



# ACHIEVE

**2013-2014**

**Course Catalog**



**Muskegon Community College**

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Muskegon Community College  
221 S. Quarterline Road, Muskegon, MI 49442  
**(231) 773-9131**

**The information contained in this catalog  
is also available on the MCC website:**

**[www.muskegoncc.edu](http://www.muskegoncc.edu)**



**Muskegon Community College**

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## Hello and Welcome to Your MCC!

It is my pleasure to welcome you to Muskegon Community College, an outstanding institution of higher education serving Muskegon, Ottawa, Newaygo, and Oceana counties, as well as students online around the world. Our mission is to provide a center for lifelong learning that meets individual, community, and global needs. We are proud of our dedication to excellence and of our ability to help meet a wide range of educational goals. Particularly in these challenging economic times, the quality of education at MCC is an excellent investment in yourself and in our community.



Whether you are here to take courses to transfer toward a higher educational degree or to retrain for the jobs of tomorrow, our credits will help you achieve your goals. With over 80 areas of study, MCC provides the opportunity for you to become a nurse, drive a big rig, research wind and solar power, and design computer games. You will learn in the classroom, online, at internships around the world, on the athletic field, and even on the beach!

In addition to having some of the best academic and technical programs in the state, MCC provides comprehensive student services that enhance your educational experience. An outstanding faculty, small class sizes, and excellent facilities only add to the value. Designed by award-winning architect Alden B. Dow, our beautiful campus features buildings spanning a stream in a forested area with nature trails, a golf course, and our state-of-the-art library and information technology center. We invite you to tour our campus, meet with our dedicated instructors and caring staff, and learn for yourself how MCC can help you get anywhere you want to go.

Take the first step today by calling us at (866) 711-4622 or by visiting [www.muskegoncc.edu](http://www.muskegoncc.edu).

We appreciate your interest in Muskegon Community College and look forward to working with you to achieve your goals.

Regards,

A handwritten signature in black ink, appearing to read "Dale K. Nesbary". The signature is fluid and cursive, with a long, sweeping tail that extends downwards and to the right.

Dale K. Nesbary Ph.D., President  
Muskegon Community College

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## Introduction

No matter where you want to go, our credits can get you there. If you're not sure where you want to go, our friendly counselors and instructors will help you find your way. CareerScope testing and other resources will help ensure you get on the right path—and may even reveal undiscovered skills! What's your goal?

Muskegon Community College (MCC) is located near the shores of Muskegon Lake and Lake Michigan and provides service to the Lakeshore region of West Michigan. MCC serves a broad and diverse body of over 5,000 students with an average age of 27 years, and offers 50 Associate Degree programs, 33 Certificate programs, 2 Professional Development Credit programs, and 1 diploma program, known for their transferability and value.

## History

Muskegon Community College was founded as Muskegon Junior College in 1926, and has been continually accredited by the North Central Association's Higher Learning Commission of since 1929. The community college district was created via the Michigan Constitution of 1963, along with an elected Board of Trustees and the college moved to its current campus location, an Alden B. Dow designed facility that opened to the public in 1967. In 1995, the Stevenson Center for Higher Education opened; comprising a consortium of Ferris State University, Grand Valley State University, and Western Michigan University, designed to increase access to educational opportunities for Muskegon residents. In 2010, the Outdoor Learning Lab, a focal point of green technology and center for MCC's new Alternative and Renewable Energy certificate program opened. The college is currently located on a 111-acre campus in Muskegon, with extension centers in Fremont, Grand Haven, Newaygo and Whitehall. A more detailed history can be found on page 278.

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# What We Offer

Muskegon Community College has Associate in Science and Arts (ASA) degrees primarily for transferring to four-year institutions. The degree provides an outstanding and accredited liberal arts education and a solid foundation for success as you work on your Bachelor's Degree and beyond. MCC counselors will advise you and help you tailor the Associate in Science and Arts degree to best meet your needs and the requirements of the university you are transferring to. The Associate in Applied Science (AAS) degrees are for specific career training -- degrees that prepare you for the jobs of tomorrow in emerging fields. A multitude of certificate programs and professional development credits are available to brush up on your working skills or help in the hunt for that perfect job.

MCC also provides on-campus access at the Stevenson Center for Higher Education to available bachelor's and master's degrees from our partner colleges: Ferris State University, Grand Valley State University, and Western Michigan University.

## Degrees, Certificates and Professional Development Credits Offered:

### Allied Health Programs

EMT  
Nursing  
Respiratory Therapy

### Business Programs

Customer Service Specialist  
Management  
Marketing  
Medical Office Management  
Office Management

### Communications

Broadcasting and Multimedia/Performance  
Broadcasting and Multimedia/Technical

### Education

Child Development Associates  
Early Childhood Education  
Family Child Care  
Infant/Toddler Care  
Instructional Assistant –Special Education  
Teacher Aide

### Entrepreneurial Studies

Alternative Fuel Vehicle  
Automotive Repair  
Bookkeeping Services  
Computer Networking  
Family Child Care

Geospatial Programming  
Graphic Design Display Advertising  
Music Performance  
Personal Computer Maintenance  
Political Campaigning  
Visual Art  
Web Game Development  
Website Development

### Business Technology Programs

Administrative Assistant  
Medical Office Management

### Public Safety

Corrections Certificate  
Criminal Justice/Corrections  
Criminal Justice/Geospatial Technology  
Criminal Justice/Law Enforcement

### Computer-Related Programs

.NET Programming  
C/Java Programming  
Computer Applications  
Computer Networking Technology  
Computer Programming  
Interactive Media and Gaming:  
    Game Designing  
Midrange Programming  
Video Editing  
Web Design

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## Applied Technologies Programs

Automotive Technician  
Automotive Technology  
Biofuels Technician  
Biomedical Electronics Technology  
Computer-Aided Drafting and Design  
Digital Electronics Technology  
Display Advertising  
Electronics Technology  
Engineering  
Graphic Design  
Graphic Design for Multimedia  
Industrial Electrical Maintenance  
Industrial Maintenance  
Industrial Technology  
Machining Technology  
Machinist/Machine Mechanic

Manufacturing Engineering Technology  
Materials Technology  
Printing Prepress  
Production Supervision  
Quality Assurance  
Video/Audio  
Welding Technology  
Wind and Solar Technician

## University Partnership Programs

Professional Truck Driver Training  
Water Resource Management

## Let's Get Started!

Our friendly enrollment representatives will make the enrollment process easy and enjoyable. Our orientations will get you acquainted with our campus and all of the resources you will have at your fingertips. Where do you start?

- Apply online at [www.muskegoncc.edu/apply](http://www.muskegoncc.edu/apply)
- Call (231) 777-0454 to reserve a spot at the next orientation
- Check out your financial aid options; visit [www.muskegoncc.edu/financialaid](http://www.muskegoncc.edu/financialaid) to learn more
- Visit [www.muskegoncc.edu/testing](http://www.muskegoncc.edu/testing) to learn more about placement tests
- Meet with a counselor; learn more at [www.muskegoncc.edu/counseling](http://www.muskegoncc.edu/counseling)
- Register for classes, using WebAdvisor for Students, at [mymcc.muskegoncc.edu](http://mymcc.muskegoncc.edu)
- Make the most of your experience at MCC!

## Academic Calendar

For detailed Academic Calendar information, refer to the MCC website at [www.muskegoncc.edu/calendar](http://www.muskegoncc.edu/calendar) or the Fall or Winter/Summer course schedules (printed versions, or online at [www.muskegoncc.edu/schedules](http://www.muskegoncc.edu/schedules)).

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## **MCC Mission Statement**

Muskegon Community College, an associate degree-granting institution of higher education, is a center for lifelong learning, which provides persons the opportunity to attain their educational goals by offering programs that respond to individual, community, and global needs.

To fulfill its mission, MCC is committed to:

1. Prepare students for successful transfer to four-year colleges and universities, and enable students to pursue higher-level degree opportunities through our local partnerships with university programs.
2. Prepare students in critical thinking, communication and long-term learning skills for the changing challenges of the future.
3. Develop technical and vocational skills necessary to enter and/or advance in the technologically sophisticated workplace of the 21st century.
4. Provide for the assessment and/or improvement of learning skills and attitudes necessary for a successful educational experience.
5. Meet the unique educational, cultural, and societal needs in the community through special courses, seminars, and exhibits.
6. Respond in a rapid fashion to the ever-changing educational and training needs of local and regional business and industry.
7. Stimulate intellectual curiosity, promote humanitarian values and enhance the general educational experiences necessary for persons to function as effective citizens.
8. Create an atmosphere where diversity is acknowledged and encouraged.
9. Provide comprehensive student services that are conducive to student learning and satisfaction in all facets of the college experience and appropriate to an open door community college.

## **Accreditation**

Muskegon Community College is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 30 N. LaSalle Street, Chicago, Illinois, 60602-2504. The Commission may be contacted by phone, (800) 621-7440, by fax, (312) 263-7462, or by e-mail, [info@hlcommission.org](mailto:info@hlcommission.org). They may also be contacted online at [www.ncahlc.org](http://www.ncahlc.org). Any interested persons may review a copy of the accreditation documents by contacting the President's Office, Room 400.

## **Equal Opportunity**

Muskegon Community College is an equal opportunity institution and does not discriminate on the basis of race, color, religion, gender, national origin, marital status, sexual orientation, political persuasion, disability, height, weight, or age in any of its educational programs, activities, and employment.

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# MCC ACADEMIC PROGRAMS

## Associate in Science and Arts Degree

This degree is for students intending to transfer to a four-year college or university. If you wish to major in a program that requires you to transfer to a four-year college, such as Social Work or Computer Science, the courses you need to take are outlined in the transfer guides available online at [www.muskegoncc.edu](http://www.muskegoncc.edu) or in the Counseling and Advising Center, Room 101. These programs are planned to enable students to transfer to bachelor degree-granting colleges and universities with advanced standing. Students graduating from Muskegon Community College with an Associate in Science and Arts Degree are generally admitted to the bachelor degree-granting institutions with junior year standing.

## Associate in Applied Science Degree

If you wish to major in an occupational program that requires only two years of study, such as Electronics or Administrative Assistant, the courses you need to take are outlined in this catalog. You will want to pursue the Associate in Applied Science Degree. The Associate in Applied Science Programs (Business, Allied Health, Technology) were designed in conjunction with active advisory committees, so that a student may reasonably expect employment upon successful completion of his/her degree work. The Associate in Applied Science Degree may also be used as a transfer degree to a limited number of baccalaureate programs, but A.A.S. degree programs are not specifically designed to transfer to four-year colleges or universities.

## Diplomas, Certificates and Professional Development Credits

Certificates are offered in many of the same occupationally-oriented programs as the Associate in Applied Science Degrees but are not as comprehensive in nature. These certificate programs were developed with the assistance of an advisory committee, and students may reasonably expect employment upon completion of these programs. New certificate and professional development programs are continually being developed at Muskegon Community College. Students should check with counselors for information on other certificate and professional development programs that may be available.

**IT IS STRONGLY RECOMMENDED THAT STUDENTS SEE A COUNSELOR TO DEVELOP A COURSE PLAN FOR PURPOSES OF TRANSFERRING TO A FOUR-YEAR INSTITUTION or OBTAINING A TWO-YEAR DEGREE or CERTIFICATE.**

**Students returning to Muskegon Community College after an absence of FIVE YEARS or LONGER will be under the requirements of the CURRENT CATALOG.**

## Associate in Science and Arts

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## Associate in Applied Science

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Criminal Justice/Geospatial Technology.....	25

### Allied Health Programs

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### Business Programs

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### Technical & Computer-Related Programs

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Personal Computer Maintenance Entrepreneur.....	61

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# Associate in Science and Arts Degree Programs

## Associate in Science and Arts

The College shares the view held by many that an education should prepare a person not only for a career, but also for life. It is primarily through the curriculum of the general education program for the Associate in Science and Arts Degree that the College seeks to help students acquire the knowledge and skills necessary to understand both themselves and the world in which we live. For a complete statement regarding the purposes of general education, please see page 240 of this catalog. This degree automatically fulfills the MACRAO AGREEMENT.

### \*REQUIRED FOUNDATIONAL SKILLS

The College believes that a successful, meaningful experience in college courses occurs when students enter programs adequately prepared to meet their challenges. Therefore, you must demonstrate a minimum level of achievement, either by successful testing or satisfactory course completion (a grade of “C” or better), in four areas: writing, reading, math and computers. See page 234 for information on testing.

### BASED ON TEST RESULTS YOU MAY BE REQUIRED TO COMPLETE:

1. Writing ..... English 085, 089, 091, and/or 114
2. Reading ..... Reading 040 or 050
3. Mathematics ..... Math 050 or 107
4. Computers ..... CIS 100 or any other CIS course  
(Students are strongly recommended to complete CIS 110, CIS 120A, or CIS 129.)

\*You may test out of each of these requirements.

<b>GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)</b>	<b>CR.HRS.</b>
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Communication .....	6
English 101 and 102	

Science/Math .....	8
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Courses must be taken in more than one academic area, be numbered 100 level or above, and include at least one 4-credit hour laboratory course.

Anthropology 105

Astronomy 101, 105A (same course as Physics 105A)

†Biology 103L&L, 104L&L, 105L&L, 106L&L, 109, 110, 120, 120F, 122B, 207LEC & 207A, Biology 200

**{All Biology classes must be taken with the accompanying  
Biology lab for laboratory credit.}**

Business 105 (same course as Mathematics 115)

*Continued on next page*

†‡Chemistry 100LEC & 100A, 101LEC & 101A,  
102LEC & 102A, 109LEC & 109A, 120LEC & 120A,  
130LEC & 130A, 201E (Lecture) & 201F (Lab),  
202F (Lecture) & 202G (Lab)

**{All Chemistry classes must be taken with the accompanying  
Chemistry lab for laboratory credit.}**

†Geography 101A, 215

†Geology 101, 102

Mathematics 105, 107, 109, 111, 112,

115 (same course as Business 105),

151, 161, 162, 215, 276, 283, 295

†Physical Science 101A

†Physics 201, 202, 203, 204

Physics 105A (same course as Astronomy 105A)

†These courses will satisfy the laboratory requirement.

†‡Chemistry placement test is required prior to taking Chemistry 101.  
Contact the Testing Center at (231) 777-0394.

## THE HUMAN EXPERIENCE

### **Aesthetic Values.....3**

Art 101, 104, 105B, 107, 108, 109, 204B, 205, 207, 208,  
209, 211, 220

Communications 203 (same course as English 208)

Dance 100, 101, 102, 106, 200, 201, 206, 210(A, B, C or D), 213, 218

English 208 (same course as Communications 203), 223

Music 103 and ALL other Music courses numbered 100 or above

Theater 101, 102, 108, 120, 141, 142, 144, 145, 147, 148, 160,  
201, 202, 203, 210, 212, 217, 260

### **Ethics and Logic.....3**

Philosophy 101,102, 104, 202, 204, 205, 207

### **Social Relationships .....3**

Economics 101, 102

English 130 (same course as Women's Studies 101)

Psychology 102, 201, 202, 203, 207, 208,

209, 210 (same course as Sociology 210)

Sociology 101, 102A, 202A, 203, 205, 206,

210 (same course as Psychology 210)

Women's Studies 101 (same course as English 130)

## HUMAN CULTURES

### **Western World.....3**

Art 198, 199, 202

English 200, 201, 204, 205, 206, 210,213, 225, 226, 227, 228, 231

History 101, 102, 204

Humanities 195

Music 103

Political Science 203

Theater 201

**American.....3**

- History 201, 202, 207, 211, 220
- Political Science 111, 205, 220

**International.....3**

If the credit hours from American Cultures and Social Relationships total fewer than 8 credits, the choices are:

- Anthropology 103, 110
- Geography 104, 105
- History 195
- Political Science 202, 210, 211

If the credit hours from American Cultures and Social Relationships total 8 credits or more, then other options are:

- Chinese 101
- English 207, 211, 218
- French 101, 102, 201, 202
- German 101, 102, 201, 202
- History 210
- Philosophy 203, 210
- Spanish 101, 102, 201, 202

**Physical Education.....2**

One credit hour from: PEA 101A, 103, 104A, 118, or 201 and one PEA/DNC credit hour of choice.

**MINIMUM GENERAL EDUCATION CREDITS 34  
MINIMUM ELECTIVES CREDIT 28**

**MINIMUM TOTAL CREDITS 62**

**Electives**

Electives are courses a student chooses, in addition to the other degree requirements, based on the anticipated major and the transfer school the student will be attending. Electives should be chosen carefully, with the advice of a counselor who will provide a student with a transfer guide that lists specific courses four-year schools recommend students take at the community college level.

**NOTE:** Some four-year colleges and universities require a second year proficiency in foreign language. Some graduate school admissions committees prefer candidates with a foreign language background. If you think you might one day seek admission to a graduate program you should consider studying a foreign language at Muskegon Community College.

To meet the College’s technology goals, students are strongly recommended to complete CIS 110, 120A, or 129. The following courses will not count toward graduation: ENG 085, 089, 091; RDG 040, 050, 060; MATH 035F, 036A, 036FT, 038, 038FT, 040, 041.

*If you are uncertain about your major, the College recommends that you complete your **General Education Requirements** first. All students, whether majoring in English or Engineering, must complete the general education requirements.*

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## MACRAO Agreement

### *(Michigan Association of Collegiate Registrars and Admissions Officers)*

Students who complete the general education requirements for the Associate in Science and Arts Degree will receive the MACRAO Agreement and it will be posted on their transcript, which makes transferring to many Michigan colleges and universities easier. Colleges and universities who are a part of this agreement will exempt transfer students from their freshman-level general education requirements if the student has met the general education requirements at Muskegon Community College. The agreement does not cover elective courses. Some colleges and universities have limitations and provisos; all students should consult with a counselor regarding the four-year college of their choice.

In special cases, it may be in the best interest of a student to take courses at Muskegon Community College that result in receiving the MACRAO Agreement but do not meet the requirements for the Associate in Science and Arts Degree.

- All students should consult with a counselor.
- Students must complete a minimum of 3 credit hours at Muskegon Community College in order to receive the MACRAO Agreement.
- Students must complete the Application For Graduation form to determine if the requirements of MACRAO have been satisfied.

## Foreign Language

Some four-year colleges and universities require a second-year proficiency in a foreign language. Some graduate school admissions committees prefer candidates with a foreign language background. Students who think they might one day seek admission to a graduate program should consider studying a foreign language at Muskegon Community College.

## Transfer Guides

Transfer guides tell you what courses to take at Muskegon Community College before transferring to a senior college. There are transfer guides available for the most popular majors and transfer schools. For example, if you want to study education and transfer to Grand Valley State University, there is a transfer guide which tells you which courses Grand Valley State University recommends you to take at MCC before transferring. The guides are prepared jointly by our counselors and the admissions offices at the transfer colleges, and are available in the Counseling and Advising Center in room 101, or online at [www.muskegoncc.edu](http://www.muskegoncc.edu) under Current Students. It is important to meet with an MCC counselor.

## Associate in Science and Arts

**Broadcasting and Multimedia/Performance**

The Broadcasting and Multimedia/Performance curriculum is designed to prepare students for entry into related degree tracks at four-year colleges and universities. Traditionally, these programs provided classes and experience for those desiring on-camera or behind-the-mic jobs in broadcasting, but now radio and television seek employees with both performance and production skills. Therefore, classes in television and audio production are required and classes in graphic design, web design, and video editing are strongly recommended. Students will find a variety of on-air opportunities in sports reporting, weather delivery, news standup, and talk show hosting through MCC's own media outlets.

**\*REQUIRED FOUNDATIONAL SKILLS**

Refer to previous Associate in Science and Arts Degree information for Foundational Skills Requirements, specific course numbers, and information.

**GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)** **CR. HRS.**

Communication.....6

Science/Math.....8

**THE HUMAN EXPERIENCE**

Aesthetic Values.....3

Ethics and Logic.....3

Social Relationships.....3

**HUMAN CULTURES**

Western World.....3

American.....3

International.....3

Physical Education

PEA and PEA/DNC.....2

**BROADCASTING AND MULTIMEDIA/  
PERFORMANCE REQUIREMENTS (28 CR. HRS.)** **CR. HRS.**

COM 101 Oral Communications.....3

COM 102 Mass Media.....3

COM 107 Introduction to Journalism.....3

COM 112 Audio Production.....2

COM 113 Practical Radio.....2

COM 201 Public Speaking.....3

COM 212 Television Production.....3

CIS 110 Computer Concepts or

CIS 120A Introduction to Computer Information Systems.....3

TH 102 Introduction to Acting I or TH 203 Readers Theater.....3

TH 160 Acting for TV and Film.....3

**SUGGESTED ELECTIVES (4-6 CR. HRS.)** **CR. HRS.**

COM 202 Human Communication.....3

COM 203/ENG 208 Introduction to Cinema.....3

ENG 221 Advanced Writing.....3

ENG 222 Creative Writing.....3

BUS 263 Advertising Dynamics.....3

*Continued on next page*

CIS 119PP Introduction to Presentation Graphics .....	1
CIS 177DW Introduction to HTML Editors .....	1
CIS 167FL/GRD 167FL Introduction to Internet Animation .....	1
GRD 120 Introduction to Graphic Design .....	3
CIS 187 Multimedia Digitizing .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
COM 290CI* Cooperative Internship.....	3

**Total 66-68**

*\*COM 290CI requires successful completion of at least 21 credit hours in the Broadcasting and Multimedia Core Requirements, 30 credit hours overall, 2.5 GPA and recommendation from department faculty.*

## Associate in Science and Arts

# Criminal Justice Corrections

### **\*REQUIRED FOUNDATIONAL SKILLS**

Refer to previous Associate in Science and Arts Degree information for Foundational Skills Requirements, specific course numbers, and information.

**All CJ classes must be passed with a minimum grade of “C.”**

<b>GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)</b>	<b>CR. HRS.</b>
Communication.....	6
Science/Math.....	8
<b>THE HUMAN EXPERIENCE</b>	
Aesthetic Values .....	3
Ethics and Logic .....	3
Social Relationships.....	3
<b>HUMAN CULTURES</b>	
Western World.....	3
American.....	3
International .....	3
Physical Education	
PEA and PEA/DNC .....	2
<b>CRIMINAL JUSTICE REQUIREMENTS (15 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 101 Intro to Law Enforcement.....	3
CJ 102 Police Administration I.....	3
CJ 104 Criminology.....	3
CJ 109 Crime Prevention and Juvenile Delinquency .....	3
CJ 201 Criminal Law .....	3

<b>REQUIRED ELECTIVES (9 CR. HRS.)</b>	<b>CR. HRS.</b>
<i>(Choose three courses from the following)</i>	
CJ 250 Introduction to Corrections.....	3
CJ 251A Legal Issues in Corrections.....	3
CJ 252A Correctional Institutions/Facilities.....	3
CJ 257 Client Relations in Corrections.....	3
CJ 258A Client Growth and Development.....	3

<b>SUGGESTED ELECTIVES (4 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 110 Defensive Tactics.....	3
CJ 112 Emergency Vehicle Operations.....	1
CJ 120 Firearms Certification.....	2
CJ 122 The Police Patrol Function.....	3
CJ 123 Traffic Enforcement.....	3
CJ 130 Tactical Communication.....	3
CJ 193 HAZ-MAT Communications.....	1
CJ 202 Police Administration II.....	3
CJ 204 Criminal Investigations.....	3
CJ 205 Interrogation and Case Preparation.....	3
CJ 206 Evidence and Criminal Procedure.....	3
CJ 207 Police and Community Relations.....	3
CJ 208 Police Science Laboratory I.....	3
CJ 298 Instructor Skill Development.....	3

**Total 62**

Associate in Science and Arts

## Criminal Justice Law Enforcement

### **\*REQUIRED FOUNDATIONAL SKILLS**

Refer to previous Associate in Science and Arts Degree information for Foundational Skills Requirements, specific course numbers, and information.

**All CJ classes must be passed with a minimum grade of “C.”**

<b>GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)</b>	<b>CR. HRS.</b>
Communication.....	6
Science/Math.....	8
<b>THE HUMAN EXPERIENCE</b>	
Aesthetic Values.....	3
Ethics and Logic.....	3
Social Relationships.....	3
<b>HUMAN CULTURES</b>	
Western World.....	3
American.....	3
International.....	3
Physical Education	
PEA and PEA/DNC.....	2

*Continued on next page*

<b>CRIMINAL JUSTICE REQUIREMENTS (15 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 101 Intro to Law Enforcement.....	3
CJ 102 Police Administration I.....	3
CJ 104 Criminology.....	3
CJ 109 Crime Prevention and Juvenile Delinquency .....	3
CJ 201 Criminal Law .....	3
<b>REQUIRED ELECTIVES (9 CR. HRS.)</b>	<b>CR. HRS.</b>
<i>(Choose three courses from the following)</i>	
CJ 202 Police Administration II.....	3
CJ 204 Criminal Investigations.....	3
CJ 205 Interrogation and Case Preparation .....	3
CJ 206 Evidence and Criminal Procedure .....	3
CJ 207 Police and Community Relations .....	3
CJ 208 Police Science Laboratory I.....	3
<b>SUGGESTED ELECTIVES (4 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 110 Defensive Tactics .....	3
CJ 112 Emergency Vehicle Operations.....	1
CJ 120 Firearms Certification .....	2
CJ 122 The Police Patrol Function .....	3
CJ 123 Traffic Enforcement.....	3
CJ 130 Tactical Communication.....	3
CJ 193 HAZ-MAT Communications .....	1
CJ 250 Introduction to Corrections.....	3
CJ 251A Legal Issues in Corrections .....	3
CJ 252A Correctional Institutions/Facilities.....	3
CJ 257 Client Relations in Corrections.....	3
CJ 258A Client Growth and Development .....	3
CJ 298 Instructor Skill Development.....	3
	<b>Total 62</b>

## Associate in Science and Arts

**Criminal Justice Geospatial Technology****\*REQUIRED FOUNDATIONAL SKILLS**

Refer to previous Associate in Science and Arts Degree information for Foundational Skills Requirements, specific course numbers, and information.

All CJ classes must be passed with a minimum grade of “C.”

