 310 Urban Geography

GC 360 Population Geography [IV]

GC 435 Geography of Michigan

Electives 16

*Choose 8 credits from two of the following four areas: economics, history, political science or sociology.*

**History Concentration** 36

HS 200 Historical Thinking and Writing	4
History Electives from 100 or 200 level	8
History Electives from 300 or 400 level	8
Electives	16

*Choose 8 credits from two of the following four areas: economics, geography\*, political science, or sociology.*

**Political Science Concentration** 36

PS 101 Introduction to Political Science [IV]	4
PS 105 American Government [IV]	4
PS 203 Comparative Government and Politics	4
PS 206 International Relations	4
PS 207 History of Political Theory	4
Electives	16

*Choose 8 credits from two of the following four areas: economics, geography\*, history, or sociology.*

<b>Sociology Concentration</b>	<b>36</b>
SO 101 Introductory Sociology [IV]	4
Sociology Electives (including 8 credits at 300-400 level)	16
Electives	16
<i>Choose 8 credits from two of the following four areas: economics, geography*, history or political science.</i>	

**Minor 20**

*\*Note: Geography electives for economics, history, political science and sociology concentrations must be selected from courses listed in the geography concentration above.*

**Technical Communications Major**

This program is tailored to meet the needs of contemporary technical communicators, so it emphasizes both the practical ends of the major (such as graphic arts, writing and desktop publishing) and theoretical considerations implicit in an ever-evolving, technological workplace (such as global communications, message design and argumentation). Students may select a minor, in consultation with an adviser, which best suits individual needs, but a minor is not required. The Art and Design, Communication and Performance Studies and the English departments provide student advisement.

**Total Credits Required for Degree 128**

<b>Liberal Studies</b>	<b>30-40</b>
<b>Health Promotion</b>	<b>2</b>

**Required Courses in Major 59**

AD 118 Introduction to Graphic Communication	4
AD 134 Electronic Imaging: Introduction	4
AD 175 Visual Structures and Concepts	4
AD 218 Graphic Communication: Studio Practice	4
BC 165 Introduction to Mass Media	4
EN 303 Technical Writing	4
EN 306 Editing and Layout	4
EN 405 Technical Writing Seminar	4
IS 100 Introduction to Windows, E-mail and the Internet [V]	1
IS 105 Presentation/Multimedia Software [V]	1
IS 107 Beginning Desktop Publishing [V]	1
IS 207 Intermediate Desktop Publishing [V]	1
IS 208 Web Page Development [V]	1
MGT 344 Managerial Communications	3
OIS 450 Advanced Desktop Publishing	3
PR 250 Research in Public Relations	4
PR 330 Public Relations Message Design	4
SP 200 Argumentation	4
SP 300 Rhetorical Theory	4

**Other Required Courses 8**

EN 211D Technical and Report Writing [I]	4
TE 351 Humanity and Technology [II]	4

**ASSOCIATE DEGREE PROGRAM**

**General University Studies  
Associate of Applied Science**

This program provides a point of access into the university for individuals seeking a post secondary education at the two-year level. It also provides maximum flexibility for students who are either undecided about their career plans or wish to create a program that suits their unique interests. The degree also provides an opportunity for individuals wishing to build their academic skills in preparation for admittance into a restricted program.

**Total Credits Required for Degree 62**

<b>Liberal Studies 18</b>	
EN 111 College Composition	4
Natural Science Elective	4
Humanities Elective	4
Social Science Elective	4
CIS/IS Electives	2

<b>Health Promotion 1</b>	
HP 200 Physical Well Being	1

**Concentration or Contracted Minor\* 20**

**Other Required Courses 4**

MA 100 Intermediate Algebra (or higher or placement test above MA 100)	4
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**Electives 19**

*\*Concentration must be one of the approved minors listed below.*

**List of Approved Minors for Concentrations in the AAS in General University Studies**

- Applied Ethics
- Architectural Technology
- Art and Design
- Art History
- Auto Service Technology
- Biology
- Business Administration
- Chemistry
- Clinical Lab Techniques
- Computer Aided Design
- Construction Systems
- Contracted Minor
- Criminal Justice
- Electromechanical Technology
- Electronic Journalism
- Electronics
- Emergency Medical Services
- Environmental Conservation
- Gender Studies
- Health Education-Liberal Arts
- History
- Hospitality Service Management
- Human Biology
- Human Geography