<b>GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)</b>	<b>CR. HRS.</b>
Communication.....	6
Science/Math.....	8
<b>THE HUMAN EXPERIENCE</b>	
Aesthetic Values.....	3
Ethics and Logic.....	3
Social Relationships.....	3
<b>HUMAN CULTURES</b>	
Western World.....	3
American.....	3
International.....	3
Physical Education	
PEA and PEA/DNC.....	2
<b>CRIMINAL JUSTICE REQUIREMENTS (15 CR. HRS.)</b>	
<b>CR. HRS.</b>	
CJ 101 Intro to Law Enforcement.....	3
CJ 102 Police Administration I.....	3
CJ 104 Criminology.....	3
CJ 109 Crime Prevention and Juvenile Delinquency.....	3
CJ 201 Criminal Law.....	3
<b>GEOSPATIAL TECHNOLOGY REQUIREMENTS (18 CR. HRS.)</b>	
<b>CR. HRS.</b>	
CIS 120A Introduction to Computer Information Systems.....	3
GEOG 230 Elements of Map Design.....	3
GEOG 231 Introduction to Geographic Information Systems.....	3
GEOG 232 Applications of Geographic Information Systems.....	3
Approved Electives*.....	6
<i>*Approved Electives</i>	
MATH 115 Probability and Statistics or BUS 105 Business Statistics...3	
CIS 253A Database Design and Implementation.....	3
GEOG 101A Physical Geography.....	4
GEOG 215 Introduction to Weather and Climate.....	4
CAD 100 Introduction to Drafting.....	3
GRD 120 Introduction to Graphic Design.....	3
GEOG 290CI GST Cooperative Internship.....	1-4
	<b>Total 62</b>

## Associate in Science and Arts

**Early Childhood Education**

This degree is intended for students who would like to work in a pre-kindergarten setting, such as a Head Start program. Please note it does not lead to a teaching certificate for K-12.

**\*REQUIRED FOUNDATIONAL SKILLS**

Refer to previous Associate in Science and Arts Degree information for Foundational Skills Requirements, specific course numbers, and information.

<b>GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)</b>	<b>CR. HRS.</b>
Communication.....	6
Science/Math.....	8
<b>THE HUMAN EXPERIENCE</b>	
Aesthetic Values.....	3
Ethics and Logic.....	3
Social Relationships.....	3
<b>HUMAN CULTURES</b>	
Western World.....	3
American.....	3
International.....	3
Physical Education	
PEA and PEA/DNC.....	2
<b>EARLY CHILDHOOD</b>	
<b>EDUCATION REQUIREMENTS (20 CR. HRS.)</b>	
ED 109 The Parent-Child Connection.....	3
ED 111 Introduction to the Education of Young Children.....	3
ED 120A Early Childhood Education.....	3
ED 214 Infants and Toddlers.....	3
ED 220A Early Childhood Assessment.....	2
ED 230 Children's Literature.....	3
ED 225 Child Development or ED 250 Human Growth and Learning.....	3
<b>RECOMMENDED ELECTIVES (8 CR. HRS.)</b>	
ED 107 Child Care: Operating a Successful Business.....	3
ED 118 Creative Curriculum for Children.....	3
ED 211 Behavior Management.....	3
ED 223 Child Care Administration.....	3
ED 226 Interdisciplinary Approaches to Early Interventions.....	3
ED 251 Health Needs of the Young Child.....	3
ED 210 Child Care and Guidance.....	3
ED 252A Child Development Practicum.....	3
	<b>Total 62</b>

## Associate of Science and Arts

# Engineering

## (Two-Year Program)

This curriculum is designed to provide a solid foundation in math, science, and engineering for students who are interested in transferring to a four-year institution to complete a Bachelor's Degree in Engineering. Successful completion of the program leads to the degree of Associate of Science and Arts. This degree is designed for transfer.

**REQUIRED FOUNDATIONAL SKILLS –You must demonstrate a minimum level of achievement, either by successful testing or satisfactory course completion (a grade of “C” or better) in four areas:**

1. Writing English 085, 089, 091 or 114
2. Reading Reading 040 or 050
3. Math Mathematics 050 or 107 (or complete higher level course)
4. Computers CIS 100 or any other CIS course (Consult a counselor regarding transferability. CIS 110 or 120A are strongly recommended.)

English, Reading and Mathematics Placement Tests may be required and are available in Testing Services, located in Room 134 – 777-0394.

### GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)

	CR. HRS.
ENG 101 English Composition .....	3
ENG 102 English Composition .....	3
MATH 162 Calculus II.....	3
PHYS 203 L&L Engineering Physics.....	5

#### THE HUMAN EXPERIENCE

Aesthetic Values.....	3
Ethics and Logic .....	3
Social Relationships (PSYC 102, SOC 101, Women's Studies 101) .....	3

#### HUMAN CULTURES

Western World.....	3
American.....	3
International .....	3
Physical Education	
PEA 101A, PEA 103, PEA 104A, PEA 118 or PEA 201 and one PEA/DNC credit hour of choice.....	2

### ENGINEERING-RELATED REQUIREMENTS (19 CR. HRS.)

	CR. HRS.
MATH 283 Calculus III .....	4
MATH 295 Differential Equations.....	4
PHYS 204 L&L Engineering Physics.....	5
ENGR 202 Statics .....	3
ENGR 204 Engineering Dynamics.....	3

*Continued on next page*

**ENGINEERING ELECTIVES (Choose a minimum of 9 credits)**

ENGR 105 Introduction to Engineering .....	4
CAD 110 Introduction to Computer-Aided Drafting .....	3
CIS 185 “C” Programming .....	3
CHEM 101A L&L General and Inorganic Chemistry .....	5
CHEM 102 L&L General and Inorganic Chemistry .....	5
MATH 215 Probability and Statistics for Engineering .....	3
GEOL 101A Introduction to Physical Geology .....	4
GEOL 102 Introduction to Earth History .....	4

**Total 62**

**Associate in Science and Arts**

**Interactive Media and Gaming: Game Designer**

A game designer develops the concept, layout, genre, story, and gameplay of this form of interactive media. This may include playfield, design, hardware specifications, writing, plus all the other properties that balance and tune the gameplay experience. This individual must possess good writing skills, some graphic design/art and programming skills, plus a solid background in the conceptual structures of a game (such as human relations, history, geography/geology, criminal investigation, etc). A minimum of 34 credits of General Education requirements must be fulfilled. Please refer to previous Associate in Science and Arts Degree information for more information and other required foundation skills\*.

**\*REQUIRED FOUNDATION SKILLS**

BASED ON TEST RESULTS YOU MAY BE REQUIRED TO COMPLETE:

1. Writing ..... English 085, 089, 091, and/or 114
2. Reading ..... Reading 040 or 050
3. Mathematics ..... Math 050 or 107 (or complete higher level course)
4. Computers ..... CIS 120A

*\*You may test out of each of these requirements.*

**GENERAL EDUCATION REQUIREMENTS (34 CR. HRS.)**

**CR. HRS.**

Communication .....	6
ENG 101 English Composition and ENG 102 English Composition Science/Math .....	8
MATH 115 Probability and Statistics	
<i>*Must include at least four (4) credits of lab science from the following list.</i>	
Biology 103L&L, 104L&L, 105L&L, 106L&L, 109, 110L&L, 120LEC, 120F, 122B, 207LEC & 207A	
Chemistry 100LEC & 100A, 101LEC & 101A, 102LEC & 102A, 109LEC & 109A, 120LEC & 120A, 130LEC & 130A, 201E & 201F, 202F & 202G	
Geography 101A, 215	
Geology 101A, 102	
Physical Science 101A	
Physics 201L&L, 202L&L, 203L&L, 204L&L	

- \*Must include at least one (1) credit of non-lab science from the following list.*
- Anthropology 105
- Astronomy 101, 105A (same course as Physics 105A)
- Biology 200, 207 – lecture only
- Geography 101A
- Mathematics 105, 107, 109, 111, 112, 115 (or Business 105), 151, 161, 162, 215, 276, 283, 295
- Physics 105A (same course as Astronomy 105A)

**THE HUMAN EXPERIENCE**

Aesthetic Values.....	3
English 208 (or Communications 203)	
Theater 101, 102, 160	
Ethics and Logic .....	3
Philosophy 104, 202	
Social Relationships.....	3
Economics 101, 102	
Psychology 102, 201	
Sociology 101	

**HUMAN CULTURES**

Western World.....	3
Art 198	
English 200, 204	
History 101, 102	
Humanities 195	
Political Science 203	
American.....	3
History 201, 202	
Political Science 111	
International.....	3

*\*If the credit hours from American Cultures and Social Relationships total fewer than 8 credits, the choices are:*

- Geography 104, 105
- History 195
- Political Science 211

*\*If the credit hours from American Cultures and Social Relationships total 8 credits or more, then other options are:*

- English 211, 218

Physical Education.....	2
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*Choose one (1) from:*

- PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201

*Also, choose one (1) PEA or DNC credit hour of choice.*

*Continued on next page*

<b>CORE REQUIREMENTS (12 CR. HRS.)</b>	<b>CR. HRS.</b>
CIS 120A Introduction to Computer Information Systems (fulfills FOUNDATIONAL SKILL REQUIREMENT).....	3
CIS 124 Introduction to Game Development .....	3
GRD 120 Introduction to Graphic Design .....	3
CIS 284 Interactive Media and Game Design .....	3
 <b>GAME DESIGNER REQUIREMENTS (18 CR. HRS.)</b>	 <b>CR. HRS.</b>
BUS 127 Human Relations.....	3
ART 198 Art History I <i>(may be used to fulfill general education group: Western World)</i> .....	3
COM 102 Mass Media.....	3
ENG 218 Popular Literary Genres <i>(may be used to fulfill general education group: International)</i> .....	3
ENG 222 Creative Writing.....	3
GEOG 104 or GEOG 105 <i>(may be used to fulfill general education group: International)</i> .....	3
ELECTIVES - if needed to reach 64 credits.....	Variable
	<b>Total 64</b>

## Associate in Applied Science Degree Programs

### Associate in Applied Science

## Broadcasting and Multimedia/Technical

The Broadcasting and Multimedia/Technical curriculum is designed to prepare students for entry into the production side of television, radio, and related careers in news media. Core requirement classes strive to provide real world experience within the college's radio and television stations. As broadcasting transitions to digital delivery and expands to web and other new media methods of reaching listeners and viewers, this curriculum requires students to broaden their experiences to include networking, web design and graphic design. This program is not designed to transfer to a four-year institution. Any student wishing to transfer to a four-year college is urged to consult with a counselor.

<b>GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business & Technical Communications.....	3
BCOM 102 Advanced Business & Technical Communications.....	3
BUS 126 Business Math or MATH 109 College Algebra with Applications.....	3-4
BUS 127 Human Relations or BUS 166 Quality Customer Service .....	3
CIS 110 Computer Concepts or CIS 120A Intro to Computer Information Systems .....	3
<i>Select one of the following:</i>	

GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Intro to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit of choice) .....	2

**BROADCASTING AND MULTIMEDIA/TECHNICAL  
CORE REQUIREMENTS (35 CR. HRS.)**

	<b>CR. HRS.</b>
COM 101 Oral Communications .....	3
COM 102 Mass Media .....	3
COM 112 Audio Production .....	2
COM 113 Practical Radio .....	2
COM 212 Television Production .....	3
GRD 120 Introduction to Graphic Design .....	3
GR 160 Digital Imaging.....	3
CIS 109/ELTR 109 Personal Computer Maintenance .....	3
CIS 143 Introduction to Local Area Networks .....	3
CIS 177DW Introduction to HTML Editors .....	1
CIS 187 Multimedia Digitizing .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
TH 120 Technical Theater I .....	3
COM 290CI* Cooperative Internship.....	3

**SUGGESTED ELECTIVES (5-7 CR. HRS.)**

	<b>CR. HRS.</b>
BUS 200 International Business .....	3
BUS 263 Advertising Dynamics.....	3
COM 107 Introduction to Journalism.....	3
COM 202 Human Communication.....	3
COM 201 Public Speaking .....	3
ENG 221 Advanced Writing.....	3
ENG 222 Creative Writing.....	3
COM 203/ENG 208 Introduction to Cinema.....	3

**Total 66-68**

*\*COM 290CI requires successful completion of at least 21 credit hours in the Broadcasting and Multimedia Core Requirements, 30 credit hours overall, 2.5 GPA and recommendation from department faculty.*

# Video Editing Certificate

The Video Editing certificate provides an opportunity to receive training in non-linear digital video editing in a fall-winter, one-year sequence.

<b>CERTIFICATE REQUIREMENTS (17 CR. HRS.)</b>	<b>CR. HRS.</b>
CIS 110 Computer Concepts or CIS 120A Introduction to Computer Information Systems .....	3
CIS 187 Multimedia Digitizing .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
COM 112 Audio Production .....	2
COM 212 Television Production .....	3
GR 160 Digital Imaging .....	3

Associate in Applied Science

## Criminal Justice/Corrections

All CJ classes must be passed with a minimum grade of "C."

<b>GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business & Technical Communications .....	3
BCOM 102 Advanced Business & Technical Communications .....	3
MATH 109 College Algebra with Applications, or BUS 126 Business Math, or MATH 115 Probability and Statistics, or BUS 105 Business Statistics .....	3-4
BUS 127 Human Relations or COM 101 Oral Communications .....	3
<i>Select one of the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Intro. to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
CIS 110 Computer Concepts or CIS 120A Introduction to Computer Information Systems .....	3
PEA/DNC Physical Education and/or Dance (Required: One credit hour from PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit of choice) .....	2
<b>CRIMINAL JUSTICE REQUIREMENTS (15 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 101 Intro to Law Enforcement .....	3
CJ 102 Police Administration I .....	3
CJ 104 Criminology .....	3
CJ 109 Crime Prevention and Juvenile Delinquency .....	3
CJ 201 Criminal Law .....	3

<b>CORRECTIONS REQUIREMENTS (15 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 250 Introduction to Corrections.....	3
CJ 251A Legal Issues in Corrections.....	3
CJ 252A Correctional Institutions/Facilities.....	3
CJ 257 Client Relations in Corrections.....	3
CJ 258A Client Growth and Development.....	3
<b>SUGGESTED ELECTIVES (10-12 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 110 Defensive Tactics.....	3
CJ 112 Emergency Vehicle Operations.....	1
CJ 120 Firearms Certification.....	2
CJ 122 The Police Patrol Function.....	3
CJ 123 Traffic Enforcement.....	3
CJ 130 Tactical Communication.....	3
CJ 193 HAZ-MAT Communications.....	1
CJ 202 Police Administration II.....	3
CJ 204 Criminal Investigations.....	3
CJ 205 Interrogation and Case Preparation.....	3
CJ 206 Evidence and Criminal Procedure.....	3
CJ 207 Police and Community Relations.....	3
CJ 208 Police Science Laboratory I.....	3
CJ 298 Instructor Skill Development.....	3
	<b>Total 62</b>

## Corrections Certificate

### CORRECTIONS OFFICER PROFESSIONAL DEVELOPMENT CREDITS

Since October 1, 1987 ALL Michigan State Corrections Officers hired are required to have 15 semester or 23 quarter college credit hours earned through one of the following options:

#### OPTION I

Five (5) specific corrections courses as determined by the Michigan Correctional Officer's Training Council.

<b>OPTION I - MCC CORRECTIONS PROGRAM (15 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 250 Introduction to Corrections.....	3
CJ 251A Legal Issues in Corrections.....	3
CJ 252A Correctional Institutions/Facilities.....	3
CJ 257 Client Relations in Corrections.....	3
CJ 258A Client Growth and Development.....	3
	<b>Total 15</b>

Students completing Option I will receive an MCC Certificate in Corrections. Please contact the Academic Affairs Office for your certificate.

*Continued on next page*

**OPTION II**

Fifteen credits in the following areas: Corrections, Criminal Justice, Guidance and Counseling, Educational Psychology, Family Relations, Psychology, Sociology. Each course must be passed with a minimum "C" grade (2.0 G.P.A.).

**OPTION III**

A.S.A. degree in Criminal Justice is recommended. Program should include the five (5) Corrections courses listed in Option I. Each corrections course must be passed with a minimum "C" grade (2.0 G.P.A.).

**Associate in Applied Science****Criminal Justice/Law Enforcement**

All CJ classes must be passed with a minimum grade of "C."

**GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)****CR. HRS.**

BCOM 101 Business & Technical Communications.....	3
BCOM 102 Advanced Business & Technical Communications.....	3
MATH 109 College Algebra with Applications, or BUS 126 Business Math, or MATH 115 Probability and Statistics, or BUS 105 Business Statistics .....	3-4
BUS 127 Human Relations or COM 101 Oral Communications .....	3
<i>Select one of the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Intro to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
CIS 110 Computer Concepts or CIS 120A Intro to Computer Information Systems .....	3
PEA/DNC Physical Education and/or Dance (Required: One credit hour from PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit of choice) .....	2

**CRIMINAL JUSTICE REQUIREMENTS (15 CR. HRS.)****CR. HRS.**

CJ 101 Intro to Law Enforcement.....	3
CJ 102 Police Administration I.....	3
CJ 104 Criminology.....	3
CJ 109 Crime Prevention and Juvenile Delinquency .....	3
CJ 201 Criminal Law .....	3

**LAW ENFORCEMENT REQUIREMENTS (15 CR. HRS.)****CR. HRS.**

CJ 202 Police Administration II.....	3
CJ 204 Criminal Investigations.....	3
CJ 205 Interrogation and Case Preparation .....	3
CJ 206 Evidence and Criminal Procedure .....	3
CJ 207 Police and Community Relations .....	3

<b>SUGGESTED ELECTIVES (10-12 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 110 Defensive Tactics .....	3
CJ 112 Emergency Vehicle Operations .....	1
CJ 120 Firearms Certification .....	2
CJ 122 The Police Patrol Function .....	3
CJ 123 Traffic Enforcement .....	3
CJ 130 Tactical Communication .....	3
CJ 193 HAZ-MAT Communications .....	1
CJ 208 Police Science Laboratory I.....	3
CJ 250 Introduction to Corrections.....	3
CJ 251A Legal Issues in Corrections.....	3
CJ 252A Correctional Institutions/Facilities.....	3
CJ 257 Client Relations in Corrections.....	3
CJ 258A Client Growth and Development .....	3
CJ 298 Instructor Skill Development.....	3
	<b>Total 62</b>

Associate in Applied Science

## **Criminal Justice/Geospatial Technology**

All CJ classes must be passed with a minimum grade of “C.”

<b>GENERAL EDUCATION REQUIREMENTS (16-18 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business & Technical Communications.....	3
BCOM 102 Advanced Business & Technical Communications.....	3
MATH 109 College Algebra with Applications, or BUS 126 Business Math, or MATH 115 Probability and Statistics, or BUS 105 Business Statistics .....	3-4
BUS 127 Human Relations or COM 101 Oral Communications .....	3
Select one of the following:	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Intro. to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC102 Applied Psychology .....	3-4
CIS 110 Computer Concepts or CIS 120A Intro to Computer Information Systems .....	3
PEA/DNC Physical Education and/or Dance (Required: One credit hour from PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit of choice.....	2
<b>CRIMINAL JUSTICE REQUIREMENTS (15 CR. HRS.)</b>	<b>CR. HRS.</b>
CJ 101 Intro to Law Enforcement.....	3
CJ 102 Police Administration I.....	3
CJ 104 Criminology.....	3
CJ 109 Crime Prevention and Juvenile Delinquency .....	3
CJ 201 Criminal Law .....	3

*Continued on next page*

**GEOSPATIAL TECHNOLOGY REQUIREMENTS (15 CR. HRS.)** **CR. HRS.**

GEOG 230 Elements of Map Design.....	3
GEOG 231 Introduction to Geographic Information Systems .....	3
GEOG 232 Applications of Geographic Information Systems.....	3
Approved Electives* .....	6

**\*Approved Electives**

MATH 115 Probability and Statistics or BUS 105 Business Statistics...3	
CIS 253A Database Design and Implementation.....	3
GEOG 101A Physical Geography .....	4
GEOG 215 Introduction to Weather and Climate.....	4
CAD 100 Introduction to Drafting.....	3
GRD 120 Introduction to Graphic Design.....	3
GEOG 290CI Cooperative Internship.....	3-4

**SUGGESTED ELECTIVES (10-12 CR. HRS.)** **CR. HRS.**

CJ 110 Defensive Tactics .....	3
CJ 112 Emergency Vehicle Operations.....	1
CJ 120 Firearms Certification .....	2
CJ 122 The Police Patrol Function .....	3
CJ 123 Traffic Enforcement .....	3
CJ 130 Tactical Communication.....	3
CJ 193 HAZ-MAT Communications .....	1
CJ 208 Police Science Laboratory I.....	3
CJ 250 Introduction to Corrections.....	3
CJ 251A Legal Issues in Corrections .....	3
CJ 252A Correctional Institutions/Facilities.....	3
CJ 257 Client Relations in Corrections.....	3
CJ 258A Client Growth and Development .....	3
CJ 298 Instructor Skill Development.....	3

**Total 62**

## Associate in Applied Science

**Geospatial Programming Entrepreneur**

This degree program provides students with the foundation skills to freelance in geospatial programming. Students are introduced to map reading/interpreting skills and specialized applications in reference to coordinate systems. This program emphasizes both conceptual and technical skills that enable students to apply geospatial technologies including global positioning systems (GPS) and remote sensing. Students in this program acquire the ability to ask questions and solve business problems regarding the management of spatial data. They learn to use modern geographic tools to develop computer programs that access data, integrate them into web-based applications, and custom user interfaces. In addition, students are provided with an introduction to database management systems as they are used to organize large geo-referenced data sets.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 115 Probability and Statistics or BUS 105 Business Statistics .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training or any PEA Physical Education or any DNC Dance .....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business.....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (31 CR. HRS.)** **CR. HRS.**

GEOG 101A Physical Geography .....	4
GEOG 230 Elements of Map Design.....	3
GEOG 231 Introduction to Geographic Information Systems .....	3
GEOG 232 Applications of Geographic Information Systems.....	3
GEOG 290CI Cooperative Internship.....	3-4
CIS 153AW Introduction to Database Management.....	1
CIS 162 Visual C# Programming.....	3
CIS 253 Database Design and Implementation .....	3
CIS 257A HTML for Internet Web Page Design .....	3
CIS 260A Visual Basic Programming.....	3
CIS 267 Web Programming using ASP.....	3

**Total 64**

## Associate in Applied Science

# Political Campaigning Entrepreneur

## (Two-Year Program)

This degree program provides students with the foundation skills to freelance in the political campaign process. Students are introduced to public communications skills through audio and television production, video editing and effective selling techniques using social, visual and print media. They will learn to integrate electronic spreadsheets, database management, webpage editors and image editors into political campaign operations. Through an internship program students are asked to be actively involved in a campaign of their choice. This degree is wrapped around learning fundamental campaign skills in business communications, general accounting and graphic design. Students completing this program will learn the American electoral process and identify their employment possibilities within this system.

### GENERAL EDUCATION REQUIREMENTS (21 CR. HRS.)

	CR. HRS.
BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 115/BUS 105 Statistics .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
Any PEA Physical Education or any DNC Dance .....	2

### ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)

	CR. HRS.
BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for the Small Business Owner .....	3
BUS 161A Effective Selling or BUS/CIS 220 E-Business.....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

### DEGREE REQUIREMENTS (28 CR. HRS.)

	CR. HRS.
PSCI 111 Introduction to American Government .....	4
PSCI 205 Contemporary Issues .....	3
ACC 201 Principles of Accounting.....	3
BUS 262/COM 262 Social Media .....	3
COM 102 Mass Media or	
CIS 287 Personal Computer Digital Video Editing .....	3
COM 212 Television Production .....	3
GRD 120 Introduction to Graphic Design .....	3
PSCI 290CI Campaign Cooperative Internship.....	3
<i>Pick any three (3) of the following</i>	
CIS 101EW Introduction to Electronic Spreadsheets or	
CIS 102EW Intermediate Electronic Spreadsheets.....	1
CIS 153AW Introduction to Database Management.....	1
CIS 177DW Introduction to HTML Editors .....	1
GRD 100ID Introduction to InDesign .....	1
GRD 100IL Introduction to Illustrator.....	1
GRD 100PS Introduction to Photoshop.....	1

**Total 62**

# Allied Health Programs

*(Degrees, Certificates, & Diplomas)*

Admission to the College does not guarantee admission to all programs within the College. Students wishing to enter the Nursing or Respiratory Therapy programs must submit an additional application. These may be obtained in the Counseling & Advising Center, Room 101.

## EMT

EMT Basic Certificate

## Nursing

Practical Nurse

A.A.S. Nursing Degree

## Respiratory Therapy

Respiratory Therapy - A.A.S. Degree

## Individual Health Related Courses

- AH 101 Medical Terminology
- AH 102 Basic Patient Care Skills
- AH 104 Medical Insurance Billing
- AH 105 Introduction to EKG
- AH/ED 251 Health Needs of the Young Child
- ELTR 212 Medical Instrumentation & Measurement
- PHIL 204 Biomedical Ethics
- HE 100A Community First Aid and Safety
- HE 102 Nutrition for Fitness and Sport
- HE 202A Sports Injuries and Prevention
- PEA 101A Fitness, Wellness, and Nutrition

NOTE: See also details on the Business Technology Programs:  
 Administrative Assistant - Medical, AAS and Medical Records & Billing - Certificate.



## MUSKEGON COMMUNITY COLLEGE NURSING PROGRAM CAREER LADDER

(Revised and Approved 23 January 2013)

		<b>ASSOCIATE IN SCIENCE AND ARTS DEGREE</b>			Total 84 Credits (transfer degree)
		ENG 102	English Composition Western World Cultures Group American Culture Elective Aesthetic Values Elective	3 Cr. 3 Cr. 3 Cr. 3 Cr.	
<b>LEVEL II</b>	<b>TERM 7</b>	If chemistry competency is validated by examination, another Science/Mathematics elective is required to fulfill the requirements of the Associate in Science and Arts Degree.			
	<b>TERM 6</b>	<b>ASSOCIATE IN APPLIED SCIENCE DEGREE</b>			Total 72 Credits (43 NUR/29 non-NUR)
	<b>TERM 5</b>	NUR 222A NUR 211A ANTH 103	Managing the Care of the Family Care of the Family in Psychological Crisis Cultural Diversity in Contemporary Society	5 Cr. 4 Cr. 3 Cr.	
<b>TERM 4</b>	NUR 212B BIOL 207	Care of the Family in Physiological Crisis Microbiology Coreq: BIOL 207A Lab Prereq: BIOL 105	8 Cr. 3 Cr. 1 Cr.		
<b>LEVEL I</b>	<b>TERM 4</b>	<b>PRACTICAL NURSE DIPLOMA</b>			Total 40 Credits (26 NUR/14 non-NUR)
	<b>TERM 3</b>	NUR 141B *PHIL 204 *PEA/DNC	Care of the Maturing Family Biomedical Ethics PE Activity or Dance Elective	8 Cr. 3 Cr. 1 Cr.	
	<b>TERM 2</b>	NUR 131B *BIOL 106	Care of the Childrearing Family Anatomy & Physiology II Prereq: BIOL 105	8 Cr. 4 Cr.	
	<b>TERM 1</b>	NUR 126 NUR 121	Family Health & Nursing Care Environmental Stressors and Pharmacotherapeutics	7 Cr. 1 Cr.	
		ENG 101	English Composition	3 Cr.	
		NUR 100 AH 111	Overview of the Nursing Profession Environmental Stressors and Nutrition	1 Cr. 1 Cr.	
		BIOL 105 COM 103 PEA 101A PSYC 201	Anatomy & Physiology I Intercultural Communication for Nurses Fitness, Wellness, & Nutrition General Psychology	4 Cr. 1 Cr. 1 Cr. 1 Cr.	
<p>* Indicates course is optional for individuals exiting upon completion of Level I; must be completed prior to Term 5 if pursuing AAS or ASA Degree. Chemistry competency must be met prior to Term 5.</p> <p>Students must make an appointment with the MCC Counseling and Advising Center (231.777.0362) to review requirements, to develop a course plan, and to receive a Nursing Program application. See Requirement Checklist for Ready List Requirements.</p> <p>If testing/coursework is over eight years old, competency must be validated on established examinations or by repeating the course.</p> <p>Courses in the Nursing Curriculum (NUR or AH) must be completed in sequence with a "C+" (2.3) or above in order to progress in the Nursing Program. Non-nursing courses may be completed with a C (2.0) or above prior to entry into the Nursing Program sequence.</p>					

The Muskegon Community College Nursing Program offers a career ladder nursing curriculum with three educational tracks. Students who choose to exit from the Program after completion of the first four terms of the curriculum will receive a Practical Nurse Diploma and will be eligible to write the National Council Licensure Examination for Practical Nurses (NCLEX-PN) to practice as a Licensed Practical Nurse (LPN). Students who choose to exit from the Program after completion of the first six terms will receive an Associate in applied Science (AAS) Degree. The AAS Degree is primarily an occupationally oriented degree. Students who choose to exit from the Program after all seven terms of the curriculum will receive an Associate in Science and Arts (ASA) Degree. The ASA Degree is primarily a transfer degree which enables students to transfer to baccalaureate degree granting institutions with advanced standing. Students who receive the AAS or ASA Degree will be eligible to write the National Council for Licensure Examination (NCLEX-RN) for licensure to practice as a Registered Nurse (RN).

Licensed Practical Nurses and other individuals with prior nursing education are afforded the opportunity to enter into the curriculum with advanced placement. Students seeking an Associate Degree in Nursing (ADN) who have previously obtained the LPN or LVN licensure must possess an unencumbered license and current work experience.

# Nursing

## NURSING DIPLOMA

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*29-2061 Licenced Practical and Licensed Vocational Nurses*

<http://www.onetonline.org/link/summary/29-2061.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$6,989.00 (includes registration fee)**

**Total estimated costs for books and supplies for entire program: \$1,660.00**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2010 and June 30, 2011: \$6,500.00**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2010 and June 30, 2011, who completed the program within the normal time of 12 months: 54**

The Muskegon Community College Nursing Program offers a career ladder nursing curriculum with three educational tracks. Students who choose to exit from the Program after completion of the first four terms of the curriculum will receive a Practical Nurse Diploma and will be eligible to write the National Council Licensure Examination for Practical Nurses (NCLEX-PN) to practice as a Licensed Practical Nurse (LPN). Students who choose to exit from the Program after completion of the first six terms of the curriculum will receive an Associate in Applied Science (AAS) Degree. The AAS Degree is primarily an occupationally oriented degree. Students who choose to exit from the Program after completion of all seven terms of the curriculum will receive an Associate in Science and Arts (ASA) Degree. The ASA Degree is primarily a transfer degree which enables students to transfer to baccalaureate degree granting institutions with advanced standing. Students who receive the AAS or ASA Degree will be eligible to write the National Council Licensure Examination (NCLEX-RN) for licensure to practice as a Registered Nurse (RN).

The curriculum in each of the educational tracks includes courses in the natural, behavioral and social sciences, and nursing. The nursing courses provide for concurrent theory presentation and clinical practice. Clinical practice takes place in community hospitals and other selected health care settings.

Licensed Practical Nurses and other individuals with prior nursing education are afforded the opportunity to enter into the curriculum with advanced placement. Students seeking an Associate Degree in Nursing (ADN) who have previously obtained LPN or LVN licensure must possess an unencumbered Michigan license and evidence of a minimum of 6 months full-time (or equivalent) current work experience in the LPN role.

See [www.muskegoncc.edu/nursing](http://www.muskegoncc.edu/nursing).

## Accreditation

Muskegon Community College is accredited by the North Central Association's Higher Learning Commission, 30 N. LaSalle St., Chicago, IL, 60602-2504, (800)621-7440. [www.ncahlc.org](http://www.ncahlc.org)

The Muskegon Community College Nursing Program is accredited by the National League for Nursing Accrediting Commission, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, GA, 30326, phone: (404)975-5000, fax: (404)975-5020. <http://www.nlnac.org/home.htm>

## Mission Statement

*Approved 31 January 2013*

Muskegon Community College Nursing Program is a ladder Associate Degree Nursing Program providing a foundation for lifelong Nursing Education.

To fulfill its mission, the Muskegon Community College Nursing Program is committed to

- partnerships with local community healthcare agencies and university partners to meet the intellectual, technical, and professional needs of a 21st century nursing workforce.
- supporting student success.
- encouraging diversity.
- stimulating intellectual curiosity, critical thinking, and evidence based practice.
- professional ethics and accountability necessary for persons to function as professional nurses.

## Nursing Program Approval

The Muskegon Community College Nursing Program is approved by the Michigan Board of Nursing to provide a program of nursing education leading to the diploma in Practical Nursing and an Associate Degree in Nursing.

The Nursing Program meets bi-annually with its Advisory Committee; a group of representatives from the Clinical Affiliate Agencies, Nursing at Large, Consumer Representatives, and Student Representatives. The Director of the Nursing Program and the Vice President for Academic Affairs are ex-officio members of the Advisory Committee.

## ADMISSION

### General Information

To better enable individuals to validate the course competencies required for admission into the Muskegon Community College Nursing Program, and to enhance their chance for success, the following high school educational preparation is recommended:

1 year of Biology	Intermediate and Advanced Algebra
1 year of Chemistry	3-4 years of English
1 year of General Math	1 year of Computer

Counseling services are available to assist students in career and educational planning. Prospective students are strongly advised to make an appointment in the Counseling and Advising Center, Room 101, (231) 777-0362.

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Individuals interested in pursuing admission are advised to make early application as spaces are limited. When applicants complete the entry level requirements they are placed on a ready list and admitted on a first come, first serve basis.

One hundred (100) spaces will be available for generic admission applicants each year. Students who are notified of admission may defer admission twice without losing their placement on the ready list. However, the student must enter on the third notification or be removed from the ready list and complete a new Nursing Program application.

Spaces vacated by generic students exiting from the Program upon completion of Level I will be available for NUR 212B advanced placement applicants each Fall and Winter.

Spaces vacated through attrition will be available for applicants eligible for advanced placement into any nursing course. Students must demonstrate continued competency in previously learned nursing courses for readmission. A student who exits the Program during the first level and has not met readmission requirements within two years is ineligible to return with advanced placement.

If the number of ready applicants exceeds the number of spaces available, the applicants with the earliest ready dates will be admitted. Any applicants remaining, after the spaces available are filled, will be placed on the ready list for the next available admission date. Applicants on the "Ready List" are encouraged to take the required general education courses.

**Effective 2011, up to half of all Nursing Admissions to each class will be selected from the applicants who have completed all general education courses for the AAS Nursing Degree.**

### **Requirement Checklist**

Academic prerequisites and requirements for admission to the Nursing Program are outlined below. Program admission is based on a first come, first served basis; once the entry requirements have been met and a nursing application completed, the applicant will be placed on the "Ready List" or "Advanced Placement Ready List." It is the responsibility of each student to notify the Student Welcome Center of an address, name, and/or phone number change(s). (Please see [www.muskegoncc.edu/residency](http://www.muskegoncc.edu/residency) for procedures to update your information.) The College will not be responsible for any incident arising from the student's failure to update this information.

Please Note: The MCC Nursing Program's primary method of communication is the MCC email system. Potential nursing students will be notified of admission opportunities through their MCC email account.

### **Ready List Requirements**

- Active Muskegon Community College student status.
- If you have attended other colleges, request official transcripts be sent from their Records Office to the **Transcript Evaluation, Attn: Records Auditor**. Transfer credit will be given only for equivalent courses in which a "C" (2.0) or above was achieved.

*Continued on next page*

- Provide proof of high school completion or GED to the Enrollment Services Office, Room 108.
- MCC cumulative GPA must be at least a C (2.0).

*Reminder: If testing/course work is over eight years old, competency must be validated on established examinations or by repeating the course. Courses in the Nursing Curriculum must be completed in sequence.*

Students with questions regarding the requirement checklist are directed to the Counseling & Advising Center (777-0362). Once the checklist is completed, schedule an appointment with a counselor to complete the Nursing Program application.

Once the nursing applicant has completed all general education requirements the student may complete an Accelerated Application by making an appointment with a counselor in the Counseling and Advising Center (777-0362). The Accelerated Application is not available during walk-in counseling.

### **Writing Skills Competency**

Complete **one** of the following:

- Score 1 or 2 in both Reading and Writing on MEAP or MME.
- Score 22 or above on ACT (composite score).
- Score 80 or higher on COMPASS Writing Test.
- Complete ENG 091 Introduction to English Composition, or ENG 101 English Composition, with a “C” (2.0) or above.
- Transfer a course in from another college that is equivalent to ENG 091 Introduction to English Composition, or ENG 101 English Composition, with a “C” (2.0) or above.

### **Reading Skills Competency**

Complete **one** of the following:

- Score 22 or above on ACT (composite score).
- Score 81 or higher on the COMPASS Reading Rest.

### **Math Skills Competency**

Complete **one** of the following:

- Complete MATH 036A, Basic Math, and MATH 038, Pre-Algebra with a “C” (2.0) or above.
- Score 40-49 on the COMPASS Pre-Algebra test **AND** MATH 038, Pre-Algebra with a “C” (2.0) or above **AND** pass the Math 035F, Metric Test Module F.
- Score 50 or better on the COMPASS Pre-Algebra test **AND** pass the Math 035F, Metric Test Module F.

### **Computer Literacy Skills Competency**

Complete **one** of the following:

- Pass the Computer Literacy Test with an 80% or better.
- Complete CIS 100 or CIS 100 L&L Introduction to Personal Computers, or CIS 110 Computer Concepts, or CIS 120A Introduction to Computer Information Systems with a “C” (2.0) or above.
- Transfer a course from another college that is equivalent to CIS 100 Introduction to

Personal Computers or CIS 100L&L Introduction to Personal Computers with lab; CIS 110 Computer Concepts; or CIS 120A Introduction to Computer Information Systems, with a “C” (2.0) or above.

### **College Success Skills Competency**

Complete **one** of the following:

- Complete CSS 100, College Success Seminar (two credits) with a “C” (2.0) or above.
- Obtain a waiver from a counselor if at least 30 college credits of 100-level courses or higher have been completed with a cumulative “C” (2.0) or higher.

### **General Education Requirements must be completed with a “C” (2.0) or above for an Associate in Applied Science (AAS) Degree.**

- BIOL 105L&L Anatomy and Physiology I or equivalent
- COM 103 Intercultural Communication for Nurses or equivalent
- PEA 101A Fitness Wellness and Nutrition or equivalent
- PSYC 201 General Psychology or equivalent
- ENG 101 English Composition or equivalent
- BIOL 106L&L Anatomy and Physiology II or equivalent
- PHIL 204 Biomedical Ethics or equivalent
- PEA/DNC elective
- Satisfy Chemistry Competency with one of the following prior to Term 5:
  - Complete 1 year of high school chemistry with a “C” (2.0) or better within the past eight years.
  - Pass the Toledo Chemistry Competency Examination in the MCC Testing Center with a “C” (70%) or higher.
  - Complete CHEM 100 and CHEM 100A Fundamentals of Chemistry with a “C” (2.0) or better. (Prerequisites of MATH 040, Beginning Algebra, and MATH 050, Intermediate Algebra).
  - Complete CHEM 109 and CHEM 109A Chemistry for Health Science with a “C” (2.0) or better. (Prerequisites of MATH 040, Beginning Algebra, and MATH 041, Mathematics for Allied Health Sciences)
- BIOL 207 & BIOL 207A or equivalent
- ANTH 103 Cultural Diversity in Contemporary Society

*\* See also Nursing Program Career Ladder - Curriculum Design for required course sequence.*

### **Complete one of the following if applying for advanced placement directly into NUR 212B:**

- Submit evidence of current unencumbered Michigan LPN license and evidence of a minimum of six months full-time (or equivalent) current work experience in the LPN role.
- Satisfactory completion of the Muskegon Community College Practical Nurse Diploma within the previous 12 months.

### **Nursing Program Application**

- Schedule an appointment with a MCC counselor, Room 101 or call (231) 777-0362 to verify the above information and complete the application process.

*Continued on next page*

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## Acceptance of Course Credit

Credits for courses completed at Muskegon Community College or other post-secondary educational institutions will be accepted toward fulfillment of the nursing (PN and AAS) curriculum requirements provided that all of the following criteria are met:

- The courses are deemed equivalent to the courses required in the MCC nursing curriculum.
- Nursing courses must be completed with a minimum of a “C+” (2.3).
- The general education courses must be completed with a minimum grade of a “C” (2.0).
- The courses were completed within eight years prior to ready date.

Official transcripts from institutions other than Muskegon Community College should be sent to the Records Auditor for credit evaluation

## Progression

To progress, students in the Muskegon Community College Nursing Program must attain a minimum grade of “C+” (2.3) in each nursing course and a “C” (2.0) or better in each general education course in each term of the nursing curriculum. All courses must be completed in sequence (see Nursing Program Career Ladder). Students failing to meet this progression requirement will be dismissed.

## Readmission

A student who withdraws or is dismissed from the Nursing Program may apply for readmission. When the readmission requirements are met, the student will be readmitted according to the date of the application for readmission and the availability of space in the Program. Students must demonstrate continued competency in previous courses upon readmission. A student who exits the Program during the first level and has not met readmission requirements within two years is ineligible to return with advanced placement.

## Three Course Repeats

A student who repeats any 3 different NUR or AH courses will be required to write a remediation plan that delineates a clear plan for future success and that is acceptable to the Nursing Faculty Admissions and Progressions Committee prior to readmission. The student must complete this plan within one semester or the student will be ineligible to reapply. When an acceptable plan is received, the student will be readmitted according to the date of application for readmission and the availability of space in the Program. A student with 3 or more different NUR or AH course repeats who is not successful during the implementation of a faculty approved probationary remediation plan will be ineligible for readmission.

## Repetition of a Nursing Course

A student readmitted to the Nursing Program after withdrawal from or failure to achieve a minimum grade of a “C+” (2.3) in a nursing course may repeat the (same) course one time. If a passing grade is not attained when the course is repeated, the student will be ineligible for readmission.

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## Graduation

To be eligible for graduation from the Nursing Program, students must meet all of the following requirements:

1. Complete the nursing curriculum requirements for the diploma/degree desired with a minimum grade of “C+” (2.3) in each nursing course and a “C” (2.0) or better in each general education course.
2. Complete not less than 30 of the last 15 credit hours required in the nursing curriculum at Muskegon Community College.
3. File application for a graduation audit in the Office of the Registrar, Room 100J or Student Welcome Center Office no later than 90 days prior to the end of the term of anticipated graduation.

## Student Learning Outcomes/Graduate Competencies

*(See chart on next page)*

Upon completion of the Associate Degree in Nursing at Muskegon Community College, the graduate will demonstrate entry level nursing competencies and will be eligible to write the NCLEX-RN examination. For the Muskegon Community College Nursing Program Associate Degree in Nursing Graduate Competencies please visit [www.muskegoncc.edu/nursing](http://www.muskegoncc.edu/nursing)

## Orientation for the Nursing Program

Orientation information will be emailed to students once they are admitted into the Nursing Program. New (NUR 100) and advanced placement students will be required to complete an online orientation and quiz in order to (re)familiarize themselves with Program policies.

Once they have been placed on the appropriate ready list, transfer students will meet with the Program Director in order to familiarize them with the MCC Nursing Program and answer any questions.

## Health Requirements

Students in the Muskegon Community College Nursing Program are required to complete a physical examination prior to beginning the first clinical nursing course. Students must be able to meet essential functions of the occupation of nursing. Students are required to maintain health requirements throughout the Program. See [www.muskegoncc.edu/nursing](http://www.muskegoncc.edu/nursing) for health requirements, essential functions of the occupation, and occupational risks.

## Criminal Background Check

Federal and State laws require a criminal background check of those assigned to a clinical agency; Michigan licensure will require an FBI fingerprint check. Felonies and some misdemeanors convictions may prevent you from completing the Nursing Program requirements and taking licensure examinations, thus affecting your employment options. Students must have a clear criminal background check to begin the Nursing Program. Any student who has not resided in Michigan for at least three or more years preceding their participation in the Nursing Program is required to obtain a criminal background check based on a national database; the student is responsible for any additional charge. Any student who becomes subject to criminal prosecution while participating in the Nursing Program is **required to report** such allegations immediately to the Nursing Program Director.

Please see the “State Information on Criminal Background Checks” on the MCC Nursing Department website: [www.muskegoncc.edu/nursing](http://www.muskegoncc.edu/nursing).

## MCC NURSING PROGRAM ASSOCIATE DEGREE IN NURSING GRADUATE COMPETENCIES

27 April 2012

**I HOLISM** Integrates the culture of human caring in nursing to establish a therapeutic relationship that provides patient-centered care.

**2 WELLNESS ILLNESS** Integrates the best current evidence from the sciences and humanities to provide nursing care that meets the health needs of patients, families, and communities across the Wellness-Illness Continuum.

### 3 NURSING

**3.1 NURSING SCOPE** Demonstrate behaviors that indicate professional, legal, and ethical accountability in nursing practice.

#### 3.2 NURSING ROLE

**3.2.1 Team Member** Collaborates with interdisciplinary health team members to provide patient-centered care for patients and their families.

**3.2.2 Communicator** Communicates as teacher, manager, and member of nursing and interdisciplinary teams to achieve safe, quality care.

**3.2.3 Teacher** Develops, evaluates and modifies individualized teaching plans based on patient outcomes and diverse learning needs of patients and their families.

**3.2.4 Manager** Prioritizes nursing care based on unique patient needs, current evidence, and sound clinical judgment.

**3.3 NURSING PROCESS** Utilizes the nursing process, nursing judgment, best current evidence, and technology to identify, diagnose, and treat patients with health needs.

# Respiratory Therapy

Muskegon Community College currently offers students the Therapist level of instruction. The therapist student, after successfully completing more than two years of instruction, receives the Associate in Applied Science Degree (AAS).

Applicants must show proficiency in the following: Score 1 or 2 in both the Reading and Writing on MEE or score 22 or above on ACT (composite score) or score 80 on COMPASS writing test or complete ENG 091 Introduction to English Composition, or ENG 101 English Composition with a “C” (2.0) or above or transfer a course in from another college that is equivalent to ENG 091 Introduction to English Composition or ENG 101 English Composition with a “C” (2.0) or above. Score 46 or better on the COMPASS Algebra Test or transfer a course from another college that is equivalent to MATH 040 Beginning Algebra or above. Validate one year of high school chemistry competency on the Toledo Chemistry Placement Test (60% or above) or complete CHEM 100 and 100A (or equivalent) with a minimum grade of “C” (2.0) or complete CHEM 109 and 109A (or equivalent) with a minimum grade of “C” (2.0). Student must pass a criminal background check.

## POTENTIAL RT STUDENTS MUST CONTACT THE RESPIRATORY THERAPY DEPARTMENT, EVEN IF YOU HAVE APPLIED TO THE COLLEGE.

(Room 231-1 or call (231) 777-0223)

### 2 1/2 YEAR PROGRAM -- A.A.S. DEGREE

#### YEAR 1

##### Semester 1 (Fall) (Aug. - Dec.) .....CR. HRS.

AH 102 Basic Patient Care Skills .....	3
RT 101 Respiratory Therapy Physics.....	1
BIOL 105L&L Anatomy & Physiology I .....	4
MATH 050 Intermediate Algebra or MATH 041 Mathematics for Allied Health Sciences.....	1-4

##### Semester 2 (Winter) (Jan. - Feb.)

CHEM 100 Fundamentals of Chemistry L&L OR CHEM 109 Chemistry for Health Science L&L.....	5
RT 110 L&L Equipment & Procedures I .....	3
RT 111 L&L Introduction to Respiratory Therapy .....	3

##### (Mar. - May)

CHEM 100L&L or 109 L&L (continued)	
RT 120 L&L Equipment & Procedures II.....	3
RT 121 Pharmacology.....	2
RT 122 Clinical I.....	2

##### Semester 3 (Summer) (May - July)

RT 130 L&L Equipment & Procedures III .....	3
RT 131 Physiology.....	3
RT 132 Clinical II .....	3
RT 134 Intro to Mechanical Ventilation.....	1

#### YEAR 2

##### Semester 4 (Fall) (Aug. - Dec.) .....CR. HRS.

RT 141 Pulmonary Pathophysiology .....	2
RT 144 Adult Mechanical Ventilation.....	3
RT 152 CLI Clinical IV .....	5

##### (Oct. - Dec.)

RT 162 CLI Clinical V .....	7
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##### Semester 5 (Winter) (Jan. - May)

BIOL 106L&L Anatomy & Physiology II .....	4
RT 210 Cardiovascular & Renal Physiology .....	4
RT 220C Pediatric-Neonatal Critical Care.....	4
PHIL 204 Biomedical Ethics .....	3
PEA/DNC *see below.....	2

##### Semester 6 (Summer) (May - Aug.)

BUS 122 Principles of Management.....	3
RT 212A Advanced Clinical Practicum I .....	7
PSYC 201 General Psychology .....	4
PSCI 111 or HIST 201 or HIST 202** .....	3-4

##### Semester 7 (Fall) (Aug. - Dec.)

RT 222A Clinical Rotation VII .....	3
RT 230B Pulmonary Diagnostics & Rehabilitation.....	2
RT 240 Health Care Environment.....	1
BIOL 207L&L Microbiology.....	4
ENG 101 English Composition .....	3

**TOTAL..... 101-105**

\* PEA/DNC – one credit hour from PEA 101A, 103, 104A, 118 or 201 required, and one PEA/DNC credit hour of choice.

\*\* PSCI III Intro to American Government (4 cr.) or HIST 201 US to 1877 (3 cr.) or HIST 202 US from Reconstruction to Present (3 cr.).  
NOTE: AH 101 Medical Terminology is not required, but is highly recommended prior to entry into the Respiratory Therapy Program.

## Respiratory Care

Respiratory Therapists work as part of the health care team in hospitals, cardiopulmonary diagnostic laboratories, rehabilitation centers, and home care agencies. They work with physicians and other health professionals in health care planning, evaluation, and treatment of patients with cardiac and pulmonary disorders.

As clinicians they perform therapeutic and life support procedures including the administration of oxygen and aerosolized medications, breathing treatments, chest physical therapy and mechanical ventilator support. In addition, they perform diagnostic tests that assess cardiac and lung function and operate physiologic monitoring equipment and life support systems in the critical care setting.

The Respiratory Care Program is a 28 month associate degree program which began January, 1980. It is fully accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The curriculum design offers the student the Associate in Applied Science Degree (AAS). The AAS Degree is an occupationally oriented degree. By taking additional coursework, the student may obtain an ASA Degree. The ASA Degree is a transfer degree which enables students to transfer to baccalaureate degree-granting institutions with advanced standing. Students who receive the AAS or ASA Degree will be eligible to write the National Board for Respiratory Care Entry-Level CRT Examination for licensure to practice as a Certified Respiratory Therapist (CRT). Upon successful completion of the CRT Examination, the graduate will be eligible to write the National Board for Respiratory Care Advanced Practitioner Examination to practice as a Registered Respiratory Therapist (RRT).

The curriculum for the program includes courses in the natural, behavioral, and social sciences, as well as respiratory care. Didactic and clinical instruction is integrated in a planned process that allows for concurrent presentation of respiratory care theory with associated clinical practice. For local students clinical practice takes place in most of the hospitals in West Michigan including the Grand Rapids hospitals.

Additionally, in response to the need for health professionals in Northern Michigan, the respiratory care program is providing distance education through a collaborative effort with Munson Medical Center and Northwestern Michigan College. Each member is responsible for providing a piece of the distance learning component; Muskegon Community College is the degree granting institution and provides the professional courses for the program – Munson Medical Center provides the “hands-on” clinical education required by the students and Northwestern Michigan College provides the non-professional degree requirements.

## ADMISSION

### General Information

To better enable individuals to validate the course competencies required for admission into the Muskegon Community College Respiratory Care Program, and to enhance their chance for success, the following high school educational preparation is recommended:

- Biology: 1 unit
- Chemistry: 1 unit
- General Math: 1 unit
- Algebra: 2 units
- English: 3-4 units

Counseling services are available to assist students in career and educational planning (Room 101, or call (231) 777-0362). Prospective students are strongly advised to make an appointment with the Respiratory Therapy Department (Room 231-1, or call (231) 777-0223).

Individuals interested in pursuing admission are advised to make early application as spaces are limited. Thirty (30) spaces will be available for generic admission applicants each year. When applicants complete the entry level requirements they are placed on a ready list and admitted on a first-come, first-served basis. If the number of ready applicants exceeds the number of spaces available, the applicants with the earliest ready dates will be admitted. Any applicants remaining, after the available spaces are filled, will be placed on the ready list for the next admission date.

Students who are notified of admission may defer admission twice without losing their placement on the ready list. However, the student must enter on the third notification or be removed from the ready list and complete a new application.

Spaces vacated through attrition will be available for applicants eligible for advanced placement into any respiratory care course. Students must demonstrate continued competency in previously learned respiratory care courses for readmission.