HVACR  
 Industrial Maintenance Technology  
 International Studies  
 Manufacturing  
 Media Production and New Technology  
 Music  
 Office Services  
 Paraprofessional Aide Certificate  
 Physical Geography  
 Planning  
 Political Science  
 Psychology  
 Social Welfare  
 Sociology  
 Speech Communication

## MINOR PROGRAMS

### Gender Studies Minor

This minor explores the significance and meaning of gender in human experience, including the roles, status and accomplishments of women and men within a number of academic fields. Courses bring new scholarship on gender studies and related feminist theory into the university curriculum, and offer students an opportunity to integrate the perspective of several disciplines into their program.

A list of courses used in this minor must be developed in consultation with Maya Sen of the Psychology Department, director of the minor. When approved, a copy of the list will be filed in the Registrar's Office. Students may not take more than eight credits from any one department.

<b>Total Credits Required for Minor</b>	<b>24</b>
UN 200 Introduction to Gender Studies*	4
Electives	20
<i>Choose from the following:</i>	
EN 250 Images of Women (4 cr.)	
EN 440 Topics in Gender in Literature (4 cr.)	
HS 283 The American Woman (4 cr.)	
PY 235 Psychology of Gender (4 cr.)	
PY 255 Sexual Behavior: Psychological Perspectives (4 cr.)	
SO 262 Women, Men and Social Inequality (4 cr.)	
AN, EN, HS, NE, PY or SO 498 Directed Study** (1-4 cr.)	1-4

*Note: Students may substitute one of the following four credit courses for one of the courses listed above.*

AN 100 Introduction to Socio-Cultural Anthropology  
 HS 293 Minorities in American History  
 SO 282 Minority Groups  
 SO 232 Marriage and the Family

*\*Students are encouraged to take UN 200 as early as possible.*

*\*\*If chosen, the directed study course should be taken as the final course in the program. Students may count only one directed study course toward the minor.*

### Labor Studies Minor

This minor provides students with the knowledge of labor organizations, their functions, their role in society and their future prospects. The program focuses on the areas of collective bargaining, grievance processing, contract administration, arbitration, labor history, social inequality, labor law, and leadership skills. Student completing the core courses are also awarded the certification in labor leadership. Advisement is provided by Dr. Russ Magnaghi in the history department.

<b>Total Credits Required for Minor</b>	<b>20-21</b>
<b>Core Courses</b>	<b>17</b>
LSP 101 Introduction to Labor Studies <i>or</i>	4
LSP 101A Introduction to Labor Studies (2 cr.) <i>and</i>	
LSP 101 B Introduction to Labor Studies (2 cr.)	
HS 244 The American Labor Movement	2
SO 322 Social Class Power, and Mobility	4
HS 444 Research in Labor History	2
MGT 424 Collective Bargaining	3
LSP 490 Seminar in Labor Leadership	2
<b>Electives</b>	<b>3-4</b>
<i>Choose from the following:</i>	
EC 101 The American Economy (4 cr.)	
EC 337 American Economic History (4 cr.)	
EC 415 Labor Economics (4 cr.)	
EC 420 Capitalism, Socialism, and Democracy (4 cr.)	
MGT 240 Organizational Behavior and Management (3 cr.)	
MGT 343 Human Resource Management (3 cr.)	
MGT 412 Compensation Administration (3 cr.)	
MGT 421 Labor Law (3 cr.)	
PS 309 State and Local Government (4 cr.)	
PS 341 Social Welfare Policy Making (4 cr.)	
PS 402 Political Economy (4 cr.)	
PS 427 Public Personnel Administration (4 cr.)	
PY 436 The Psychology of Organization Behavior (4 cr.)	
SO 282 Minority Groups (4 cr.)	
SO 472 Occupational Stress (4 cr.)	
SP 421 Organizational Communication (4 cr.)	
LSP 295 Special Topics in Labor Studies (1-4 cr.)	
LSP 495 Special Topics in Labor Studies (1-4 cr.)	
HS/PS/SO 491 Internship (1-12 cr.)	
HS/PS/SO 498 Directed Study (1-4 cr.)	