**Applicants on the ready list are encouraged to take the required non-respiratory therapy courses.**

### **Entry Level Requirements**

- Submit a completed Muskegon Community College Admission Application. (Online at [www.muskegoncc.edu](http://www.muskegoncc.edu) or Student Welcome Center)
- Submit a completed Muskegon Community College Respiratory Care Program Admission Application. (Room 231-1 or call (231) 777-0223)
- Submit official evidence of high school graduation or successful completion of the General Education Development (GED) tests. (Room 108 or call (231) 777-0363)
- Score 1 or 2 in both the Reading and Writing on MEE or score 22 or above on ACT (composite score) or score 80 or better on COMPASS Writing Test\* or complete ENG 091 Introduction to English Composition, or ENG 101 English Composition, with a “C” (2.0) or above or transfer a course in from another college that is equivalent to ENG 091 Introduction to English Composition, or ENG 101 English Composition, with a “C” (2.0) or above.
- Score 46 or better on the COMPASS Algebra Test\* or transfer a course in from another college that is equivalent to MATH 040 Beginning Algebra, or above.
- Validate one year of high school chemistry competency on the Toledo Chemistry Placement Test (score 60% or above)\* or complete CHEM 100 Lecture & Lab (or equivalent) with a minimum grade of “C” (2.0) or complete CHEM 109 Lecture & Lab (or equivalent) with a minimum grade of “C” (2.0).
- **NOTE:** AH 101 Medical Terminology is not required, but is highly recommended prior to entry into the respiratory therapy program.
- Maintain a minimum cumulative grade point average of “C” (2.0) or better.

\*Testing Center, Room 134, (231) 777-0394.

## Advanced Placement Applicants

Applicants with prior post-secondary respiratory education are candidates for advanced placement admission into the Muskegon Community College Respiratory Care Program. Admission requirements:

- Submit a completed Muskegon Community College Admission Application. (Online at [www.muskegoncc.edu](http://www.muskegoncc.edu))
- Submit a completed Muskegon Community College Respiratory Care Program Admission Application. (Room 231-1 or call (231) 777-0223)
- Meet with the Director of Respiratory Care. (Room 231-1 or call (231) 777-0223)
- Meet all of the generic admission entry level requirements.
- Submit official evidence of prior post-secondary respiratory care education.
- Validate competency in the required respiratory care and non-respiratory care courses, up to point of placement, on established competency examinations.

## Acceptance of Course Credit

Credits for courses completed at Muskegon Community College or other post-secondary educational institutions will be accepted toward fulfillment of the respiratory care curriculum requirements provided all of the following criteria are met:

- The courses are deemed equivalent to the courses required in the respiratory care curriculum.
- The courses were completed with a minimum grade of “C” (2.0).

Official transcripts from institutions other than Muskegon Community College should be sent to the Records Auditor for credit evaluation. (Room 100-H, or call (231) 777-0204)

## Progression and Retention

To progress, students in the Muskegon Community College Respiratory Care Program must attain a minimum grade of “C” (2.0) in each science and respiratory care course in each semester of the respiratory care curriculum. Students failing to meet this requirement will be dismissed. Students are strongly advised to complete all non-RT courses during, or prior to, the semester required. Failure to do so could extend the student’s expected completion date.

## Readmission

Students may apply for readmission providing they meet all general education and course competency requirements and have not repeated a respiratory care course more than once. When readmission requirements have been met, the student will be readmitted according to availability of space in the program. Failure to attain a passing grade in a repeated respiratory care course will render students ineligible for readmission.

## Graduation

To be eligible for graduation from the respiratory care program, students must meet all of the following requirements:

1. Complete the respiratory care curriculum requirements for the degree with a minimum grade point of “C” (2.0).
2. Complete not fewer than the last 15 credit hours required in the respiratory care curriculum at Muskegon Community College.
3. File application for a graduation audit in the College Records Office no later than 90 days prior to the end of the term of anticipated graduation.

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## Health Status Evaluation

Students in the Muskegon Community College Respiratory Care Program are required to have a health status evaluation done prior to beginning the first clinical respiratory care course. Each newly admitted student will be scheduled for the health status evaluation, including drug screens, TB, immunization status, and latex sensitivity screening. A health status evaluation fee will be assessed upon registration for selected respiratory courses. Students are required to maintain health requirements throughout the program.

## Criminal Background Check

Students are required by Michigan law to pass a criminal background check ensuring no felony history for the past 15 years and no history of misdemeanors including domestic violence, abuse, neglect, fraud, theft, or assault and battery within the past 10 years. Any student with a history of substance abuse or criminal conviction related to illegal drugs may be ineligible for respiratory care licensure. Any student who has not resided in Michigan for at least three or more years preceding application for admission to the Respiratory Care Program is required to obtain an FBI fingerprint check. The student is responsible for the cost of the FBI check.

# Emergency Medical Technician Certification

Emergency Medical Technicians are certified in 3 levels of entry; Basic, Intermediate and Paramedic

Muskegon Community College currently offers only the EMT-Basic level of instruction.

The EMT-Basic is a health care provider that is part of the first response team included in the emergency medical system. An EMT trained at this level is prepared to care for patients at the scene of an accident and while transporting patients by ambulance to the hospital under the direction of more highly trained medical personnel. The EMT-Basic has the emergency skills to assess a patient's condition and manage respiratory, cardiac, and trauma emergencies.

At the EMT-Basic level, coursework emphasizes emergency skills, such as managing respiratory, trauma, and cardiac emergencies, and patient assessment. Formal courses are often combined with time in an emergency department or ambulance. The program provides instruction and practice in dealing with bleeding, fractures, airway obstruction, cardiac arrest, and emergency childbirth. Students learn how to use and maintain common emergency equipment, such as backboards, suction devices, splints, oxygen delivery systems, and stretchers. Typically graduates of approved EMT-Basic training programs must pass a written and practical examination administered by their State licensing agency or the NREMT. (National Registry of Emergency Medical Technicians)

At Muskegon Community College the EMT-Basic program includes 3 courses taken over 2 semesters (240 hours) – 2 classroom courses and a clinical experience course. (completed in local hospitals and ambulance services)

# EMT Basic Certificate

Muskegon Community College currently offers students the EMT-Basic level of instruction. Students will earn a Certificate of Completion in EMT-Basic after successfully completing the three-course sequence including both classroom and practical experience in the field of emergency services. This certificate program extends over a nine-month period of time and allows the student two different times in the year to begin.

In order to enter the program Students must have the ability to meet the Program Technical Standards, pass a criminal background check, pass a drug screen and provide an up-to-date immunization record including Hepatitis B vaccine.

<b>Fall/Winter Program</b>	<b>CR. HRS.</b>	<b>Winter/Summer Program</b>	<b>CR. HRS.</b>
<b>Semester I</b> ( <i>August - December</i> )		<b>Semester I</b> ( <i>January - May</i> )	
EMT 101		EMT 101	
Basic Emergency Technology I .....	8	Basic Emergency Technology I .....	8
<b>Semester II</b> ( <i>January - May</i> )		<b>Semester II</b> ( <i>May - August</i> )	
EMT 102		EMT 102	
Basic Emergency Technology II .....	4	Basic Emergency Technology II .....	4
EMT 103		EMT 103	
Basic Emergency Clinical.....	4	Basic Emergency Clinical.....	4
	<b>Total: 16</b>		<b>Total: 16</b>

## Business Programs

(Degrees, Certificates, & Professional Development Credits)

### Degrees and Certificates - Including:

- Management
- Marketing
- Office Management
- Business Technology
- Criminal Justice
- Computer Information Systems
- Entrepreneurial Studies

## Associate in Applied Science

### Office Management

The following program is for the A.A.S. Degree student. It is not designed for students wishing to transfer to a four-year institution. Any student desiring to pursue a transfer program in business should consult a counselor.

<b>GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 109 College Algebra with Applications or	
MATH 111 Algebra with Coordinate Geometry .....	3-4

BUS 127 Human Relations or COM 101 Oral Communications .....	3
CIS 110 Computer Concepts or CIS 120A Introduction to Computer Information Systems .....	3
Select one course from the following: GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice) .....	2

**BUSINESS CORE REQUIREMENTS (10 CR. HRS.)** **CR. HRS.**

ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business .....	3
BUS 200 International Business .....	3

**CAREER PROGRAM REQUIREMENTS (29 CR. HRS.)** **CR. HRS.**

ACC 202 Principles of Accounting II .....	4
QuickBooks Computerized Accounting .....	3
BUS 123 Business Law I .....	3
CIS 101EW Introduction to Electronic Spreadsheets .....	1
CIS 102EW Intermediate Electronic Spreadsheets .....	1
BUS 180C Introduction to Word Processing Part I .....	4
ECON 101 Principles of Economics .....	4
*BUS 181C Office Procedures I .....	3
*BUS 182C Office Procedures II – Document Production .....	3
*BUS 280C Word Processing Part II .....	3

**RECOMMENDED ELECTIVES (3-6 CR. HRS.)** **CR. HRS.**

ACC 203 Payroll Accounting .....	3
BUS 281C Office Procedures III - Desktop Publishing .....	3
BUS 273A Human Resource Management .....	3
BUS 290CI Cooperative Internship Program .....	3

**Minimum Total 63**

\*Students must obtain a grade of “C” or better in each of these three classes.

## Associate in Applied Science

**Management**

The following program is for the A.A.S. Degree student. It is not designed for the student wishing to transfer to a four-year institution. Any student desiring to pursue a transfer program in business should consult with a counselor.

The Management Program is a two-year curriculum focusing on Management Development and Supervision. The program is designed to develop knowledge, attitudes, experience, and leadership skills, which will enable graduates to function in positions as supervisors or managers in business and industry.

**GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math, or MATH 109 College Algebra with Applications, or MATH 115 Probability and Statistics, or BUS 105 Business Statistics .....	3-4
BUS 127 Human Relations or COM 101 Oral Communications .....	3
CIS 110 Computer Concepts or CIS 120A Intro to Computer Information Systems .....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice) .....	2

**BUSINESS CORE REQUIREMENTS (10 CR. HRS.)** **CR. HRS.**

ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business .....	3
BUS 200 International Business .....	3

**CAREER PROGRAM REQUIREMENTS (21 CR. HRS.)** **CR. HRS.**

BUS 122 Principles of Management .....	3
BUS 123 Business Law I .....	3
BUS 125 Supervision .....	3
BUS 127 Human Relations (if not taken as a Gen. Ed. Course) .....	3
BUS 222 Fundamentals of Organizational Behavior .....	3
BUS 260 Principles of Marketing .....	3
BUS 273A Human Resource Management .....	3

<b>SUGGESTED ELECTIVES (9 MINIMUM CR. HRS.)</b>	<b>CR. HRS.</b>
BUS 124 Business Law II.....	3
BUS 161A Effective Selling.....	3
BUS 166 Quality Customer Service.....	3
BUS 274 International Studies in Human Resources.....	1
ACC 202 Principles of Accounting II.....	4
BUS 105 Business Statistics.....	3
BUS 114 Personal Finance.....	3
BUS 220/CIS 220 E-Business.....	3
BUS 262/COM 262 Social Media.....	3
CIS 101EW Introduction to Electronic Spreadsheets.....	1
CIS 120A Introduction to Computer Information Systems.....	3
QC 105 Quality/Productivity Using Statistical Process Control.....	3
BUS 290CI Cooperative Internship Program.....	3
<b>Minimum Total</b>	<b>62</b>

## Associate in Applied Science

### Marketing

The following program is for the A.A.S. Degree student. It is not designed for the student wishing to transfer to a four-year institution. Any student desiring to pursue a transfer program in business should consult with a counselor.

The Marketing Program is a two-year curriculum focusing on Marketing Applications and Supervision. The program is designed to develop knowledge, attitudes, experience, and leadership skills, which will enable graduates to function in positions as supervisors or managers in business and industry.

<b>GENERAL EDUCATION REQUIREMENTS (22 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business and Technical Communications.....	3
BCOM 102 Advanced Business and Technical Communications.....	3
BUS 126 Business Math, or MATH 109 College Algebra with Applications, or MATH 115 Probability and Statistics, or BUS 105 Business Statistics.....	3-4
BUS 127 Human Relations or COM 101 Oral Communications.....	3
CIS 110 Computer Concepts or CIS 120A Intro to Computer Information Systems.....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology.....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice).....	2

*Continued on next page*

<b>BUSINESS CORE REQUIREMENTS (10 CR. HRS.)</b>	<b>CR. HRS.</b>
ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business.....	3
BUS 200 International Business .....	3
<b>CAREER PROGRAM REQUIREMENTS (24 CR. HRS.)</b>	<b>CR. HRS.</b>
BUS 260 Principles of Marketing.....	3
BUS 161A Effective Selling .....	3
BUS 162 Principles of Retailing.....	3
BUS 123 Business Law I .....	3
BUS 127 Human Relations (if not taken as a Gen. Ed. course) .....	3
BUS 263 Advertising Dynamics.....	3
BUS 125 Supervision or BUS 122 Principles of Management .....	3
BUS 166 Quality Customer Service .....	3
<b>SUGGESTED ELECTIVES (MINIMUM 6 CR. HRS.)</b>	<b>CR. HRS.</b>
BUS 124 Business Law II.....	3
ACC 202 Principles of Accounting II.....	4
BUS 220/CIS 220 E-Business .....	3
BUS 262/COM 262 Social Media .....	3
GR 104 Job Planning Layout and Design.....	3
BUS 105 Business Statistics or MATH 115 Probability and Statistics .....	3
BUS 114 Personal Finance .....	3
CIS 120A Introduction to Computer Information Systems .....	3
BUS 222 Fundamentals of Organizational Behavior .....	3
BUS 290CI Cooperative Internship Program .....	3
BUS 266 Customer Service II.....	3
<b>Minimum Total 62</b>	

## Customer Service Specialist Certificate

This certificate is part of program leading to the Associate in Applied Science in Marketing Degree.

<b>CERTIFICATE REQUIREMENTS (12 CR. HRS.)</b>	<b>CR. HRS.</b>
BUS 127 Human Relations.....	3
BUS 161A Effective Selling .....	3
BUS 166 Quality Customer Service .....	3
BUS 266 Quality Customer Service II.....	3
<b>Minimum Total 12</b>	

## Associate in Applied Science

**Bookkeeping Services Entrepreneur**

This degree provides the foundation skills needed to create and maintain the records required to support the operation of a small business as part of an independent bookkeeping services business. The student will learn the accounting cycle used by small businesses to prepare financial statements and tax returns. Courses will cover managing a small business as well as offering advice to small business owners. Other courses will cover the important business topics of ethics in business, payroll tax return preparation, computer information systems, business communications as well as popular small business accounting software. Students completing this program will understand the challenges in managing a small business.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting For Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business.....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (29 CR. HRS.)** **CR. HRS.**

ACC 201 Principles of Accounting I .....	4
ACC 202 Principles of Accounting II.....	4
ACC 203 Payroll Accounting .....	3
BUS 180C Introduction to Word Processing .....	4
BUS 181C Office Procedures I – Document Formatting.....	3
BUS 182C Office Procedures II – Document Production .....	3
BUS 185B Electronic Calculator.....	2
CIS 101 Introduction to Electronic Spreadsheets .....	1
CIS 102 Intermediate Electronic Spreadsheets.....	1
CIS 153AW Introduction to Database Management.....	1
BUS 290CI Cooperative Internship Program .....	3

**Total 62**

# Technical & Computer-Related Programs

(Degrees and Certificates)

## Associate in Applied Science

### Computer Applications

The following program is for A.A.S. Degree students interested in careers which require extensive knowledge of microcomputer operations and personal productivity software. Students receiving an A.A.S. Degree in Computer Applications are expert users of word processing, electronic spreadsheet, and database software that operate on popular microcomputers. They learn to work within local-area networks and can develop new microcomputer-based applications using fourth-generation languages. This degree is not designed for students wishing to transfer to four-year institutions. Transfer-oriented students interested in working with computers should consult with a counselor.

#### GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.) CR. HRS.

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math, or MATH 109 College Algebra with Applications, or MATH 115 Probability and Statistics, or BUS 105 Business Statistics .....	3-4
BUS 127 Human Relations or COM 101 Oral Communication.....	3
CIS 120A Intro to Computer Information Systems .....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice).....	2

#### BUSINESS CORE REQUIREMENTS (10 CR. HRS.) CR. HRS.

ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business.....	3
BUS 200 International Business .....	3

#### CAREER PROGRAM REQUIREMENTS (30-32 CR. HRS.) CR. HRS.

CIS 101EW Introduction to Electronic Spreadsheets.....	1
CIS 102EW Intermediate Electronic Spreadsheets.....	1
CIS 109/ELTR 109 Personal Computer Maintenance .....	2
CIS 115WW Introduction to Word Processing.....	1
CIS 177DW Introduction to HTML Editors .....	1
CIS 143 Introduction to Local Area Networks .....	3
CIS 153AW Introduction to Database Management.....	1
CIS 163VB Visual Basic for Applications.....	1

CIS 187 Multimedia Digitizing .....	3
CIS 193A Introduction to Operating Systems .....	1
CIS 253A Database Design and Implementation.....	3
CIS 257A HTML for Internet Web Page Design .....	3
BUS 179 Keyboarding.....	1
BUS 290CI Cooperative Internship Program .....	3
<b>ELECTIVES**</b> .....	5-7
<b>Minimum Total</b>	
<b>62</b>	

*\*\*Recommended Electives: PHIL 104 Symbolic Logic or any CIS course.*

## Associate in Applied Science

# Computer Programming

The following program is for A.A.S. Degree students interested in computer programming career opportunities. Students receiving an A.A.S. Degree in Computer Programming become familiar with several programming languages and develop procedural and object-oriented applications. The Computer Programming A.A.S. degree is not designed for students wishing to transfer to four-year institutions. Transfer-oriented students interested in working with computers should consult with a counselor.

### **GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math, or MATH 109 College Algebra with Applications, or higher level Math course .....	3-4
BUS 127 Human Relations or COM 101 Oral Communication.....	3
CIS 120A Introduction to Computer Information Systems .....	3
Select one course from the following: GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice).....	2

### **BUSINESS CORE REQUIREMENTS (10 CR. HRS.)** **CR. HRS.**

ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business.....	3
BUS 200 International Business .....	3

### **CAREER PROGRAM REQUIREMENTS (30-32 CR. HRS.)** **CR. HRS.**

CIS 121 File Design and Utilities for Midrange Computers .....	1
CIS 153AW Introduction to Database Management .....	1
<i>Two of the following computer programming tracks</i>	
CIS 162 Visual C# Programming and	
CIS 260A Visual Basic Programming.....	12

**OR**

*Continued on next page*

CIS 185 C Programming and CIS 280 Java Programming .....	12
<b>OR</b>	
CIS 170 RPG Programming and CIS 270A Advanced RPG Programming .....	12
CIS 210 Operating System Concepts.....	3
CIS 250 Developing Information Systems .....	3
CIS 253A Database Design and Implementation.....	3
CIS 275 Linux Operating System .....	3
BUS 290CI Cooperative Internship Program .....	3
<b>ELECTIVES*</b> .....	<b>1-3</b>
<b>Minimum Total 62</b>	

\* Recommended Electives: Strongly recommended: CIS 143 Introduction to Local Area Networks. Other recommendations: PHIL 104 Symbolic Logic, or any programming class not yet taken.

## Midrange Programming Certificate

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*15-1021 Computer Programmers*

<http://www.onetonline.org/link/summary/15-1021.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$1,910.00 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$938.70**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months: 0**

**CR. HRS.**

CIS 120A Introduction to Computer Information Systems .....	3
CIS 121 File Design and Utilities for Midrange Computers .....	1
CIS 170 RPG Programming.....	3
CIS 131 Operations and Commands for Midrange Computers .....	1
CIS 270A Advanced RPG Programming.....	3
CIS 210 Operating System Concepts.....	3
CIS 253A Database Design and Implementation .....	3
CIS 250 Developing Information Systems .....	3
<b>Total 20</b>	

# C/Java Programming Certificate

<b>CERTIFICATE REQUIREMENTS (22 CR. HRS.)</b>	<b>CR. HRS.</b>
CIS 120A Introduction to Computer Information Systems .....	3
CIS 153AW Introduction to Database Management .....	1
CIS 185 C Programming .....	3
CIS 210 Operating System Concepts.....	3
CIS 250 Developing Information Systems .....	3
CIS 253A Database Design and Implementation .....	3
CIS 275 Linux Operating System .....	3
CIS 280 Java Programming .....	3
	<b>Total 22</b>

# .NET Programming Certificate

<b>CERTIFICATE REQUIREMENTS (19 CR. HRS.)</b>	<b>CR. HRS.</b>
CIS 120A Introduction to Computer Information Systems .....	3
CIS 153AW Introduction to Database Management .....	1
CIS 162 Visual C# Programming.....	3
CIS 210 Operating System Concepts.....	3
CIS 250 Developing Information Systems .....	3
CIS 253A Database Design and Implementation .....	3
CIS 260A Visual Basic Programming.....	3
	<b>Total 19</b>

## Associate in Applied Science

# Computer Networking Technology

The following program is for A.A.S. Degree students interested in careers which require extensive knowledge of the local and wide area networks. Students receiving an A.A.S. Degree in Computer Networking Technology can create, install and maintain local area networks and are knowledgeable about the protocols and hardware used to transfer data across wide area networks. They learn to work within different network environments and use the latest networking technologies. This degree is not designed for students wishing to transfer to four-year institutions. Transfer-oriented students interested in working with computers should consult with a counselor.

<b>GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math, or	
MATH 109 College Algebra with Applications, or	
MATH 115 Probability and Statistics, or	
BUS 105 Business Statistics .....	3-4
BUS 127 Human Relations or COM 101 Oral Communication.....	3
CIS 120A Introduction to Computer Information Systems .....	3

*Continued on next page*

Select one course from the following:

GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice) .....	2

**BUSINESS CORE REQUIREMENTS (10 CR. HRS.)** **CR. HRS.**

ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business .....	3
BUS 200 International Business .....	3

**CAREER PROGRAM REQUIREMENTS (30-32 CR. HRS.)** **CR. HRS.**

CIS 109/ELTR 109 Personal Computer Maintenance .....	2
CIS 143 Introduction to Local Area Networks .....	3
CIS 183 Networking Technologies .....	3
CIS 209/ELTR 209 PC Maintenance II (A+ Certification).....	3
CIS 210 Operating System Concepts.....	3
CIS 243 Telecommunications .....	3
CIS 275 Linux Operating System .....	3
CIS 283 Advanced Local Area Networks .....	3
CIS 293 Network Security .....	3
BUS 290CI Cooperative Internship Program .....	3
<b>ELECTIVES**</b> .....	<b>1-3</b>

**Minimum Total 62**

\*\*Recommended Electives: PHIL 104 Symbolic Logic, CIS 253A Database Design and Implementation or any 200 level CIS course.

## Associate in Applied Science

**Computer Networking Entrepreneur**

This program provides students with fundamental skills to own and operate a Computer Networking Services business. Students acquire the ability to diagnose and solve hardware and operating systems problems as well as learn how to perform operating system installations and configurations. They can describe file system organizations, evaluate system policies and optimize those policies. In addition, students utilize Directory Services, implement security accounts and permissions along with learning how to improve server performance. By completing this program students can identify the layers of the Open Systems Interconnect model and other critical communication models. They can describe the principles of wired and wireless network communications and explain native Ethernet and advanced Ethernet systems. Students have an understanding of the principles employed in telecommunications and wide-area networks and write error-free computer programs. As part of their coursework students design and engineer a corporate level network while preparing to avoid malware and unwanted intrusions of computers and networks. This program introduces students to the challenges involved with setting up and troubleshooting networks for other organizations and the issues faced by a new business.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 109, MATH 115, BUS 126 or higher level MATH course .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training or any PEA Physical Education Activity or any DNC Dance .....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business .....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (31 CR. HRS.)** **CR. HRS.**

CIS 109/ELTR 109 Personal Computer Maintenance .....	2
CIS 143 Introduction to Local Area Networks .....	3
CIS 162 Visual C# Programming or CIS 185 C Programming .....	3
CIS 183 Networking Technologies .....	3
CIS 209/ELTR 209 Personal Computer Maintenance II .....	3
CIS 210 Operating Systems Concepts .....	3
CIS 243 Telecommunications .....	3
CIS 275 Linux Operating System .....	3
CIS 283 Advanced Local Area Networking.....	3
CIS 293 Network Security .....	3
BUS 290CI Cooperative Internship Program .....	2

**Total 64**

# Computer Networking Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*Uncertain*

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,629.00 + \$35.00 *per semester for registration fee*

**Total estimated costs for books and supplies for entire program:** \$1880.55

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

## CERTIFICATE REQUIREMENTS (37 CR. HRS.)

## CR. HRS.

CIS 109/ELTR 109 Personal Computer Maintenance .....	2
CIS 120A Introduction to Computer Information Systems .....	3
CIS 143 Introduction to Local Area Networks .....	3
CIS 162 Visual C# Programming or CIS 185 C Programming .....	3
CIS 183 Networking Technologies .....	3
CIS 209 Personal Computer Maintenance II (A+ Certification) .....	3
CIS 210 Operating Systems Concepts .....	3
CIS 243 Telecommunications .....	3
CIS 260A Visual Basic Programming or	
CIS 280 Java Programming .....	3
CIS 275 Linux Operating System .....	3
CIS 283 Advanced Local Area Networking .....	3
CIS 293 Network Security .....	3
BUS 290CI Cooperative Internship Program .....	2
	<b>Total 37</b>

## Associate in Applied Science

**Web Design**

The following program is for A.A.S. Degree students interested in careers which require extensive knowledge of the Internet. Students receiving an A.A.S. Degree in Web Design can create Web pages, install and maintain Web servers and are knowledgeable about the protocols and hardware used to transfer data across the Internet. They learn to work within wide-area networks and can develop new Web sites using HTML coding. This degree is not designed for students wishing to transfer to four-year institutions. Transfer-oriented students interested in working with computers should consult with a counselor.

**GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math, or MATH 109 College Algebra with Applications, or higher level Math course .....	3-4
BUS 127 Human Relations or COM 101 Oral Communication.....	3
CIS 120A Introduction to Computer Information Systems .....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice) .....	2

**BUSINESS CORE REQUIREMENTS (10 CR. HRS.)** **CR. HRS.**

ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business.....	3
BUS 200 International Business .....	3

**CAREER PROGRAM REQUIREMENTS (31-32 CR. HRS.)** **CR. HRS.**

GRD 120 Introduction to Graphic Design .....	3
GR 160 Digital Imaging or CIS 187 Multimedia Digitizing .....	3
CIS 153AW Introduction to Database Management .....	1
CIS 162 Visual C# Programming or CIS 185 C Programming .....	3
CIS 167FL/GRD 167FL Introduction to Internet Animation .....	1
CIS 177DW Introduction to HTML Editors .....	1
CIS 217 Introduction to JavaScript Programming.....	1
CIS 220 E-Business .....	3
CIS 253A Database Design and Implementation .....	3
CIS 257A HTML for Internet Web Page Design .....	3

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CIS 267PHP Server-Side Web Programming	
or CIS 267ASP Server-Side Web Programming .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
BUS 290CI Cooperative Internship Program .....	3
<b>ELECTIVE**</b> .....	1

**Minimum Total 62**

*\*\*Recommended Electives: CIS 183, CIS 210, CIS 250, or a 200-level programming class.*

## Web Design Certificate

<b>CERTIFICATE REQUIREMENTS (35 CR. HRS.)</b>	<b>CR. HRS.</b>
CIS 120A Introduction to Computer Information Systems .....	3
CIS 153AW Introduction to Database Management .....	1
CIS 162 Visual C# Programming or CIS 185 C Programming .....	3
CIS 177DW Introduction to HTML Editors .....	1
CIS 187 Multimedia Digitizing .....	3
CIS 217 Introduction to Java Script Programming .....	1
CIS 220 E-Business .....	3
CIS 253A Database Design and Implementation .....	3
CIS 257A HTML for Internet Web Page Design .....	3
CIS 267PHP Server-Side Web Programming	
or CIS 267ASP Server-Side Web Programming .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
GRD 120 Introduction to Graphic Design .....	3
GRD 167FL/CIS 167FL Introduction to Internet Animation .....	1
GR 160 Digital Imaging .....	3
BUS 290CI Cooperative Internship Program .....	1
<b>Minimum Total 35</b>	

## Associate in Applied Science

**Website Development Entrepreneur**

This program provides students with foundational skills required to own and operate a Website development business. This includes understanding the features and opportunities of doing business on the Internet and by examining how e-business strategies differ from those of traditional businesses. Students will employ professional design principles in the development of effective and user-friendly websites using XHTML and cascading style sheets. Students acquire the skills required to write error-free computer programs and server-side scripts, to design and normalize databases, as well as create and integrate multi-media applications using sound, video and animation. The degree is wrapped around learning fundamental day-to-day business skills including implementing a business plan, client management, professional business communication, accounting and finance functions. Students completing this program understand the challenges involved with establishing a new business, keeping it financially sound and solving issues faced by new businesses.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 115 or BUS 105 Statistics or BUS 126 Business Math .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training or any PEA Physical Education or any DNC Dance course .....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 220/CIS 220 E-Business .....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (29 CR. HRS.)** **CR. HRS.**

CIS 153AW Introduction to Database Management.....	1
CIS 162 Visual C# Programming or CIS 185 C programming.....	3
CIS 177 Introduction to HTML editors .....	1
CIS 187 Multimedia Digitizing .....	3
CIS 217 Introduction to JavaScript Programming.....	1
CIS 253A Database Design and Implementation.....	3
CIS 257A HTML for Internet Web Page Design .....	3
CIS 267ASP Web Programming or CIS 267PHP Web Programming.....	3
CIS 287 Personal Computer Digital Video Editing .....	3
GRD 120 Introduction to Graphic Design .....	3
GRD 167FL/CIS 167FL Introduction to Internet Animation using Flash .....	1
GR 160 Digital Imaging.....	3
BUS 290CI Cooperative Internship Program .....	1

**Total 62**

## Associate in Applied Science

**Web Game Development Entrepreneur**

This degree program provides students with the foundation skills to own and operate a web-based game development business. Students acquire the skills to create web-based entertainment offerings, to effectively utilize programming and game scripting skills, to design and normalize databases, to implement server-side scripts, to employ graphic design in the creation of the user interface, and to apply principles of game development. Students learn how to utilize market analysis techniques to understand the various trends in the marketplace in order to create a successful offering. In addition, they learn how to run the day-to-day operation of the business by employing database management procedures, using accounting procedures, professional business communication, analyzing profit and loss statements, applying business ethics, and creating and executing a business plan.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 115/BUS 105 Statistics or higher level MATH course .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics .....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training or any PEA Physical Education or any DNC Dance course .....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business .....	3
BUS 230 Entrepreneurial Planning .....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (29 CR. HRS.)** **CR. HRS.**

CIS 124 Introduction to Game Development .....	3
CIS 153AW Introduction to Database Management .....	1
CIS 162 Visual C# Programming or CIS 185 C Programming .....	3
GRD167/CIS 167FL Introduction to Internet Animation .....	1
CIS 244 Game Scripting .....	3
CIS 253A Database Design and Implementation .....	3
CIS 257A HTML for Internet Web Page Design .....	3
CIS 267ASP Web Programming or CIS 267PHP Web Programming .....	3
CIS 284 Interactive Media and Game Design .....	3
GRD 120 Introduction to Graphic Design .....	3
ART 198 Art History I, TH 102 Introduction to Acting I, COM 102 Mass Media or BUS 290CI Cooperative Internship Program .....	3

**Total 62**

Associate in Applied Science

# Personal Computer Maintenance Entrepreneur

This degree program will provide students with foundation skills and knowledge to own and operate a computer repair and maintenance business. Students will gain the skills to analyze, repair and maintain computer and computer networked systems. They do this by understanding basic electronic circuit principles, analyzing the fundamentals of semi conductor circuit devices and by being able to examine circuits used in digital and analog communication systems. This knowledge is brought together by utilizing market evaluation techniques to understand trends in the marketplace to keep the business competitive. Students also learn the procedures and techniques to run the day to day operation of the business. In addition, they employ database management, accounting procedures and business communication to analyze profit and loss statements and trend analysis. As a result, students apply business ethics to implement and execute a successful plan.

## GENERAL EDUCATION REQUIREMENTS (22 CR. HRS.) CR. HRS.

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
ELTR 111 Electronic Mathematics .....	5
COM 101 Oral Communications or	
BUS 127 Human Relations.....	3
AMT 129 Intro to Technology .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

## ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.) CR. HRS.

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business.....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

## DEGREE REQUIREMENTS (29 CR. HRS.) CR. HRS.

ELTR 101 Electronic-Basic .....	4
ELTR 102A Active Devices and Circuit Analysis .....	4
ELTR 109 or CIS 109 Personal Computer Maintenance .....	2
ELTR 112 Digital Electronics.....	3
ELTR 201A Communications (Principles and Servicing) .....	4
ELTR 209 or CIS 209 Personal Computer Maintenance II .....	3
CIS 143 Introduction to Local Area Networks .....	3
CIS 183 Networking Technologies .....	3
TECH 290CI Cooperative Internship .....	3

**Total 64**

## Business Technology Programs

(Degrees and Certificates)

Many of the Business Technology courses are taught in the self-paced Business Technology computer lab. Instructors using this system recognize that no two students are exactly alike in background, skills, and learning abilities. Students will find that this learning system can be adapted to their own special talents, needs, and objectives. Please note that all prerequisites, as listed in class schedules, must be met prior to enrolling in a Lab course.

This system of individualized instruction combines specialized software and printed materials in a sequence of learning activities. Students **PROCEED AT THEIR OWN PACE WITH A DAILY SCHEDULE THAT THEY CREATE** within the lab hours of operation and following a weekly schedule of assignments.

The following courses are currently taught in the Business Technology Lab:

- BUS 179 Keyboarding
- BUS 181C Office Procedures I – Document Formatting
- BUS 182C Office Procedures II – Document Production
- BUS 188F Introduction to Medical Transcription
- BUS 281C Office Procedures III – Desktop Publishing
- BUS 194 Business English Essentials
- BUS 195 Medical Records Management
- BUS 196 Electronic Health Records
- BUS 187A Electronic Records Management
- BUS 280C Word Processing Part II
- BUS 185B Electronic Calculator
- BUS 188A1 Voice Transcription – Administrative
- CIS 115WW Introduction to Word Processing
- CIS 119PP Introduction to Presentation Graphics
- CIS 101EW Introduction to Electronic Spreadsheets

Business Technology Lab students design a schedule that allows them to finish comfortably the course or courses in which they enroll. Students can complete the course assignments in the Lab at any time that the Lab is open during the day or at night. Many of the courses can be worked on outside of the lab. For Business Technology Lab courses, students have either 7 or 15 weeks in the Fall and Winter and up to 7 weeks in the Summer to complete their course(s). It is possible to complete Business Technology Lab courses in less than the 15 weeks (or 7 weeks as mentioned above).

Students who enroll in an Business Technology Lab course should check the MCC class schedule to read about the scheduled date for the Business Technology Lab student orientation. This student orientation is **required** for all first-time Business Technology Lab students.

### A.A.S. Degree Programs

Administrative Assistant  
 Administrative Assistant - Medical  
 Medical Office Management

### Certificates

Medical Records and Billing  
 Office Assistant

## Associate in Applied Science

**Administrative Assistant**

The following program is for the A.A.S. Degree student. It is not designed for the student wishing to transfer to a four-year institution. Any student desiring to pursue a transfer program in business should consult with a counselor. This program will provide training in office activities and administration in order for the student to attain a high degree of competency and meet entry-level qualifications for an administrative office assistant position. Upon completion of the program, the student will be able to use hardware and software commonly used in the office, successfully communicate through effective writing and speech, demonstrate the ability to keyboard at a speed that meets industry standards, create business documents following standards, and demonstrate critical thinking skills as they relate to the administrative assistant.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

<sup>5</sup> BCOM 101 Business and Technical Communications.....	3
BCOM 102 Advanced Business and Technical Communications.....	3
BUS 126 Business Math.....	3-4
BUS 127 Human Relations or COM 101 Oral Communications.....	3
CIS 120A Introduction to Computer Information Systems.....	3
PHIL 205 Business Ethics.....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice).....	2

**BUSINESS CORE REQUIREMENTS (11 CR. HRS.)** **CR. HRS.**

ACC 201 Principles of Accounting I.....	4
BUS 121 Introduction to Business.....	3
<sup>3</sup> BUS 180C Introduction to Word Processing.....	4

**CAREER PROGRAM REQUIREMENTS (31 CR. HRS.)** **CR. HRS.**

BUS 106 Quickbooks.....	3
<sup>1</sup> BUS 179 Keyboarding.....	1
<sup>2</sup> BUS 181C Office Procedures I–Document Formatting.....	3
<sup>4</sup> BUS 182C Office Procedures II–Document Production.....	3
BUS 185B Electronic Calculator.....	2
BUS 187A Electronic Records Management.....	2
BUS 188A Voice Transcription, Administrative.....	3
BUS 280C Word Processing Part II.....	3
BUS 281C Office Procedures III–Desktop Publishing.....	3
BUS 290CI Cooperative Internship Program.....	3
CIS 101EW Introduction to Electronic Spreadsheets.....	1
CIS 102EW Intermediate Electronic Spreadsheets.....	1
CIS 119PP Introduction to Presentation Graphics.....	1
CIS 153AW Introduction to Database Management.....	1
CIS 163VB Visual Basic for Applications.....	1

*Continued on next page*

**SUGGESTED ELECTIVES****CR. HRS.**

<i>(Dependent on individual student to meet 62 credit hour minimum)</i>	
BUS 200 International Business .....	3
ACC 202 Principles of Accounting II.....	4
BUS 166 Quality Customer Service .....	3
BUS 123 Business Law I .....	3

**Minimum Total 62**

<sup>1</sup>BUS 179 Keyboarding – This course should be taken the first semester by the student with no formal training in correct keyboarding techniques. Students may test out of BUS 179 if they have the ability to type 25-30 wpm.

<sup>2</sup>BUS 181C Office Procedures I–Document Formatting – Designed for the student who has correct typing techniques, types at least 25-35 wpm, and has basic word processing skills but lacks formal training in formatting business documents. Student must obtain a grade of C- or better to advance.

<sup>3</sup>BUS 180C is a prerequisite for BUS 182C Office Procedures II–Document Production and BUS 281C Office Procedures III–Desktop Publishing, voice transcription courses, and advanced word processing courses. Attempt to enroll in this class your first semester.

<sup>4</sup>BUS 182C Office Procedures II–Document Production – Designed for the student with some formal training in document formatting, types 40 wpm or higher, and has a knowledge of Microsoft Word. Student must obtain a grade of C- or better to advance.

<sup>5</sup>Student must obtain a grade of C- or better to advance.

**Please see the Business Department counselor or an Business Technology Lab instructor for the recommended sequence of classes.**

**Associate in Applied Science****Administrative Assistant - Medical**

The following program is for the A.A.S. Degree student. It is not designed for the student planning to transfer to a four-year institution. Any student desiring to pursue a transfer program in business should consult with a counselor. This program will provide training in medical office activities/procedures in order for the student to attain a high degree of competency and meet entry-level qualifications for an administrative office position with specialized medical office skills. Upon completion of the program, the student will be able to successfully communicate through effective writing and speech; recognize the importance of safeguarding confidentiality as it relate to medical/legal, professional and bio-ethical standards and laws; define and use terms related to the administrative medical office; and operate computer systems/software or other types of technology to accomplish office tasks.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)****CR. HRS.**

4BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math .....	3-4
BUS 127 Human Relations or COM 101 Oral Communications .....	3
CIS 120A Introduction to Computer Information Systems .....	3

PHIL204 Biomedical Ethics or PHIL205 Business Ethics or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice) .....	2

<b>BUSINESS CORE REQUIREMENTS (11 CR. HRS.)</b>	<b>CR. HRS.</b>
ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business.....	3
1BUS 180C Introduction to Word Processing .....	4

<b>CAREER PROGRAM REQUIREMENTS (31 CR. HRS.)</b>	<b>CR. HRS.</b>
AH101 Medical Terminology .....	3
AH104 Medical Billing.....	2
AH106 Fundamentals of Health Care Delivery .....	3
BIOL 115 Introduction to Anatomy and Physiology .....	4
<sup>2</sup> BUS 181C Office Procedures I.....	3
<sup>3</sup> BUS 182C Office Procedures II .....	3
BUS 188F Introduction to Medical Transcription .....	3
BUS 195 Medical Records Management.....	3
BUS 196 Electronic Health Records.....	3
BUS 290CI Internship.....	3
CIS 101EW Intro to Electronic Spreadsheets .....	1

**Minimum Total 62**

<sup>1</sup>BUS 180C is a prerequisite for BUS 182C Office Procedures II–Document Production and BUS 281C Office Procedures III–Desktop Publishing, voice transcription courses, and advanced word processing courses. Attempt to enroll in this class your first semester.

<sup>2</sup>BUS 181C Office Procedures I–Document Formatting – Designed for the student who has correct typing techniques, types at least 25-35 wpm, and has basic word processing skills but lacks formal training in formatting business documents. Student must obtain a grade of C- or better to advance.

<sup>3</sup>BUS 182C Office Procedures II–Document Production – Designed for the student with some formal training in document formatting, types 40 wpm or higher, and has a knowledge of Microsoft Word. Student must obtain a grade of C- or better to advance.

<sup>4</sup>Student must obtain a grade of C- or better to advance.

**Please see the Business Department counselor or an Business Technology Lab instructor for the recommended sequence of classes for a semester.**

## Associate in Applied Science

**Medical Office Management**

This program is designed for students planning to seek employment in a medical office or similar health care practice of two to six physicians. The curriculum includes general business principles, quality customer service, medical ethics, electronic records management, human resource management, and managed care. The student will develop skills to manage employees, patients, and the business practice in general. A cooperative internship in a medical, dental, or similar health care office is a requirement for the Associates Degree. The program also provides opportunities to upgrade present knowledge and skills or to retrain in the area of medical office management.

<b>GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math, or MATH 109 College Algebra with Applications, or MATH 115 Probability and Statistics, or BUS 105 Business Statistics .....	3-4
BUS 127 Human Relations or COM 101 Oral Communications .....	3
CIS 110 Computer Concepts or CIS 120A Introduction to Computer Information Systems .....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice) .....	2
<b>BUSINESS CORE REQUIREMENTS (10 CR. HRS.)</b>	<b>CR. HRS.</b>
ACC 201 Principles of Accounting I .....	4
BUS 121 Introduction to Business .....	3
BUS 200 International Business .....	3
<b>CAREER PROGRAM REQUIREMENTS (34 CR. HRS.)</b>	<b>CR. HRS.</b>
BUS 290CI Cooperative Internship Program .....	3
AH 101 Medical Terminology .....	3
AH 104 Medical Insurance Billing .....	2
AH 106 Fundamentals of Health Care Delivery .....	3
BUS 123 Business Law I .....	3
BUS 273A Human Resource Management .....	3
BUS 166 Quality Customer Service .....	3
BUS 125 Supervision .....	3
BUS 180C Introduction to Word Processing Part I .....	4
ACC 203 Payroll Accounting .....	3

BUS 195 Medical Records Management.....	3
BUS 297QB Quickbooks.....	1

**OTHER CLASSES TO CONSIDER**

CIS 101EW Introduction to Electronic Spreadsheets.....	1
CIS 153AW Introduction to Database Management .....	1

**Minimum Total 64-66****BUSINESS TECHNOLOGY – CERTIFICATE PROGRAMS**

The following one-year programs are designed for non-transfer students. Students with a desire to pursue a transfer program in business should consult a counselor.

**Medical Records and Billing Certificate**

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*43-9061 Office Clerks, General*

<http://www.onetonline.org/link/summary/43-9061.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$2,864.00 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$1,429.00**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2010 and June 30, 2011:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2010 and June 30, 2011, who completed the program within the normal time of 12 months: 1**

This certificate is designed to provide training and practice in medical office assistant skills. This certificate will flow directly into the Administrative Assistant-Medical, AAS.

**CERTIFICATE REQUIREMENTS (35 CR. HRS.)****CR. HRS.**

AH 101 Medical Terminology .....	3
AH 104 Medical Billing.....	2
AH 106 Fundamentals of Health Care Delivery.....	3
5BCOM 101 Business and Technical Communications.....	3
BIOL 115 Introduction to Anatomy and Physiology .....	4
1BUS 179 Keyboarding.....	1
2BUS 180C Introduction to Word Processing .....	4
3BUS 181C Office Procedures I.....	3
4BUS 182C Office Procedures II.....	3

*Continued on next page*

BUS 195 Medical Records Management.....	3
BUS 196 Electronic Health Records.....	3
CIS 120A Introduction to Computer Information Systems .....	3
	<b>Total 35</b>

<sup>1</sup>BUS 179 Keyboarding – This course should be taken the first semester by the student with no formal training in correct keyboarding techniques. A student with a typing speed of at least 20-25 wpm should enroll in BUS 181C.

<sup>2</sup>BUS 180C is a prerequisite for BUS 182C Office Procedures II–Document Production and BUS 281C Office Procedures III–Desktop Publishing, voice transcription courses, and advanced word processing courses. Attempt to enroll in this class your first semester.

<sup>3</sup>BUS 181C Office Procedures I–Document Formatting – Designed for the student who has correct typing techniques, types at least 25-35 wpm, and has basic word processing skills but lacks formal training in formatting business documents. Student must obtain a grade of C- or better to advance.

<sup>4</sup>BUS 182C Office Procedures II–Document Production – Designed for the student with some formal training in document formatting, types 40 wpm or higher, and has a knowledge of Microsoft Word. Student must obtain a grade of C- or better to advance.

<sup>5</sup>Student must obtain a grade of C- or better to advance.

## Office Assistant Certificate

### Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*31-9092 Medical Assistance*

<http://www.onetonline.org/link/summary/31-9092.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$1,790.00 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$751.00

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2010 and June 30, 2011:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2010 and June 30, 2011, who completed the program within the normal time of 12 months:** 2

This certificate is designed to provide training and practice in basic office skills. This certificate will flow directly into the Administrative Assistant, AAS.

<b>CERTIFICATE REQUIREMENTS (30 CR. HRS.)</b>	<b>CR. HRS.</b>
5BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
1BUS 179 Keyboarding.....	1
2BUS 180C Introduction to Word Processing .....	4
3BUS 181C Office Procedures I.....	3

4BUS 182C Office Procedures II.....	3
BUS 185B Electronic Calculator .....	2
BUS 280C Word Processing Part II.....	3
CIS 101EW Introduction to Electronic Spreadsheets.....	1
CIS 102EW Intermediate Electronic Spreadsheets.....	1
CIS 119PP Introduction to Presentation Graphics .....	1
CIS 120A Introduction to Computer Information Systems .....	3
CIS 153AW Introduction to Database Management.....	1
CIS 163VB Visual Basic for Applications.....	1
<b>Total</b>	<b>30</b>

<sup>1</sup>BUS 179 Keyboarding – This course should be taken the first semester by the student with no formal training in correct keyboarding techniques. A student with a typing speed of at least 20-25 wpm should enroll in BUS 181C.

<sup>2</sup>BUS 180C is a prerequisite for BUS 182C Office Procedures II–Document Production and BUS 281C Office Procedures III–Desktop Publishing, voice transcription courses, and advanced word processing courses. Attempt to enroll in this class your first semester.

<sup>3</sup>BUS 181C Office Procedures I–Document Formatting – Designed for the student who has correct typing techniques, types at least 25-35 wpm, and has basic word processing skills but lacks formal training in formatting business documents. Student must obtain a grade of C- or better to advance.

<sup>4</sup>BUS 182C Office Procedures II–Document Production – Designed for the student with some formal training in document formatting, types 40 wpm or higher, and has a knowledge of Microsoft Word. Student must obtain a grade of C- or better to advance.

<sup>5</sup>Student must obtain a grade of C- or better to advance.

## Education Programs

*(Degrees and Certificates)*

### A.A.S Degree Programs

Child Development Associate  
 Family Child Care Entrepreneur  
 Instructional Assistant, Special Education  
 Teacher Aide

### Certificates

Child Development Associate  
 Infant-Toddler Development Associate  
 Family Child Care  
 Instructional Assistant, Autism

### **Criminal Background Check**

State laws require a criminal background check of students interested in the field of Education, and students have to pass a criminal background check before starting fieldwork.

Felonies and some misdemeanor convictions may prevent you from completing fieldwork for the Education Program and getting a State of Michigan Home Care License. Students must have a clear criminal background check to begin the Education Program.

*Continued on next page*

Some school districts require classroom volunteers to obtain an FBI fingerprint check; the student is responsible for the cost of that FBI check. Any student who becomes subject to criminal prosecution while participating in the Education Program is required to report such allegations immediately to the Education Program Director. Discovery of such may result in immediate dismissal from the class(es) and the program.

**Professional Education Certificates**

The national Child Development Associate (C.D.A.) and Muskegon Community College’s certificates provide competency-based professional preparation for individuals interested in becoming preschool teachers and paraprofessionals. The national C.D.A. credentials are recognized throughout the country. The preschool center-based program is accepted as alternate teacher certification in teaching 3-5 year old children in non-public school settings.

**Associate in Applied Science**

**Child Development Associate**

Muskegon Community College currently offers a program in Child Development. The purpose of the program is to enhance the quality of child care by defining, evaluating, and recognizing the competence of child care providers. The C.D.A. student, after successfully completing the program may apply to The Council for Professional Recognition in Washington, D.C. for assessment of the competency standards and earn a CDA Credential.

The Education Department is pleased to announce that students who complete two years of instruction can now receive the Associate in Applied Science Degree (A.A.S.). This level of graduate can function as lead teacher for 3-5 year old children in a center-based preschool.

Students desiring to transfer to a four-year institution should consult with a counselor. This curriculum is not designed as a transfer program.

<b>GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)</b>	<b>CR. HRS.</b>
BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math OR	
MATH 105 Math for Elementary Teachers.....	3-4
BUS 127 Human Relations OR	
COM 101 Oral Communications .....	3
CIS 120A Introduction to Computer Information Systems OR	
CIS 110 Computer Concepts.....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics,	
PSCI 111 Introduction to American Government,	
PSCI 211 Comparative Governments,	
PSYC 201 General Psychology, or	
PSYC 102 Applied Psychology .....	3-4

PEA/DNC Physical Education and/or Dance  
 (Required: One credit hour from: PEA 101A, PEA 103,  
 PEA 104A, PEA 118 or PEA 201 and  
 one PEA/DNC credit hour of choice).....2

**\*CAREER PROGRAM REQUIREMENTS (29 CR. HRS.)** **CR. HRS.**

ED 109 The Parent-Child Connection .....	3
ED 111 Introduction to the Education of Young Children.....	3
ED 120A Early Childhood Education.....	3
ED 211 Behavior Management.....	3
ED 214 Infants and Toddlers .....	3
ED 220A Early Childhood Assessment .....	2
ED 230 Children’s Literature.....	3
ED 225 Child Development OR	
ED 250 Human Growth and Learning.....	3
ED 210 Child Care and Guidance.....	3
ED 252A Child Development Practicum.....	3

**\*Total Fieldwork Hours: 480**

**SUGGESTED ELECTIVES (Minimum 11-13 CR. HRS.)** **CR. HRS.**

ED 106 Introduction to Outdoor Education .....	2
ED 118 Creative Curriculum for Children.....	3
ED 200 Literacy - Birth to Five Years .....	3
ED 202 Teaching of Reading in the Elementary School .....	3
ED 207 Principles of Elementary Education .....	3
ED 216 Educating the Exceptional Child and Young Adult.....	3
ED 219 Science in the Elementary Classroom .....	3
ED 107 Child Care: Operating a Successful Business OR	
ED 223 Child Care Center Administration.....	3
ED 251 Health Needs of the Young Child .....	3
ART 211 Art Education Workshop .....	3
CSS 100 College Success Seminar.....	2
MATH 050 Intermediate Algebra .....	4
MU 192 Music for the Classroom Teacher.....	4
PSYC 202 Educational Psychology.....	3
SOC 101 Principles of Sociology .....	3
TH 108 Theater for Children .....	3

**Total 62**

# Child Development Associate Certificate

## CERTIFICATE REQUIREMENTS (29-38 CR. HRS.) CR. HRS.

### (Center-Based Preschool)

ED 109 The Parent-Child Connection .....	3
ED 111 Introduction to the Education of Young Children .....	3
ED 120A Early Childhood Education.....	3
ED 211 Behavior Management .....	3
ED 214 Infants and Toddlers .....	3
ED 220A Early Childhood Assessment .....	2
ED 230 Children's Literature.....	3
ED 225 Child Development OR	
ED 250 Human Growth and Learning.....	3
ED 210 Child Care and Guidance.....	3
ED 252A Child Development Practicum.....	3

**Total 29**

## ADMINISTRATIVE ELECTIVES (9 CR. HRS.) CR. HRS.

Those pursuing a director's position should also take

### Administrative Electives:

ED 118 Creative Curriculum for Children .....	3
ED 107 Child Care: Operating a Successful Business OR	
ED 223 Child Care Center Administration .....	3
ED 251 Health Needs of the Young Child .....	3

**Total 38**

### **Total Fieldwork Hours: 480**

*Students are required to successfully complete HE 100A Community First Aid or present a valid CPR and First Aid card.*

# Infant-Toddler Development Associate Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*25-2011 – Preschool Teachers, Except Special Ed.*

<http://www.onetonline.org/link/summary/25-2011.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$2,865.00 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$1254.75**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months: 1**

## CERTIFICATE REQUIREMENTS (26 CR.HRS.)

## CR. HRS.

ED 111 Introduction to Education of Young Children .....	3
ED 120A Early Childhood Education.....	3
ED 214 Infants and Toddlers .....	3
ED 220A Early Childhood Assessment .....	2
ED 230 Children's Literature.....	3
ED 225 Child Development OR	
ED 250 Human Growth and Learning.....	3
ED 216 Educating the Exceptional Child and Young Adult.....	3
ED 210 Child Care and Guidance.....	3
ED 252A Child Development Practicum.....	3

**Total 26**

### **Total Fieldwork Hours: 480**

*Students are required to successfully completed HE 100A Community First Aid or present a valid CPR and First Aid card.*

## Associate in Applied Science

**Family Child Care Entrepreneur**

This degree program provides students with the foundation skills necessary to own and operate a Family Child Care business. As part of this program students develop knowledge of administrative tasks, business responsibilities, record keeping and curriculum development along with an understanding of the personnel, parent involvement and developmental growth needs of children in a care setting. Also included is a comprehensive review of the theory and practice of behavior management in applied settings. This program addresses the challenges and procedures of building a new center, classroom design, and problems faced by a new business.

**GENERAL EDUCATION REQUIREMENTS (21 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 105 Mathematics for Elementary Teachers .....	4
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business.....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (29 CR. HRS.)** **CR. HRS.**

ED 111 Introduction to Education of Young Children.....	3
ED 120A Early Childhood Education.....	3
ED 210 Child Care and Guidance.....	3
ED 211 Behavior Management.....	3
ED 214 Infants and Toddlers .....	3
ED 220A Early Childhood Assessment .....	2
ED 223 Child Care Center Administration .....	3
ED 225 Child Development or	
ED 250 Human Growth and Learning .....	3
ED 230 Children's Literature.....	3
ED 252A Child Development Practicum.....	3

**Total 63**

# Family Child Care Certificate (FCC)

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*39-9011 Childcare Workers*

<http://www.onetonline.org/find/quick?s=39-9011>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,151.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1255.80

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

<b>CERTIFICATE REQUIREMENTS (29 CR. HRS.)</b>	<b>CR. HRS.</b>
ED 111 Introduction to the Education of Young Children .....	3
ED 120A Early Childhood Education .....	3
ED 211 Behavior Management .....	3
ED 214 Infants and Toddlers .....	3
ED 223 Child Care Center Administration .....	3
ED 220A Early Childhood Assessment .....	2
ED 230 Children's Literature.....	3
ED 225 Child Development OR	
ED 250 Human Growth and Learning .....	3
ED 210 Child Care and Guidance.....	3
ED 252A Child Development Practicum.....	3
	<b>Total 29</b>

**Total Fieldwork Hours: 480**

*Students are required to successfully completed HE 100A Community First Aid or present a valid CPR and First Aid card.*

## Associate in Applied Science

**Instructional Assistant, Special Education****GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math or MATH 105 Math for Elementary Teachers.....	3-4
BUS 127 Human Relations or COM 101 Oral Communications .....	3
CIS 120A Introduction to Computer Information Systems or CIS 110 Computer Concepts.....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics, PSCI 111 Introduction to American Government, PSCI 211 Comparative Governments, PSYC 201 General Psychology, or PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance (Required: One credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118 or PEA 201 and one PEA/DNC credit hour of choice) .....	2

**\*CAREER PROGRAM REQUIREMENTS (30 CR. HRS.)** **CR. HRS.**

ED 101A Introduction to Education .....	3
ED 109 The Parent-Child Connection .....	3
ED 202 Teaching of Reading in the Elementary School .....	3
ED 211 Behavior Management .....	3
ED 221 Teaching Students with Learning and Behavioral Problems.....	3
ED 216 Educating the Exceptional Child and Young Adult .....	3
ED 225 Child Development OR ED 250 Human Growth and Learning .....	3
ED 230 Children's Literature .....	3
PSYC 202 Educational Psychology .....	3
ED 272 Education Practicum.....	3

**\*Total Fieldwork Hours: 480****SUGGESTED ELECTIVES (Minimum 10-12 CR. HRS.)** **CR. HRS.**

ED 106 Introduction to Outdoor Education .....	2
ED 118 Creative Curriculum for Children.....	3
ED 207 Principles of Elementary Education .....	3
ED 219 Science in the Elementary Classroom .....	3
ED 220A Early Childhood Assessment .....	3
ED 226 Interdisciplinary Approaches to Early Interventions. ....	3
ED 251 Health Needs of the Young Child .....	3
ART 211 Art Education Workshop .....	3
CSS 100 College Success Seminar .....	2
**HE 100A Community First Aid .....	2
30 hours minimum working with CIMO, CIS, SXI, AI	

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MATH 050 Intermediate Algebra .....	4
MU 192 Music for the Classroom Teacher .....	4
SOC 101 Principles of Sociology .....	3
TH 108 Theater for Children .....	3
<b>Total</b>	<b>62</b>

\*\*A valid First Aid and CPR card must be current at the time of graduation for all certificate programs. Approved prior experience may be counted for *some* fieldwork hours. All courses earn college credit.

An individualized Educational Planning Committee (IEPC) programs are:

- Moderate cognitive impairments (CIMO) -- 88 hours
- Severe cognitive impairments (CIS) -- 88 hours
- Severe multiple impairments (SXI) -- 88 hours
- Autistic Impairment (AI) -- 88 hours

**The CIS and SXI programs operate year-round, while CIMO and AI are on a regular year calendar.**

Past work experience and former academic coursework may be considered when programs are planned. More than one certificate may be obtained through individually designed programs. A certificate may be obtained as entry into the workforce, or the student may continue with the Associate in Science and Arts Degree or Associate in Applied Science Degree.

Please contact the Education Department office (231) 777-0277 for more information concerning these certificate programs, and the Early Childhood Education sequence leading to the A.S.A degree or the A.A.S. degree.

Entry into any certificate program includes:

- Completion of an MCC application for admission
- Completion of a professional certificate program application
- MCC assessments in English, reading, and mathematics
- Interview with the Education Coordinator

In order to earn an Education Certificate, a student must maintain at least a “C” (2.0) grade in every course and have a 2.5 cumulative G.P.A. prior to enrolling for an independent study course.

**NOTE:** 25 fieldwork hours for every 3 credit hour of course work is required for all students. **To avoid updating coursework, all courses in a certificate must be completed within five years.**

# Instructional Assistant, Autism Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

25-2041- *Special Ed. Teachers Kindergarten, & Elementary*

<http://www.onetonline.org/link/summary/25-2041.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,533.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1289.40

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

<b>CERTIFICATE REQUIREMENTS (34 CR. HRS.)</b>	<b>CR. HRS.</b>
ED 101A Introduction to Education .....	3
ED 109 The Parent-Child Connection .....	3
ED 225 Child Development.....	3
ED 229 Fundamental Concepts of Autism Spectrum .....	3
ED 227 Educational and Assistive Technology .....	3
PSYC 201 General Psychology .....	4
PSYC 202 Educational Psychology.....	3
ED 211 Behavior Management.....	3
ED 231 Intro to Autism Spectrum Disorders (ASD) Therapies I .....	3
ED 232 Advanced Autism Spectrum Disorders (ASD) Therapies II.....	3
ED 272 Education Practicum.....	3
	<b>Total 34</b>

*\*\*A valid First Aid and CPR card must be current at the time of graduation for all certificate programs. Approved prior experience may be counted for some fieldwork hours. All courses earn college credit.*

An individualized Educational Planning Committee (IEPC) programs are:

- Moderate cognitive impairments (CIMO) -- 88 hours
- Severe cognitive impairments (CIS) -- 88 hours
- Severe multiple impairments (SXI) -- 88 hours
- Autistic Impairment (AI) -- 88 hours

**The CIS and SXI programs operate year-round, while CIMO and AI are on a regular year calendar.**

Past work experience and former academic coursework may be considered when programs are planned. More than one certificate may be obtained through individually designed programs. A certificate may be obtained as entry into the workforce, or the student may continue with the Associate in Science and Arts or Associate in Applied Science Degrees.

## Associate in Applied Science

**Teacher Aide**

Muskegon Community College currently offers a program preparing paraprofessional workers to work in various grades/classrooms, latchkey programs, and child care centers. It is an opportunity for students to gain professional recognition for demonstrating competence in their profession. The Education Department is pleased to announce that students who complete two years of instruction can now receive the Associate in Applied Science Degree (A.A.S.) Students desiring to transfer to a four-year institution should consult with a counselor. This curriculum is not designed as a transfer program.

**GENERAL EDUCATION REQUIREMENTS (20-22 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math OR	
MATH 105 Math for Elementary Teachers.....	3-4
BUS 127 Human Relations OR	
COM 101 Oral Communications .....	3
CIS 120A Introduction to Computer Information Systems OR	
CIS 110 Computer Concepts.....	3
<i>Select one course from the following:</i>	
GEOG 104 Cultural Geography, PHIL 205 Business Ethics,	
PSCI 111 Introduction to American Government,	
PSCI 211 Comparative Governments,	
PSYC 201 General Psychology, or	
PSYC 102 Applied Psychology .....	3-4
PEA/DNC Physical Education and/or Dance	
(Required: One credit hour from: PEA 101A, PEA 103,	
PEA 104A, PEA 118 or PEA 201 and	
one PEA/DNC credit hour of choice) .....	2

**\*CAREER PROGRAM REQUIREMENTS (27 CR. HRS.)** **CR. HRS.**

ED 101 A Introduction to Education.....	3
ED 109 The Parent-Child Connection .....	3
ED 202 Teaching of Reading in the Elementary School .....	3
ED 211 Behavior Management .....	3
ED 221 Teaching Students with Learning and Behavior Problems.....	3
ED 230 Children's Literature.....	3
ED 225 Child Development OR	
ED 250 Human Growth and Learning.....	3
ED 272 Education Practicum.....	3
PSYC 202 Educational Psychology.....	3

**\*Total Fieldwork Hours: 480**

**SUGGESTED ELECTIVES (Minimum 13-15 CR. HRS.)** **CR. HRS.**

ED 106 Introduction to Outdoor Education .....	2
ED 118 Creative Curriculum for Children.....	3
ED 207 Principles of Elementary Education .....	3

*Continued on next page*

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ED 216 Educating the Exceptional Child and Young Adult .....	3
ED 219 Science in the Elementary Classroom .....	3
ED 251 Health Needs of the Young Child .....	3
ART 211 Art Education Workshop .....	3
CSS 100 College Success Seminar .....	2
MATH 050 Intermediate Algebra .....	4
MU 192 Music for the Classroom Teacher .....	4
SOC 101 Principles of Sociology .....	3
TH 108 Theater for Children .....	3
	<b>Total 62</b>

## Applied Technology Programs

*(Degrees and Certificates)*

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES WHERE HAZARDS EXIST. Students should be advised that it could be dangerous to wear contact lenses in any area where fumes from chemicals, solvents, gases, and areas where electrical flash may be present. You should plan to wear prescription eyeglasses if you take classes where these hazards exist.**

## Associate in Applied Science

# Alternative Fuel Vehicle Entrepreneur

## (Two-Year Program)

This degree program will provide students with the foundation skills and knowledge to own and operate an alternative fuel vehicle repair business. Students completing this degree will have hands-on experience in problem solving and dealing with issues in all eight areas of Automotive Service Excellence (ASE) including hybrid and alternative fueled vehicles. They will learn to repair automobiles in the areas of brakes, steering and suspension, electrical, and engine performance. The students will learn the skills to manage their own business. This includes creating a business plan, accounting and finance, professional business communications and financial functions. Workplace safety and business ethics are also covered. Students are made aware of the many challenges they will face when starting and operating their own business.

### GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)

	CR. HRS.
BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
MATH 115/BUS 105 .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems or AMT 129 Intro to Technology .....	3
PHIL 205 Business Ethics .....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

### ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)

	CR. HRS.
BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for the Small Business Owner .....	3
BUS 161A Effective Selling or BUS/CIS 220 E-Business .....	3
BUS 230 Entrepreneurial Planning .....	3
BUS 240 Entrepreneurship Capstone .....	3

### DEGREE REQUIREMENTS (29 CR. HRS.)

	CR. HRS.
AT 101 Introduction to Automotive Technology .....	2
AT 114 Automotive Power Plants (Engine Rebuilding) .....	3
AT 120 Introduction to Electrical Systems I .....	3
AT 121 Electrical Systems II .....	3
AT 122 Fuel Systems and Emission Controls .....	3
AT 123 Engine Tune Up (Driveability) .....	3
AT 140 Hybrid and Alternative Fuels .....	3
AT 150 Automotive Brakes .....	3
AT 214 Service Management .....	3
AT 223 Advanced Engine Performance .....	3

**Total 62**

Associate in Applied Science

# Automotive Repair Entrepreneur

## (Two-Year Program)

This degree program will provide students with the foundation skills and knowledge to own and operate an automotive repair business. Students completing this degree will have hands-on experience in problem solving and dealing with issues in all eight areas of Automotive Service Excellence (ASE). They will learn to repair automobiles in the areas of brakes, steering and suspension, electrical, and engine performance. The students will learn the skills to manage their own business. This includes creating a business plan, accounting and finance, professional business communications and financial functions. Workplace safety and business ethics are also covered. Students are made aware of the many challenges they will face when starting and operating their own business.

### GENERAL EDUCATION REQUIREMENTS (20 CR. HRS) CR. HRS.

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications.....	3
MATH 109, MATH 115/BUS 105, TMAT 101A or higher level MATH course.....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems or AMT 129 Intro to Technology .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

### ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS) CR. HRS.

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for the Small Business Owner .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business.....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

### DEGREE REQUIREMENTS (29 CR. HRS.) CR. HRS.

AT 101 Introduction to Automotive Technology .....	2
AT 114 Automotive Power Plants (Engine Rebuilding) .....	3
AT 120 Introduction to Electrical Systems I.....	3
AT 121 Electrical Systems II .....	3
AT 122 Fuel Systems and Emission Controls.....	3
AT 123 Engine Tune Up (Driveability).....	3
AT 150 Automotive Brakes.....	3
AT 214 Service Management.....	3

Select one of the following options:

**Option 1 Transmissions**

AT 210 Power Trains (Manual Drive Trains) .....	3
AT 211 Automatic Transmissions .....	3

**Option 2 General Technician**

AT 160 Automotive Air Conditioning.....	3
AT 212 Alignment and Suspensions .....	3

**Total 62**

Associate in Applied Science

**Automotive Technology  
(Two-Year Program)**

This curriculum is designed to educate and train personnel to fill the mechanical, technical, and supervisory positions in the automotive industry. Successful completion of the program leads to the degree of Associate in Applied Science. (Students may elect only those courses required to develop a particular skill without enrolling in the entire program of study that leads to a degree.) Students who wish to complete a program in two years are advised to use a sequence of courses recommended by their counselor or by the instructor. If a student wishes to attend college on less than a full-time basis, the program may be extended beyond two years.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 & 102 Business and Technical Communications.....	6
TMAT 101A, 102, 201 Technical Math (choose two) .....	6
AMT 129 Introduction to Technology .....	3
BUS 127 Human Relations.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

**AUTOMOTIVE TECHNOLOGY REQUIREMENTS (30 CR. HRS.)** **CR. HRS.**

AT 120 Introduction to Electrical Systems I.....	3
AT 121 Electrical Systems II .....	3
AT 122 Fuel Systems and Emission Controls.....	3
AT 123 Engine Tune-Up (Engine Performance).....	3
AT 114 Automotive Power Plants (Engine Rebuilding.....	3
AT 210 Power Trains (Drivelines- Manual Drivetrains).....	3
AT 211 Automatic Transmissions (FWD and RWD).....	3
AT 212 Alignment and Suspension .....	3
AT 213 Brakes and Air Conditioning.....	3
AT 214 Service Management .....	3

NOTE: AT 120/AT 121 must be taken before AT 122/AT 123.

**TECHNICAL-RELATED REQUIREMENTS (6 CR. HRS.)** **CR. HRS.**

W 101 Basic Welding.....	3
MT 101A Basic Machining.....	3

*Continued on next page*

**ELECTIVES (6 CR. HRS.)****CR. HRS.**

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

MET 101 Industrial Materials.....	3
MET 201 Metallurgy.....	3
MET 102 Basic Cast Metals .....	3
HP 101 Hydraulics/Pneumatics .....	3
CAD 150 Blueprint Reading.....	3
CAD 100, 130, or 140 Drafting .....	3
ELTC 101L&L Electricity-Basic .....	3
TECH 290CI Cooperative Internship .....	3

**Total 62**

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES WHERE HAZARDS EXIST.**

## Automotive Technician Certificate

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*49-3023 Automotive Services Technicians and Mechanics.*

<http://www.onetonline.org/link/summary/49-3023.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$4,870.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$826.35

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

**CERTIFICATE REQUIREMENTS (18 CR. HRS.)****CR. HRS.**

TMAT 101A Technical Math .....	3
AT 114 Automotive Power Plants (Engine Rebuilding) .....	3
AT 120 Intro. to Electrical Systems I.....	3
AT 121 Electrical Systems II .....	3

**Select Focus Area:****Drivability**

AT 122 Fuel Systems and Emission Controls.....	3
AT 123 Electrical Tune-Up .....	3

-OR-

**Systems (select two of three)**

AT 211 Automatic Transmissions .....	3
AT 212 Alignment and Suspension.....	3
AT 213 Brakes and Air Conditioning.....	3

**Total 18**

# Automotive Technology Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

49-3023 *Automotive Services Technicians and Mechanics.*

<http://www.onetonline.org/link/summary/49-3023.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$5,443.50 + \$35 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$815.88

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 1

<b>CERTIFICATE REQUIREMENTS (30 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT 101A Technical Math .....	3
AT 114 Automotive Power Plants (Engine Rebuilding) .....	3
AT 120 Intro. to Electrical Systems I .....	3
AT 121 Electrical Systems II .....	3
AT 122 Fuel Systems and Emission Controls .....	3
AT 123 Electrical Tune-Up .....	3
AT 210 Power Trains (FWD & RWD Drivelines) .....	3
AT 211 Automatic Transmissions .....	3
AT 212 Alignment and Suspension .....	3
AT 213 Brakes and Air Conditioning .....	3
	<b>Total 30</b>

Note: AT 120/AT 121 must be taken before AT 122/AT 123

**BCOM 101 Business and Technical Communications is recommended.**

## Associate in Applied Science

**Biomedical Electronics Technology****(Two-Year Program)**

The biomedical electronics technician is a person knowledgeable in the theory of operation, the underlying physiological principles, and the safe clinical application of biomedical equipment. Responsibilities may include installation, calibration, inspection, preventive maintenance, and repair of general biomedical and related technical equipment. The technician might be involved in the operation of equipment and in equipment control, safety, and maintenance.

**GENERAL EDUCATION REQUIREMENTS (19 CR. HRS.)** **CR. HRS.**

BCOM 101 & 102 Business and Technical Communications.....	6
ELTR 111 Electronics Mathematics.....	5
AMT 129 Introduction to Technology.....	3
BUS 127 Human Relations.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201.....	1
HE 110 Industrial Safety and Workplace Training.....	1

**TECHNICAL RELATED REQUIREMENTS (45 CR. HRS.)** **CR. HRS.**

AH 101 Medical Terminology.....	3
BIOL 105L&L Anatomy & Physiology I, .....	4
BIOL 106L&L Anatomy & Physiology II, .....	4
ELTR 101 Electronics-Basic.....	4
ELTR 102A Active Devices & Circuit Analysis.....	4
ELTR 112 Digital Electronics I.....	3
ELTR 201A Communications (Principles & Servicing).....	4
ELTR 202A Industrial Electronic Systems.....	4
ELTR 205 Electronic Circuit Design.....	3
ELTR 210 Introduction to Microprocessors.....	3
ELTR 211A Microcomputer Interfacing.....	3
ELTR 212 Medical Instrumentation & Measurement.....	4
TECH 290CI Cooperative Internship Program.....	2

**ELECTIVES (3-4 CR. HRS.)****Minimum Total: 64**

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES  
WHERE HAZARDS EXIST.**

## Associate in Applied Science

# Computer-Aided Drafting and Design (Two-Year Program)

Computer-Aided Design is a universal language used to communicate ideas of design and construction details through the use of lines, symbols and dimensions. Successful completion of the program leads to the Associate in Applied Science Degree. (Students may elect only those courses required to develop a particular skill without enrolling in the entire program of study that leads to a degree.)

Students who wish to complete a program in two years are advised to use a sequence of courses recommended by their counselor or by the instructor. If a student wishes to attend college on less than a full-time basis, the program may be extended beyond two years.

## GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)

	CR. HRS.
BCOM 101 & 102 Business and Technical Communications .....	6
TMAT 102A, 201 Technical Math .....	6
AMT 129 Introduction to Technology .....	3
BUS 127 Human Relations .....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

## COMPUTER-AIDED

### DRAFTING & DESIGN REQUIREMENTS (24 CR. HRS.)

	CR. HRS.
CAD 110 Introduction to Computer-Aided Drafting (2D) .....	3
CAD 120 Descriptive Geometry .....	3
CAD 135 Engineering Graphics .....	3
CAD 210 Parametric Design I; Part Modeling .....	3
CAD 220 Parametric Design II; Assemblies .....	3
CAD 230 Tool Design .....	3
CAD 240 Product Design .....	3
CAD 250 Introduction to Solidworks .....	3

Students with no drafting experience will be required to take CAD 100 Introduction to Drafting.

### TECHNICAL-RELATED REQUIREMENTS (12 CR. HRS.)

	CR. HRS.
MET 201 Metallurgy .....	3
MT 205 NC/CNC (Numerical Control/Computer Numerical Control) ..	3
MT 101A Basic Machining .....	3
W 101 Basic Welding .....	3

### ELECTIVES (6 CR. HRS.)

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

BUS 179 Keyboarding (or demonstrate proficiency) .....	1
COM 101 Oral Communications .....	3
CAD 100 Introduction to Drafting .....	3
CAD 150 Blueprint Reading .....	3
CAD 151 Geometric Dimensioning & Tolerancing .....	3

*Continued on next page*

CAD 152 Residential Architecture .....	3
CAD 153 Commercial Architecture.....	3
CAD 251 Die Design .....	3
ELTC 101L&L Electricity-Basic .....	3
HP 101 Hydraulics/Pneumatics .....	3
MET 101 Industrial Materials.....	3
MET 102 Basic Cast Metals .....	3
QC 101 Basic Quality Control.....	3
TECH 290CI Cooperative Internship Program.....	3
TMAT 202 Technical Math.....	3
	<b>Total 62</b>

STUDENTS MUST WEAR APPROVED SAFETY GLASSES WHERE HAZARDS EXIST.

## Computer-Aided Drafting and Design Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*17-3019 Drafters, All other:*

<http://www.onetonline.org/link/summary/17-3019.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$3,438.00 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$1165.50**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months: 0**

<b>CERTIFICATE REQUIREMENTS (21 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT 102A, 201 Technical Math .....	6
CAD 110 Introduction to Computer-Aided Drafting (2D).....	3
CAD 120 Descriptive Geometry.....	3
CAD 135 Engineering Graphics .....	3
CAD 210 Parametric Design I; Part Modeling .....	3
CAD 250 Introduction to Solidworks.....	3
	<b>Total 21</b>

**BCOM 101 Business and Technical Communications is recommended.**

## Associate in Applied Science

**Electronics Technology****(Two-Year Program)**

This curriculum is designed to prepare a student for employment as a technician in the industrial and customer service areas. Successful completion of the program leads to the Associate in Applied Science Degree. (Students may elect only those courses required to develop a particular skill without enrolling in the entire program of study that leads to a degree.) Students who wish to complete a program in two years are advised to use a sequence of courses recommended by their counselor or by the instructor. If a student wishes to attend college on less than a full-time basis, the program may be extended beyond two years.