## CERTIFICATION PROGRAM

### Labor Leadership Certification

This certificate program is intended for union members and officers, potential union members and aspiring union leaders who are interested in developing their knowledge, leadership skills and perspective of unions and the labor movement. An advisory committee made up of labor leaders in cooperation with NMU faculty members and administrators determine the nature of this program.

<b>Total Credits Required for Certification</b>	<b>13-15</b>
LSP 101 Introduction to Labor Studies <i>or</i>	4
LSP 101A Introduction to Labor Studies (2 cr.) <i>and</i>	
LSP 101 B Introduction to Labor Studies (2 cr.)	
HS 244 The American Labor Movement	2
SO 322 Social Class, Power, and Mobility <i>or</i>	2-4
SO 222 Social Inequality	
HS 444 Research in Labor History	2
MGT 424 Collective Bargaining	3
LSP 490 Seminar in Labor Leadership	2

*\*This program does not permit double counting between liberal studies, the concentrations and electives.*

*The following guidelines apply to the degree:*

1. Students must obtain a "C" (2.00) or better in all courses in the concentration.
2. Students must complete 40 credits after the program is approved.
3. The program must include 40 credits at the upper division (300-400) level.
4. Liberal studies: Students must complete a minimum of 40 credits for all degrees. (Students cannot "double count" courses in the liberal studies and the concentration.)
5. The program may not include courses that would comprise more than 80 percent of any approved departmental major.
6. Students interested in an individually created program within the College of Business will coordinate with a College of Business adviser. If it is determined that more than 25 percent of the individually created program is appropriate in business, the adviser will make certain that the courses chosen meet the common body of knowledge requirements of The American Assembly of Collegiate Schools of Business.
7. Students with a concentration outside of the College of Business may not take more than 25 percent of their program from courses taught by the College of Business.
8. Admission into an individually created program begins the semester following approval of the committee.

## INDIVIDUALLY CREATED PROGRAMS (ICP)

### ICP Baccalaureate Degree

Students with clearly defined educational goals that do not correspond with existing programs at NMU can choose this bachelor of arts or bachelor of science degree with the phrase "Individualized Studies" appearing in place of the major on the transcript. In consultation with their advisers, students develop a program of individualized concentration which is then submitted to the Committee for Undergraduate Programs. Students can select their own advisers or obtain advice in the Registrar's Office about which advisers might be most suitable.

Once the program is drawn up and approved by the Committee for Undergraduate Programs, the approved outline is filed with the Registrar's Office as an official contract. Any changes in the contract are submitted to the Committee for Undergraduate Programs and filed. The committee may withdraw approval on the recommendation of the adviser in cases where the student's academic capacities clearly fall short of the stated goals.

<b>Total Credits Required for Degree</b>	<b>124</b>
<b>Liberal Studies*</b>	<b>40</b>
<b>Health Promotion</b>	<b>2</b>
<b>Concentration</b>	<b>52</b>
<b>General Electives</b>	<b>30</b>

## CERTIFICATE PROGRAM

### Special Studies Certificate

This is a one-year program leading to a certificate for those students for whom an associate or baccalaureate degree is not an immediate goal. Students can later, if they wish, use this program as a basis for meeting the requirements of a degree program. Students develop a course of study, in conjunction with an adviser, on a form provided by the Registrar's Office. The area of concentration emphasizes a specific area of interest or professional development. The student, with the approval of the adviser, chooses courses from either a single discipline or a combination of disciplines. The student uses courses from one or more disciplines as cognates to support the area of concentration. Students must obtain a grade of "C" (2.00) or better in the area of concentration in order to graduate.

<b>Total Credits Required for Certificate</b>	<b>33</b>
<b>Liberal Studies</b>	<b>8</b>
Natural Science/mathematics elective	4
Humanities or social science elective	4
<b>Health Promotion</b>	<b>1</b>
HP 200 Physical Well Being	1
<b>Area of Concentration</b>	<b>12</b>
<b>Cognates</b>	<b>8</b>
<b>Other Required Course</b>	<b>4</b>
EN 090 Basic Composition <i>or</i>	4
EN 111 College Composition I	