**GENERAL EDUCATION REQUIREMENTS (19 CR. HRS.)** **CR. HRS.**

BCOM 101 & 102 Business and Technical Communications .....	6
ELTR 111 Electronics Mathematics.....	5
AMT 129 Introduction to Technology.....	3
BUS 127 Human Relations.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

**ELECTRONICS TECHNOLOGY REQUIREMENTS (28 CR. HRS.)** **CR. HRS.**

ELTR 101 Electronics-Basic.....	4
ELTR 102A Active Devices & Circuit Analysis.....	4
ELTR 112 Digital Electronics I.....	3
ELTR 201A Communications (Principles and Servicing) .....	4
ELTR 202A Industrial Electronic Systems.....	4
ELTR 205 Electronic Circuit Design .....	3
ELTR 210 Introduction to Microprocessors .....	3
ELTR 211A Microcomputer Interfacing.....	3

**TECHNICAL-RELATED REQUIREMENTS (3 CR. HRS.)** **CR. HRS.**

CAD 100 Introduction to Drafting	
or CAD 110 Intro to Computer-Aided Drafting .....	3

**ELECTIVES (12 CR. HRS.)**

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

COM 101 Oral Communications.....	3
ELTC 150 Industrial Electricity.....	3
ELTC 160L&L Programmable Controllers.....	3
ELTR/CIS 109 Personal Computer Maintenance .....	2
ELTR 212 Medical Instrumentation & Measurement.....	4
HP 101 Hydraulics/Pneumatics .....	3
BUS 125 Supervision.....	3
MET 101 Industrial Materials.....	3
TECH 290CI Cooperative Internship Program.....	3-6

**Total 62-66**

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES  
WHERE HAZARDS EXIST.**

# Electronics Technology Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*17-3023- Electrical & Electronics Engineering Technicians*

<http://www.onetonline.org/link/summary/17-3023.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$5,348.00 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$1063.65**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months: 0**

## CERTIFICATE REQUIREMENTS (39 CR.HRS.)

## CR. HRS.

BCOM 101 Business and Technical Communications .....	3
ELTR 111 Electronics Mathematics.....	5
ELTR 101 Electronics-Basic.....	4
ELTR 102A Active Devices and Circuit Analysis .....	4
ELTR 112 Digital Electronics I.....	3
ELTR 201A Communications (Principles & Servicing).....	4
ELTR 202A Industrial Electronics Systems.....	4
ELTR 205 Electronic Circuit Design .....	3
ELTR 210 Introduction to Microprocessors .....	3
ELTR 211A Microcomputer Interfacing.....	3
CAD 100 Introduction to Drafting	
or CAD 110 Intro to Computer-Aided Drafting .....	3

**Total 39**

Associate in Applied Science

## Graphic Design (Two-Year Program)

The Graphic Design curriculum is designed to prepare students for entry into the field of graphic design with a broad background and experience in the creation of a wide variety of media for advertising, displays, sign and computer graphics to fit clients' needs. Though not fine artists, students need to be skilled in drawing and painting. Media creation and distribution is ever changing and so must be the knowledge and skills of the graphic designer. This program is not designed to transfer to a four-year institution. Any student wishing to

transfer to a four-year college is urged to consult with a counselor. The certificate programs are intended to provide the student with foundation skills to gain immediate employment in the specialty, or continue in the AAS program.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 & 102 Business and Technical Communications .....	6
TMAT 101A & TMAT 102A Technical Math .....	6
BUS 127 Human Relations.....	3
AMT 129 Introduction to Technology.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118 or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training. ....	1

**GRAPHIC DESIGN REQUIREMENTS (32 CR. HRS.)** **CR. HRS.**

GRD 120 Introduction to Graphic Design .....	3
GRD 130 Drawing for Graphic Design .....	3
GRD 140 Introduction to Typography.....	3
GRD 160 History of Graphic Design.....	3
GR 160 Digital Imaging.....	3
CIS 187 Multimedia Digitizing .....	3
GR 110 Introduction to Graphic Reproduction.....	3
GR 220 Electronic Publishing .....	3
GR 270 Computer Imaging for the Printing Industry.....	3
GRD 100ID Introduction to InDesign .....	1
GRD 100PS Introduction to Photoshop.....	1
GRD290CI Cooperative Internship .....	3

**TECHNOLOGY RELATED REQUIREMENTS (7 CR. HRS.)** **CR. HRS.**

CIS 100 Introduction to Personal Computers or CIS 100 L&L Introduction to Personal Computers with Lab (using Windows).....	1
BUS 179 Keyboarding.....	1
GRD 107 Image Assembly .....	2
BUS 123 Business Law .....	3

**ELECTIVES (3 CR. HRS.)** **CR. HRS.**

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

CIS 287 Personal Computer Digital Video Editing .....	3
GRD 100IL Introduction to Illustrator.....	1
CIS 119PP Power Point .....	1
CIS 257A HTML for Internet Web Page Design.....	3
COM 212 Television Production .....	3

**Total 62**

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES  
WHERE HAZARDS EXIST.**

Associate in Applied Science

# Graphic Design Display Advertising Entrepreneur

Students completing this set of classes will have the foundation skills to run a freelance graphic design business. The skill set includes competency in creating graphic design solutions for either print or web-based advertising. Students will develop proficiencies in contemporary graphic design software, image creation and integrating animation techniques in final design solutions. They apply fundamental design elements and principles using type, image and layout to create professional quality display advertising.

## GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.) CR. HRS.

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics .....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

## ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.) CR. HRS.

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business .....	3
BUS 230 Entrepreneurial Planning .....	3
BUS 240 Entrepreneurship Capstone .....	3

## DEGREE REQUIREMENTS (32 CR. HRS.) CR. HRS.

GRD 100ID Introduction to InDesign .....	1
GRD 100IL Introduction to Illustrator .....	1
GRD 100PS Introduction to Photoshop .....	1
GRD 120 Introduction to Graphic Design .....	3
GRD 130 Drawing for Graphic Design .....	3
GRD 140 Introduction to Typography .....	3
GRD 167FL or CIS 167FL	
Introduction to Internet Animation using Flash .....	1
GRD 210 Graphic Design II .....	3
GR 110 Introduction to Graphic Reproduction .....	3
GR 160 Digital Imaging .....	3
GR 200 Black & White Photography .....	3
GR 270 Computer Imaging for the Printing Industry .....	3
BUS 263 Advertising Dynamics .....	3
CIS 177DW Introduction to HTML Editors using Dreamweaver .....	1

**Total 65**

# Graphic Design Certificate Programs

## Display Advertising

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*27-1021 Commercial and Industrial Designers*

<http://www.onetonline.org/link/summary/27-1021.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$5,634.50 + \$35.00 *per semester for registration fee*

**Total estimated costs for books and supplies for entire program:** \$1354.50

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

<b>CERTIFICATE REQUIREMENTS (35 CR. HRS.)</b>	<b>CR.HRS.</b>
GRD 100ID Introduction to InDesign .....	1
GRD 100PS Introduction to Photoshop .....	1
GRD 100IL Introduction to Illustrator .....	1
GRD 120 Introduction to Graphic Design .....	3
GRD 130 Drawing for Graphic Design .....	3
GRD 140 Introduction to Typography .....	3
GR 110 Introduction to Graphic Reproduction .....	3
GR 160 Digital Imaging .....	3
GR 200 Black & White Photography .....	3
GR 270 Computer Imaging for the Printing Industry .....	3
BUS 123 Business Law .....	3
BUS 263 Advertising Dynamics .....	3
CIS 120A Introduction to Computer Information Systems .....	3
CIS 167FL Introduction to Internet Animation Using Flash .....	1
CIS 177DW Introduction to HTML Editors Using Dreamweaver .....	1
	<b>Total 35</b>

# Printing Prepress

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*51-5022 Prepress Technicians and Workers*

<http://www.onetonline.org/link/summary/51-5022.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$4,297.50 + \$35.00 *per semester for registration fee*

**Total estimated costs for books and supplies for entire program:** \$1143.45

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

<b>CERTIFICATE REQUIREMENTS (25 CR. HRS.)</b>	<b>CR.HRS.</b>
GRD 120 Introduction to Graphic Design .....	3
GRD 130 Drawing for Design .....	3
GRD 140 Introduction to Typography .....	3
GR 160 Digital Imaging.....	3
GR 220 Electronic Publishing .....	3
GR 110 Introduction to Graphic Reproduction.....	3
CIS 100 Introduction to Personal Computers OR	
CIS 100 L&L Introduction to Personal Computers with	
Lab (using Windows).....	1
BUS 179 Keyboarding.....	1
BUS 123 Business Law .....	3
GRD 107 Image Assembly .....	2
	<b>Total 25</b>

# Graphic Design for Multimedia

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*27-3099 Media and Communication Workers*

<http://www.onetonline.org/link/summary/27-3099.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$4,584.00 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1400.70

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

**CERTIFICATE REQUIREMENTS (33 CR. HRS.)**

**CR.HRS.**

GRD 120 Introduction to Graphic Design .....	3
GRD 130 Drawing for Design .....	3
GRD 140 Introduction to Typography .....	3
GRD 167FL/CIS 167FL Introduction to Internet Animation .....	1
GR 160 Digital Imaging.....	3
GR 270 Computer Imaging for the Printing Industry .....	3
CIS 120A Introduction to Computer Information Systems .....	3
CIS 119PP Introduction to Presentation Graphics .....	1
CIS 177DW Introduction to HTML Editors .....	1
CIS 187 Multimedia Digitizing .....	3
CIS 257A HTML for Internet Web Page Design .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
BUS 123 Business Law .....	3

**Total 33**

# Web Design Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*27-1024 Graphic Designers*

<http://www.onetonline.org/link/summary/27-1024.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$3,915.50 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$1214.85**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months: 0**

<b>CERTIFICATE REQUIREMENTS (35 CR. HRS.)</b>	<b>CR.HRS.</b>
CIS 120A Introduction to Computer Information Systems .....	3
CIS 153AW Introduction to Database Management.....	1
CIS 162 Visual C# Programming or CIS 185 C Programming .....	3
CIS 177DW Introduction to HTML Editors .....	1
CIS 187 Multimedia Digitizing .....	3
CIS 217 Introduction to Java Script Programming .....	1
CIS 220 E-Business .....	3
CIS 253A Database Design and Implementation .....	3
CIS 257A HTML for Internet Web Page Design.....	3
CIS 267PHP/CIS 267ASP Server-Side Web Programming .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
GRD 120 Introduction to Graphic Design .....	3
GRD 167FL/CIS 167FL Introduction to Internet Animation .....	1
GR 160 Digital Imaging.....	3
BUS 290CI Cooperative Internship Program .....	1
	<b>Total 35</b>

## Video/Audio

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*27-4012 Broadcast Technicians*

<http://www.onetonline.org/link/summary/27-4012.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,724.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$997.50

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

<b>CERTIFICATE REQUIREMENTS (25 CR. HRS.)</b>	<b>CR.HRS.</b>
GRD 120 Introduction to Graphic Design .....	3
GRD 130 Drawing for Graphic Design .....	3
GRD 140 Introduction to Typography .....	3
CIS 100 Intro to Personal Computers or CIS 100 L&L Intro to Personal Computers with Lab (using Windows) .....	1
BUS 179 Keyboarding .....	1
BUS 123 Business Law .....	3
CIS 287 Personal Computer Digital Video Editing .....	3
CIS 187 Digitizing for Multimedia .....	3
COM 102 Mass Media .....	3
COM 212 Television Production .....	3
COM 112 Audio Production .....	3
	<b>Total 29</b>

## Associate in Applied Science

# Industrial Technology

## (Two-Year Program)

This curriculum is designed to educate and train personnel to fill supervisory and technical positions related to industrial technology. Successful completion of the program leads to the degree of Associate in Applied Science. (Students may elect only those courses required to develop a particular skill without enrolling in the entire program of study that leads to a degree.) This degree is not designed for transfer.

### GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.) CR.HRS.

BCOM 101 & 102 Business and Technical Communications .....	6
TMAT 102A, 201 Technical Math .....	6
AMT 129 Introduction to Technology .....	3
BUS 127 Human Relations .....	3
PEA 101A, PEA 103, PEA 104A, PEA 118 or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

### TECHNICAL-RELATED REQUIREMENTS (27 CR. HRS.) CR.HRS.

MET 201 Metallurgy .....	3
MET 101 Industrial Materials .....	3
CAD 110 Introduction to Computer-Aided Drafting (2D) .....	3
CAD 250 Introduction to SolidWorks® .....	3
ELTC 101L&L Electricity-Basic .....	3
MT 101A Basic Machining .....	3
MT 206 2-D CAD/CAM Computer-Aided Design/Machining .....	3
W 101 Basic Welding .....	3
QC 101 Basic Quality Control .....	3

### ELECTIVES (16 CR. HRS.) CR.HRS.

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

BUS 125 Supervision .....	3
BUS 166 Quality Customer Service .....	3
CAD 100 Introduction to Drafting .....	3
CAD 120 Descriptive Geometry .....	3
CIS 102EW Intermediate Electronic Spreadsheets .....	1
CIS 119PP Introduction to Presentation Graphics .....	1
COM 101 Oral Communications .....	3
ELTC 150 Industrial Electricity .....	3
HP 101 Hydraulics/Pneumatics .....	3
MT 216 3-D CAD/CAM Computer-Aided Design/Machining .....	3
QC 105 Quality & Productivity Using SPC-Statistical Process Control .....	3
TMAT 202 Technical Math IV .....	3
TECH 290CI Cooperative Internship .....	3

**Total 63**

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES WHERE HAZARDS EXIST.**

# Industrial Technology Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*17-3026 Industrial Engineering Technicians*

<http://www.onetonline.org/link/summary/17-3026.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,724.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1357.65

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

Federal student loan debt: *NA*

Private loan debt: *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

<b>CERTIFICATE REQUIREMENTS (27 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT 102A Technical Mathematics II .....	3
MET 102 Basic Cast Metals .....	3
MET 101 Industrial Materials.....	3
CAD 150 Blueprint Reading.....	3
ELTC 101L&L Electricity-Basic .....	3
MT 101A Basic Machining.....	3
W 101 Basic Welding.....	3
QC 101 Basic Quality Control.....	3
AMT 129 Introduction to Technology .....	3
	<b>Total 27</b>

**BCOM 101 Business and Technical Communications is recommended.**

## Associate in Applied Science

**Machining Technology****(Two-Year Program)**

This curriculum is designed to prepare the student for that highly diversified area engaged in the production of machined objects required for the assembly of the products of modern industry. Successful completion of this program leads to the Associate in Applied Science Degree. (Students may elect only those courses required to develop a particular skill without enrolling in the entire program of study that leads to a degree.) Students who wish to complete a program in two years are advised to use a sequence of courses recommended by their counselor or by the instructor. If a student wishes to attend college on fewer than a full-time basis, the program may be extended beyond two years.

**GENERAL EDUCATION REQUIREMENTS (20 CR HRS) CR.HRS.**

BCOM 101 & 102 Business and Technical Communications.....	6
TMAT 101A, 102, 201, 202 Technical Math (Choose two) .....	6
AMT 129 Introduction to Technology .....	3
BUS 127 Human Relations.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

**MACHINING TECHNOLOGY REQUIREMENTS (20 CR. HRS.) CR.HRS.**

MT 101A Basic Machining.....	3
MT 102 Intermediate Machining.....	3
MT 103 Advanced Machining .....	3
MT 230 Basic Die Making.....	3
MT 225 Mold Making.....	3
MT 206 2-D CAD/CAM Computer-Aided Design/Machining .....	3
MT 216 3-D CAD/CAM Computer-Aided Design/Machining .....	3

**TECHNICAL-RELATED REQUIREMENTS (15 CR. HRS.) CR.HRS.**

MT 205 NC/CNC (Numerical Control/Computer Numerical Control)...	3
CAD 100 Introduction to Drafting	
or CAD 110 Intro to Computer-Aided Drafting .....	3
CAD 150 Blueprint Reading.....	3
W 101 Basic Welding.....	3
CAD 110 Introduction to Computer-Aided Drafting (2D) .....	3

**ELECTIVES (6 CR. HRS.) CR.HRS.**

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

HP 101 Hydraulics/Pneumatics .....	3
MET 201 Metallurgy .....	3
QC 101 Basic Quality Control.....	3
BUS 125 Supervision.....	3
MET 102 Basic Cast Metals .....	3
MET 101 Industrial Materials.....	3

MT 240 Basic Machine Repair .....	3
MT 245 Advanced Machine Repair.....	3
TECH 290CI Cooperative Internship .....	3
	<b>Total 62</b>

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES  
WHERE HAZARDS EXIST.**

## Machining Technology Certificate

**Related occupations from U.S. Department of Labor Standard  
Occupational Classification (SOC) codes:**

*51-2041 Structural Metal Fabricators and Fitters*

<http://www.onetonline.org/link/summary/51-2041.00>

**Total in-district tuition and required fees for entire program completed in  
normal time: \$3,915.50 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$1739.85**

**Median cumulative debt for all students (both borrowers and  
non-borrowers) completing the program between July 1, 2011 and  
June 30, 2012:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2011 and  
June 30, 2012, who completed the program within the normal time of  
12 months: 0**

<b>CERTIFICATE REQUIREMENTS (27 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT 102A Technical Math II.....	3
MT 101A Machining-Basic .....	3
MT 205 NC/CNC Numerical Control/Computer Numerical Control ....	3
MET 101 Industrial Materials.....	3
AMT 129 Introduction to Technology.....	3
QC 101 Basic Quality Control.....	3
MT 102 Intermediate Machining .....	3
MT 103 Advanced Machining .....	3
CAD 150 Blueprint Reading.....	3
	<b>Total 27</b>

# Machinist Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*51-4041 Machinists*

<http://www.onetonline.org/link/summary/51-4041.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,438.00 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1496.25

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

<b>CERTIFICATE REQUIREMENTS (24 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT 101A Technical Math I.....	3
TMAT 102A Technical Math II.....	3
MT 101A Machining-Basic .....	3
MT 102 Intermediate Machining.....	3
MT 103 Advanced Machining .....	3
CAD 150 Blueprint Reading.....	3
MET 101 Industrial Materials.....	3
MT 206 2D CAD/CAM Computer-Aided Design/Machining .....	3
	<b>Total 24</b>

# Machine Mechanic Certificate (Industrial Maintenance)

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*49-9041 Industrial Machinery Mechanics*

<http://www.onetonline.org/link/summary/49-9041.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,151.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1569.75

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

## CERTIFICATE REQUIREMENTS (27 CR. HRS.)

## CR. HRS.

TMAT 101A Technical Math I.....	3
CAD 150 Blueprint Reading.....	3
MT 101A Machining-Basic.....	3
W 101 Basic Welding.....	3
ELTC 101L&L Electricity-Basic.....	3
HP 101 Hydraulics/Pneumatics.....	3
MT 240 Basic Machine Repair.....	3
HE 110 Industrial Safety and Workplace Training.....	1

**Total 22**

## Associate in Applied Science

**Manufacturing Engineering Technology  
(Two-Year Program)**

This program is designed to educate and train students for entry level engineering and technical positions related to industry and technology. Successful completion of the program leads to the degree of Associate in Applied Science. This degree is designed to prepare graduates for entry-level work in the field of Engineering and to transfer to a 4-year institution for continuing engineering study.

**REQUIRED FOUNDATIONAL SKILLS –You must demonstrate a minimum level of achievement, either by successful testing or satisfactory course completion (a grade of “C” or better) in four areas:**

1. Writing English 085, 089, 091 or 114
2. Reading Reading 040 or 050
3. Math Mathematics 050 or 107 (or complete higher level course)
4. Computers CIS 100 or any other CIS course (Consult a counselor regarding transferability. CIS 110 or 120A are strongly recommended.)

English, Reading and Mathematics Placement Tests may be required and are available in Testing Services, located in Room 134 – 777-0394.

<b>GENERAL EDUCATION REQUIREMENTS (22 CR. HRS.)</b>	<b>CR. HRS.</b>
ENG 101 English Composition .....	3
ENG 102 English Composition .....	3
MATH 161 Calculus I.....	4
CIS 120A Computer Information Systems .....	3
COM 101 Oral Communications.....	3
ECON 101, ECON 102 or PSYC 201 .....	4
PEA 101A, PEA 103, PEA 104A, PEA 118 or PEA 201 .....	1
HE 110 Industrial Safety.....	1
<b>ENGINEERING-RELATED REQUIREMENTS (22 CR. HRS.)</b>	<b>CR. HRS.</b>
CHEM 101 L&L General and Inorganic Chemistry.....	5
PHYS 203 L&L Engineering Physics.....	5
CAD 110 Introduction to Computer-Aided Drafting .....	3
CAD 210 Parametric Design .....	3
MATH 215 Probability and Statistics for Engineering.....	3
CIS 185 “C” Programming.....	3
<b>ENGINEERING TECHNOLOGY ELECTIVES (18 CR. HRS.)</b>	<b>CR. HRS.</b>
MET 101 Industrial Materials.....	3
MET 201 Metallurgy .....	3
MT 101A Basic Machining .....	3
HP 101 Hydraulics .....	3
ELTC 101 L&L Electricity-Basic .....	3
CAD 250 Solid Works .....	3
MT 206 D CAD Design Molding.....	3
QC 101 Basic Quality Control.....	3
QC 105 Statistical Process Control.....	3
	<b>Total 62</b>

## Associate in Applied Science

# Materials Technology

## (Two-Year Program)

Materials Technology is the study of new and modified materials emerging on the technology scene. The activities of the Materials Technologist are directed toward the understanding, testing, development, and applications of materials. These materials include metals, alloys, ceramics, semi-conductors, polymers, and composites. Materials Technology is basic to a wide range of industries, including automotive, electrical, and manufacturing, to name a few. The mission of the Materials Technologist is to understand the underlying physical and chemical origins of the properties being evaluated. Covering all physical classes of materials, the program investigates the relationship between the structure and properties of materials and then applies the resulting knowledge to issues related to the design, processing, and performance of these materials.

### GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)

	CR. HRS.
BCOM 101 & 102 Business and Technical Communications .....	6
TMAT102 & 201 Technical Math .....	6
AMT 129 Introduction to Technology .....	3
BUS 127 Human Relations.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118 or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

### MATERIALS TECHNOLOGY REQUIREMENTS (23 CR. HRS.)

	CR. HRS.
MET 101 Industrial Materials.....	3
MET 102 Basic Cast Metals .....	3
MET 201 Metallurgy .....	3
MET 202 Advanced Metals .....	3
MET 203 Materials Testing. ....	3
MET 212 Pattern Making Gating and Risering .....	3
CHEM 100 Fundamentals of Chemistry, L&L.....	5

### TECHNICAL-RELATED REQUIREMENTS (12 CR. HRS.)

	CR. HRS.
MT 101A Basic Machining.....	3
QC 101 Basic Quality Control.....	3
CAD 150 Blueprint Reading.....	3
W 101 Basic Welding.....	3

### ELECTIVES (9 CR. HRS.)

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

HP 101 Hydraulics/Pneumatics .....	3
ELTC 101L&L Electricity- Basic .....	3
BUS 125 Supervision.....	3
TECH 290CI Cooperative Internship .....	3
MET 204 Plastics .....	3

**Total 64**

## Associate in Applied Science

# Welding Technology

## (Two-Year Program)

Welding Technology is a diversified program of skills dealing with the fabrication of metal products from rolled, stamped, forged or cast shapes. The type of metal, position of weldments, and use of structural shapes will be handled in a manner similar to that used in industrial processing. Selection of the proper welding methods, materials and procedures required will provide training in solving realistic problems found in the welding field. Students who wish to complete a program in two years are advised to use a sequence of courses recommended by their counselor or by the instructor. If a student wishes to attend college on less than a full-time basis, the program may be extended beyond two years. Students may wish to complete only the certificate program in welding.

### GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.) CR. HRS.

BCOM 101 & 102 Business and Technical Communications.....	6
TMAT 101A, 102, 201 Technical Math (Choose two courses) .....	6
AMT 129 Introduction to Technology .....	3
BUS 127 Human Relations.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118 or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

### WELDING TECHNOLOGY REQUIREMENTS (21 CR. HRS.) CR. HRS.

W 101 Basic Welding.....	3
W 102 Welding -Advanced.....	3
W 103 MIG/TIG Welding .....	3
W 201 Structural Welding.....	3
W 202 Pipe Welding .....	3
W 203 Welding Maintenance.....	3
W 204 Welding Supervision .....	3

### TECHNICAL-RELATED REQUIREMENTS (15 CR. HRS.) CR. HRS.

MET 201 Metallurgy .....	3
CAD 100 Intro. to Drafting	
or CAD 110 Intro to Computer-Aided Drafting .....	3
ELTC 101L&L Electricity-Basic .....	3
MT 101A Basic Machining.....	3
CAD 150 Blueprint Reading.....	3

### ELECTIVES (6 CR. HRS.) CR. HRS.

*Supplementing the student's major interest, electives must be chosen from the list of recommended electives or have departmental approval.*

QC 101 Basic Quality Control.....	3
BUS 125 Supervision.....	3
ACC 201 Principles of Accounting I .....	4

MET 102 Basic Cast Metals .....	3
BUS 161A Effective Selling .....	3
TECH 290CI Cooperative Internship .....	3
<b>Total</b>	<b>62-64</b>

**STUDENTS MUST WEAR APPROVED SAFETY GLASSES WHERE HAZARDS EXIST.** *Students should be advised that it could be dangerous to wear contact lenses in any area where fumes from chemicals, solvents, gases, and areas where electrical flash may be present. You should plan to wear prescription eyeglasses if you take classes where these hazards exist.*

## Welding Technology Certificate

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*51-4121 Welders, Cutters, Solderers, and Brazers*

<http://www.onetonline.org/link/summary/51-4121.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,151.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1677.90

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 1

<b>CERTIFICATE REQUIREMENTS (24 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT101 Technical Math I .....	3
CAD 150 Blueprint Reading.....	3
ELTC 101L&L Electricity-Basic .....	3
MT 101A Machining-Basic .....	3
W 101 Basic Welding.....	3
W 102 Introduction to Advanced Welding.....	3
W 103 MIG/TIG Welding .....	3
W 201 Structural Welding.....	3
<b>Total</b>	<b>24</b>

**BCOM 101 Business and Technical Communications is recommended.**

## Additional AAS Degrees

### Entrepreneurial Study Programs

(Degrees)

This is a non-certificate, two-year, program designed to prepare students from all areas of study for starting a business. First semester students evaluate their personal skills, create and analyze business ideas, and determine if they are ready to make the commitment necessary to become a successful entrepreneur. Continuing students study and apply financial, marketing, operational, and human resources concepts to their specific business idea. They finish the program with a comprehensive business plan which may assist them in seeking financing and launching their business.

Students choose from special topic classes to further develop specific business skills. They can also compete in local and national business plan and elevator pitch competitions. Throughout the program, students will meet local entrepreneurs and area leaders as a prelude to joining the local business community.

The college offers AAS Entrepreneurial Degrees where students combine the Entrepreneurial Studies courses with their chosen field of study. It is strongly recommended that students check WebAdvisor, their college counselor, [www.muskegoncc.edu/startup](http://www.muskegoncc.edu/startup), or individual departments for the latest offerings.

Below is a current list of AAS Entrepreneurial degrees:

Automotive Repair .....	page 82
Alternative Fuel Vehicle.....	page 81
Bookkeeping Services.....	page 49
Computer Networking .....	page 55
Family Child Care.....	page 74
Geospatial Programming .....	page 27
Graphic Design Display Advertising .....	page 92
Music Performance .....	page 108
Personal Computer Maintenance .....	page 61
Political Campaigning.....	page 28
Visual Art .....	page 110
Web Game Development .....	page 60
Web Development.....	page 59

### Associate in Applied Science

## Music Performance Entrepreneur

This degree program provides the foundation skills for the performance musician to operate, promote, manage, and stage a musical act in the professional music world. Everyone seeking this degree makes music and participates in ensembles of their own choosing. Students have the option of specializing in one instrument or broadening their instrumental repertoire through the study of multiple instruments. To put their own music performances into proper

*Continued on next page*

perspective, students are asked to explore music literature and music theory. They also gain hands-on experience with the technology and software professionals use for business communication, accounting and finance functions associated with money making enterprises. People completing this degree are exposed to music career options and common business practices, along with the challenges and joys of being a musical artist.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math or	
MATH 115/BUS 105 Probability and Statistics .....	3
COM 101 Oral Communications or	
BUS 127 Human Relations.....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training or	
any PEA Physical Education or any DNC Dance.....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business .....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (30 CR. HRS.)** **CR. HRS.**

MU 100 Introduction to Music Theory or	
MU 102 Music Theory*.....	3
MU 101 Music Theory.....	3
MU 103 Introduction to Music Literature .....	3
MU 190A or MU 190B Class Piano .....	2
MU 194 Sight-Reading and Ear Training.....	1
MU 240 Professional Practices in Music.....	4
Any MU Performance/Ensemble courses .....	4
<b>Applied Music Options</b> ( <i>select only one of the following 3 options</i> )	
Option 1:	
Any 2 course sequence with a primary instrument from	
MU 148 to MU 189 and any 2 course sequence with	
an advanced instrument from MU 248 to MU 289.....	8
Option 2:	
Any 2 course sequence with a primary instrument from	
MU 148 to MU 189 and any 4 courses with	
a secondary instrument from MU 127 to MU 147.....	8
Option 3:	
Any 8 courses with a secondary instrument from	
MU 127 to MU 147.....	8
Electives can be any MU course not taken above .....	3

**Minimum Total 63**

*\*If taking MU 102 Choose MU 191A and MU 195 as MU electives*

## Associate in Applied Science

**Visual Art Entrepreneur**

This degree program provides Visual Art students with the basic skills for a variety of entrepreneurial avenues such as self-employed artist, art promoter, gallery representative, or commercial art gallery owner/director. Along with acquiring practical business concepts, the student also develops basic hands-on skills through a variety of two and three-dimensional studio experiences traditionally associated with foundation level undergraduate Art degrees. Study in art from historical and contemporary viewpoints to help gain insights into the cultural significance of art and the interrelationship of art and society is also stressed. The student then concludes the degree with an overview of professional practices in art and further hands-on experience in gallery/museum operations. Students completing this program are made aware of many of the challenges they will face when starting and operating a business.

**GENERAL EDUCATION REQUIREMENTS (20 CR. HRS.)** **CR. HRS.**

BCOM 101 Business and Technical Communications .....	3
BCOM 102 Advanced Business and Technical Communications .....	3
BUS 126 Business Math .....	3
COM 101 Oral Communications or BUS 127 Human Relations .....	3
CIS 120A Intro to Computer Information Systems .....	3
PHIL 205 Business Ethics.....	3
PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 .....	1
HE 110 Industrial Safety and Workplace Training .....	1

**ENTREPRENEUR CORE REQUIREMENTS (13 CR. HRS.)** **CR. HRS.**

BUS 131 Introduction to Entrepreneurship .....	1
BUS 104 Accounting for Business Owners .....	3
BUS 161A Effective Selling or BUS 220/CIS 220 E-Business .....	3
BUS 230 Entrepreneurial Planning.....	3
BUS 240 Entrepreneurship Capstone .....	3

**DEGREE REQUIREMENTS (30 CR. HRS.)** **CR. HRS.**

ART 104 Drawing I.....	3
ART 105B Two-Dimensional Form and Surface .....	3
ART 108 Ceramics I, ART 109 Sculpture I or	
ART 117 Three-Dimensional Form and Space .....	3
ART 198 Art History I .....	3
ART 199 Art History II .....	3
ART 202 Contemporary Art History.....	3
ART 204B Drawing II Transfer Portfolio Preparation.....	3
ART 240 Professional Practices in Art .....	3
ART 250 Art Gallery/Collection Practicum.....	3
ART 290CI Art Internship.....	3

**Total 63**

## Additional Technology Certificate Programs

These certificate programs are designed to prepare the student for immediate employment. The student may receive a certificate for completion of one or more courses in the programs. **STUDENTS MUST WEAR APPROVED SAFETY GLASSES WHERE HAZARDS EXIST.**

### Digital Electronics Technology

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*17-3023- Electrical & Electronics Engineering Technicians*

<http://www.onetonline.org/link/summary/17-3023.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$5,348.00 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1063.65

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

#### **CERTIFICATE REQUIREMENTS (25 CR. HRS.)**

#### **CR. HRS.**

ELTR 101 Electronics-Basic or Instructor Approval .....	4
ELTR 102A Active Devices and Circuit Analysis .....	4
ELTR 111 Electronics Mathematics.....	5
ELTR 112 Digital Electronics I.....	3
ELTR 205 Electronic Circuit Design .....	3
ELTR 210 Introduction to Microprocessors .....	3
ELTR 211A Microcomputer Interfacing and Robotic.....	3

**Total 25**

# Industrial Electrical Maintenance

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*17-3023- Electrical & Electronics Engineering Technicians*

<http://www.onetonline.org/link/summary/17-3023.00>

**Total in-district tuition and required fees for entire program completed in normal time: \$5,348.00 + \$35.00 per semester for registration fee**

**Total estimated costs for books and supplies for entire program: \$1515.15**

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt: NA**

**Private loan debt: NA**

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months: 1**

## CERTIFICATE REQUIREMENTS (35 CR. HRS.)

## CR. HRS.

AMT 129 Intro to Technology .....	3
ELTR 101 Electronics-Basic.....	4
ELTR 111 Electronics Mathematics.....	5
ELTR 102A Active Devices and Circuit Analysis .....	5
ELTC 150 Industrial Electricity .....	3
ELTC 160L&L Programmable Controllers.....	3
ELTC 152 National Electrical Code .....	3
ELTC 203 Advanced Programmable Controllers .....	3
HP 101 Hydraulics/ Pneumatics .....	3
W 101 Basic Welding.....	3

**Total 35**

# Grounds Maintenance Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*NA*

Total in-district tuition and required fees for entire program completed in normal time: \$2,483.00 + \$35.00 per semester for registration fee

Total estimated costs for books and supplies for entire program: \$994.35

Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:

Federal student loan debt: *NA*

Private loan debt: *NA*

Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months: *0*

## CERTIFICATE REQUIREMENTS (18 CR. HRS.)

## CR. HRS.

TMAT 101A Technical Math I.....	3
ELTC 101L&L Electricity - Basic .....	3
MT 101A Machining-Basic .....	3
AT 114 Automotive Power Plants .....	3
W 101 Basic Welding.....	3
TECH 290CI Cooperative Internship .....	3

**Total 18**

# Industrial Maintenance Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*49-9041 Industrial Machinery Mechanics*

<http://www.onetonline.org/link/summary/49-9041.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,151.50 + \$35.00 *per semester for registration fee*

**Total estimated costs for books and supplies for entire program:** \$1569.75

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

The Industrial Maintenance Certificate Program was developed in response to requests from local industrial employers. The changing nature of manufacturing processes has contributed to significant advancements in production technology with particular emphasis on quality and continuous improvement, thereby changing the approach to maintenance. This program will enhance maintenance expertise by providing reliable and consistent basic training, as well as performance-tested documentation of acquired skills.

<b>CERTIFICATE REQUIREMENTS (19 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT 102A Technical Math II.....	3
CAD 150 Blueprint Reading.....	3
MT 101A Machining-Basic .....	3
W 101 Welding-Basic .....	3
HP 101 Hydraulics/Pneumatics .....	3
ELTC 101L&L Electricity-Basic .....	3
HE 110 Industrial Safety and Workplace Training .....	1
	<b>Total 19</b>

# Production Supervision Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*17-3026 Industrial Engineering Technicians*

<http://www.onetonline.org/link/summary/17-3026.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$2,865.00 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$994.35

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

<b>CERTIFICATE REQUIREMENTS (24 CR. HRS.)</b>	<b>CR. HRS.</b>
TMAT 101A Technical Math I.....	3
AMT 129 Introduction to Technology .....	3
BUS 127 Human Relations.....	3
BCOM 101 Business and Technical Communications .....	3
QC 101 Quality Control.....	3
CAD 150 Blueprint Reading.....	3
MET 101 Industrial Materials.....	3
BUS 125 Supervision.....	3
	<b>Total 24</b>

# Quality Assurance Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*19-4099.1 Quality Control Analysts*

<http://www.onetonline.org/link/summary/19-4099.01>

**Total in-district tuition and required fees for entire program completed in normal time:** \$2,483.00 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$952.35

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** *NA*

**Private loan debt:** *NA*

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** *0*

<b>CERTIFICATE REQUIREMENTS (21 CR. HRS.)</b>	<b>CR. HRS.</b>
AMT 129 Introduction to Technology .....	3
2A Technical Math I.....	3
BCOM 101 Business and Technical Communications .....	3
QC 101 Basic Quality Control.....	3
CAD 150 Blueprint Reading.....	3
QC 105 Quality & Productivity Using SPC .....	3
BUS 127 Human Relations.....	3
	<b>Total 21</b>

# Alternative & Renewable Energy Certificates

Muskegon Community College's Alternative and Renewable Energy (ARE) certificate programs are for the student desiring to enter the field at the technician level.

The Wind and Solar Certificate focuses on the installation of wind and solar electric generation equipment designed for use in residential and light commercial environments. This segment of the industry has received statewide acceptance by local communities. As the technology advances payback periods are decreasing thus encouraging increased use of these alternative and renewable power generation technologies.

The Biofuel Certificate is focused on the development of the technician's need to monitor and maintain the technology used to create common biofuels such as ethanol, biodiesel, and methane. This program will be of particular interest to the student who has an interest in the chemistry and biology components of biofuels.

## Biofuels Technician Certificate

**Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:**

*19-4099 Life, Physical, and Social Science Technicians, all other.*

<http://www.onetonline.org/link/summary/19-4099.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,629.00 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1047.90

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

<b>CERTIFICATE REQUIREMENTS (28 CR. HRS.)</b>	<b>CR. HRS.</b>
TECH 200 Applied Alternative and Renewable Energy.....	3
MATH 109 College Algebra with Applications.....	4
CHEM 100LEC Fundamentals of Chemistry.....	4
CHEM 100A Fundamentals of Chemistry Laboratory.....	1
CHEM 101LEC General and Inorganic Chemistry.....	4
CHEM 101A General and Inorganic Chemistry Laboratory.....	1
BIOL 104L&L Introductory Biology II.....	4
AT 140 Intro to Hybrid's and Alternative Fuels.....	3
TECH 290CI Cooperative Internship.....	4
	<b>Total 28</b>

# Wind & Solar Certificate

Related occupations from U.S. Department of Labor Standard Occupational Classification (SOC) codes:

*17-3029 Engineering Technicians, except drafters, All other*

<http://www.onetonline.org/link/summary/17-3029.00>

**Total in-district tuition and required fees for entire program completed in normal time:** \$3,724.50 + \$35.00 per semester for registration fee

**Total estimated costs for books and supplies for entire program:** \$1344.00

**Median cumulative debt for all students (both borrowers and non-borrowers) completing the program between July 1, 2011 and June 30, 2012:**

**Federal student loan debt:** NA

**Private loan debt:** NA

**Number of students completing the program between July 1, 2011 and June 30, 2012, who completed the program within the normal time of 12 months:** 0

## CERTIFICATE REQUIREMENTS (32 CR. HRS.)

## CR. HRS.

TECH 200 Applied Alternative and Renewable Energy.....	3
ELTR 111 Electronics Mathematics.....	5
W 101 Basic Welding.....	3
ELTR 101 Electronics-Basic.....	4
ELTC 103 Residential Wiring.....	3
ELTC 150 Industrial Electricity.....	3
ELTC 152 National Electric Code.....	3
ELTC 160L&L Programmable Controllers.....	3
ARE 115 Wind Turbine and Solar Array Installation.....	3
KVCC ELT 126 Power Generation and Distribution.....	2

**Total 32**

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## University Partnership Programs

In addition to the many traditional transfer opportunities available to MCC students, the college also partners with three universities in unique programs allowing occupational students to transfer to a high quality baccalaureate program. In all transfer programs, be sure to see an MCC counselor for details.

### Ferris State University

([www.ferris.edu/statewide](http://www.ferris.edu/statewide))

Ferris State University partners with MCC to provide opportunities to complete a bachelor's degree locally and affordably. Our 2+2 and 3+1 degree programs are set up so you can take two or three years of MCC courses and one or two years of Ferris courses. These programs are available to you locally. (Note some classes are online or in Grand Rapids.)

#### **Business Administration-Professional Track**

If you have a specialized associate degree, this program will build a solid knowledge of business and management upon your technical expertise.

#### **Computer Information Systems**

Step into a position in computer programming/analysis, systems analysis, network administration, and microcomputers.

#### **Computer Information Technology**

This curriculum prepares you for several industry certifications such as: CompTIA's: A+, Network+, Linux+, Security+, and Microsoft's Systems Administration Certification (MCSA).

#### **Criminal Justice** – *Now available entirely on the MCC campus.*

This program gives you a general education in criminal justice, while allowing you to choose and focus on specific technical skills.

#### **Industrial Technology and Management**

If you have technical education, technical training, or military training in your background and you're looking for a career move to an administrative role or an advanced technical position, this degree is for you.

Find out how your MCC courses transfer to Ferris programs, including others on the main campus, at [www.ferris.edu/admissions/transfer](http://www.ferris.edu/admissions/transfer). For more information or to schedule an appointment with an advisor, call (231) 777-0510 or visit our office in the Stevenson Center for Higher Education on the MCC campus.

# Grand Valley State University

([www.gvsu.edu/ce](http://www.gvsu.edu/ce))

MCC has partnered with GVSU for many years to develop programs which enable the student to easily transfer into a baccalaureate degree program. We can help you get started by providing assistance with degree planning, credit transfer, and enrollment procedures. For more information, call (231) 777-0505 or visit our office in the Stevenson Center for Higher Education on the MCC campus.

## **NEW -- The Muskegon Leadership Degree**

This degree program is specially designed for the student who is interested in learning leadership principles applied directly to the business and nonprofit sectors.

Muskegon Community College and Grand Valley State University have collaborated to provide a degree completion program at one convenient location. Both institutions offer courses at the Stevenson Center for Higher Education on the campus of Muskegon Community College.

# Western Michigan University

([www.wmich.edu/muskegon](http://www.wmich.edu/muskegon))

As a cooperative partnership between MCC and Western Michigan University, WMU offers several transfer program options:

## **Bachelor of Science in Engineering – Manufacturing**

In an effort to help meet the personnel needs of regional manufacturers, the BSE program was developed in partnership with numerous local industries. The curriculum is designed to enhance the skills of current employees as well as prepare students for future employment. Courses are offered in Muskegon and online. Foundation and pre-engineering courses are offered by MCC, and the manufacturing core classes are offered by WMU. Resident faculty are available for advising.

## **Bachelor of Science in Recreation**

The program offers Muskegon Community College students a path to obtain a bachelor's degree in recreation, once they have completed an Associate of Science and Arts Degree. The recreation program focuses on educating students about recreation and leisure leadership, program and service development, delivery and management. The curriculum includes major/minor core courses including specific academic service learning opportunities. In addition, the major includes electives, 225 hours of field experience (practicum) and a 600 hour internship.

MCC and WMU Transfer Credit Equivalencies may be found online at [www.wmich.edu/admissions/transfer](http://www.wmich.edu/admissions/transfer).

## **MCC Transfer Students Offered One WMU-Muskegon Class at MCC Tuition Rates**

WMU-Muskegon, in partnership with Muskegon Community College (MCC), is proud to offer the WMU-Muskegon Advantage tuition program. The WMU-Muskegon Advantage offers each MCC transfer student one WMU-Muskegon course at MCC tuition rates.

The WMU-Muskegon Advantage is available for face-to-face or hybrid courses offered at WMU-Muskegon as part of either the Bachelor of Science in Recreation or the Bachelor of Science in Engineering (Manufacturing). Both of these programs are joint-cooperatives between MCC and WMU-Muskegon. For more information regarding both programs visit [www.wmich.edu/muskegon/programs](http://www.wmich.edu/muskegon/programs).

### Other Agreements

Muskegon Community College also has articulation agreements with other colleges offering four-year degrees, including Capella University (Computer Information Systems), Franklin University (Bachelor of Science in 12 majors), and Northwood University (Management). Please schedule an appointment with an MCC counselor to learn about other opportunities. For a full listing of Transfer Guides to various four-year institutions, go to [www.muskegoncc.edu/transfer](http://www.muskegoncc.edu/transfer).

## Additional Partnerships

### Water Resource Management

#### I + I Program (72 Credits)

The articulated program will allow a student to complete an Associate in Applied Science Degree in Water Resource Management and meet the requirements for water and wastewater licensure in the State of Michigan.

Graduation Requirements include:

Minimum:	72 credits
Minimum:	2.0 cumulative GPA

#### Courses Taken at Muskegon Community College

	<b>CR. HRS.</b>
CHEM 101, 101A General and Inorganic Chemistry & Lab.....	5
CHEM 102, 102 A General and Inorganic Chemistry & Lab.....	5
MATH 109 or higher College Algebra with Applications .....	4
ENG 101 English Composition .....	3
COM 101 Oral Communications.....	3
PSCI 111 Introduction to American Government.....	4
BIOL 104L&L Introductory Biology II.....	4
And one Human Experience or Human Cultures Elective .....	4
	<b>Total 32</b>

#### Courses Taken at Bay de Noc Community College

\* = Courses offered online

<b>Semester 3</b>	<b>CR. HRS.</b>
WT240 Environmental Analysis.....	5
WT270 Water in Motion .....	4*
WT110 Wastewater Operations & Management .....	4*
WT260 Current Issues for Managers.....	3*
	<b>Total 16</b>

*Continued on next page*

**Semester 4****CR. HRS.**

WT250 Water Analysis & Techniques .....	5
WT220 Industrial Solutions .....	3*
WT255 Mechanics & Instrumentation .....	3
WT120 Water Operations & Management .....	4*
WT230 Aquatics .....	3*
<b>WT272 Professional Field Experience (water) .....</b>	<b>3</b>
<b>WT273 Professional Field Experience (wastewater) .....</b>	<b>3</b>

*Bold = classes taken second eight (8) weeks*

**Total 24**

## Professional Truck Driver Training

Nearly three million people work as truck drivers, hauling goods locally and across the country on our nation's highways. Many skills are required to be a professional driver and typically they involve being able to work with many people, staying current on transportation laws, understanding trailer load requirements, having mechanical aptitude, following instructions, and safety procedures. Truck drivers often have long hours on the road, but enjoy good salaries and independence. Job prospects for trained, licensed drivers are expected to remain strong through the next decade.

### Training Highlights

Complete vehicle training to prepare you for an entry-level position in the trucking industry, plus a lot more! Designed for individuals with little or no commercial driving experience, CDL Training Services & Consulting's Professional Truck Driver Training at MCC includes everything you need to receive a Commercial Driver's License.

- You will receive DOT rules, regulations and log books; training to obtain CDL learner's permit and endorsement preparation; and thorough instruction in map reading, trip planning, and yard and road vehicle handling.
- You will receive a certificate after successfully completing the course.
- Basic (160 hrs), and Advanced (184 hrs) classes available
- CPR Training and Certificate
- Basic First Aid Training
- You will complete the Michigan Secretary of State administered Class A test.

Complete the course in just four or five weeks by attending full-time. Part-time evening classes are also available for those who are unable to attend full-time. We work with many trucking companies that will pre-hire students. Most students receive job offers prior to completion of their training.

### Entry Requirements

A high school diploma or GED is *not* required. Individuals must be able to read and write the English language, be able to meet the Federal Department of Transportation physical requirements, and have a valid driver's license at the time of registration. The course trains individuals 18 and over but has limited job placement assistance for individuals under the age of 21.

**Additional Items (not part of course fee):**

- Copy of Motor Vehicle Report from the Secretary of State's Office (Driver's License Bureau)
- DOT drug screen and physical
- CDL learner's permit
- Class A license plus any endorsements

The following may disqualify you from entering the truck driving workforce:

- A driving record inconsistent with industry standards for entry-level driving positions
- Any substance-related violations on your motor vehicle record in the past three years
- Recent felony convictions or criminal background
- History of drug or alcohol abuse
- Permanent disability or physical limitations

Training is scheduled around holidays and interruptions caused by weather or unforeseen circumstances. For more information, contact CDL Coordinator Terri Dykema at (231) 777-0200, or toll-free at (1-888) 503-5151.

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# Course Numbering System

**Courses offered at Muskegon Community College shall be numbered according to the following system:**

Sequential courses (those that must be taken in specific order), shall be numbered so that the first course in the sequence carries the lowest number. If a course is part of a sequence, prerequisite courses shall be clearly stated in the Course Descriptions section of the catalog, and in the Schedule of Classes.

Courses numbered from within the range 000 to 099 can generally be considered as pre-college level skills development or enhancement courses, designed to help prepare students for success in college level work. Students should check with an academic counselor, department chairperson, or program coordinator to determine whether such courses may be counted toward a degree, certification, or transfer requirements.

Courses numbered 100 to 199 are introductory courses intended primarily for first-year college students with no significant deficiencies in their academic background.

Courses numbered 200 to 299 are courses intended primarily for students who have successfully completed one year of college-level coursework. The number 297 shall be reserved for courses being taught on an experimental or temporary basis, before formal addition to the College catalog. The number 299 shall be reserved for independent study courses.

- D** This course is only offered when Demand is great enough.
- F** This course is typically offered during the Fall semester.
- W** This course is typically offered during the Winter semester.
- S** This course is typically offered during the Summer semester.

## Ready to Succeed

Before enrolling in many courses, you must meet the **READY TO SUCCEED** (*Reading Competency*) requirement by test scores or course completion.

COMPASS	Reading score of 76 or higher
ACT	Reading score of 19 or higher
MME	1 or 2 on both Reading and Writing
College Credits	15 College credits (100 level or higher) with cumulative 2.0 or higher GPA
Reading Course	Earning a "C" grade or better in Reading 040 or Reading 050

If you have not tested or do not know your scores, call the Testing Center at **(231) 777-0394**.

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## Accounting (See Business)

## Allied Health Courses (See also Health Education)

**Several Allied Health courses may be taken that do not require a commitment to a program or a special application. Students take these courses to increase their knowledge and skills in special areas or to prepare themselves to enter a health-related position.**

### AH 101 Medical Terminology 3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisites: None*

Designed to assist the beginning health student to master new medical terms and modes of communication. With an understanding of basic terms, the student can proceed to build a functional vocabulary while pursuing a career specialty. Basic anatomy and physiology will be an integral part of the course.

### AH 102 Basic Patient Care Skills 3 Cr. Hrs. – 4 Contact Hrs. **F**

*Co-requisite: RT 101.*

This course is designed as a general introduction to patient care. The student will master skills including: vital signs, medical asepsis, isolation techniques, proper body mechanics, and introduce the student to medical terminology, medical vocabulary, medical abbreviations and charting procedures. *This course is only open to Respiratory Therapy students.*

### AH 104 Medical Insurance Billing 2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisites: None*

An introductory course designed to assist the student to quickly identify insurance coverage appropriately and accurately, complete insurance forms and become familiar with billing procedures. The content of this course is relevant to dental and other allied health insurance billing.

### AH 105 Introduction to Electrocardiography (EKG)

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisites: None*

This course will provide the student with the necessary knowledge to perform basic cardiac technology skills. This course does not have prerequisites but students are encouraged to enroll in the Medical Terminology course. The course will be helpful to new students interested in a career in the health technologies as electrocardiographic and/or vascular technicians. The course will also provide more in-depth information for RNs, LPNs, EMTs and other health professionals. Offered only upon sufficient demand.

### AH 106 Fundamentals of Health Care Delivery

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisites: None*

This course is designed as a general introduction to the health care delivery system. It will prepare the student with the necessary information for (basic) entry into the medical office environment. Topics of discussion will include ethics, law (including the new HIPAA regulatory standards), safety, infection control, patient record keeping, medical transcription, medical reimbursement and managed care.

### AH 111 Environmental Stressors and Nutrition

1 Cr. Hr. – 1 Contact Hr. **FS**

*Co-requisite: NUR 100, COM 103 or Equivalent, PSYC 201, BIOL 105L&L, PEA 101A.*

This course is designed to provide the student with the theoretical foundation for the clinical application of nutrition principles in relation to stress adaptation throughout the nursing curriculum. The focus of the course is on the identification of the role of nutrients in maintaining man's dynamic equilibrium and the use of therapeutic diets for clients. ***This course is only open to Nursing students.***

**AH 251 Health Needs of the Young Child***3 Cr. Hrs. – 3 Contact Hrs. ㉔**Prerequisites: None*

The emphasis in this course is on identification, treatment, and prevention of common childhood illnesses, and the promotion of good health, safety and nutrition for the young child. Physical and dental health will be emphasized, along with signs and symptoms of illness within varying age groups. Treatment options and procedures for non-professionals will be discussed. Prevention will be focused on how to promote optimum health, how to prevent injuries, and nutritional requirements of young children.

**EMT 101 Basic Emergency Medical Technology I***8 Cr. Hrs. – 8 Contact Hrs. ㉔㉕**Prerequisite: None*

This course is designed to provide the student with the knowledge to become a licensed EMT in the State of Michigan. Emphasis will be placed on the development of knowledge and skills needed to provide basic life-saving care. This course is based on the U.S Department of Transportation National Standard Curriculum for an EMT training program. This course is approved by the Michigan Department of Community Health.

**EMT 102 Basic Emergency Medical Technology II***4 Cr. Hrs. – 4 Contact Hrs. ㉕㉖**Prerequisites: EMT 101**Suggested Co-requisite: EMT 103*

This course is a continuation of EMS 101 and is designed to provide the student with the knowledge to become a licensed EMT in the State of Michigan. Emphasis will be placed on the development of knowledge and skills needed to provide basic life-saving care. This course is based on the U.S Department of Transportation National Standard Curriculum for an EMT training program. This course is approved by the Michigan Department of Community Health.

**EMT 103 Basic Emergency Medical Technology Clinical***4 Cr. Hrs. – 4 Contact Hrs. ㉕㉖**Suggested Prerequisite: EMT 101**Co-requisite: EMT 102*

The course will include clinical hours to be spent in both Hospital Emergency Departments and on Ambulance Clinical Rotations. This course will include all of the EMT-Basic clinical procedures and psychomotor objectives listed in EMT 101 and EMT 102. This course will include a minimum of 40 clinical hours.

**American Sign Language****ASL 101 American Sign Language I***3 Cr. Hrs. – 3 Contact Hrs. ㉔**Prerequisite: None*

Study the various aspects of American Sign Language including finger spelling, interpreting, sign vocabulary, facial expression, body movement, and grammatical structure. This course is designed for students who are considering pursuing certification in interpreting.

**ASL 102 American Sign Language II***3 Cr. Hrs. – 3 Contact Hrs. ㉕**Prerequisite: ASL 101.*

Study the various aspects of American Sign Language including finger spelling, interpreting, sign vocabulary, facial expression, body movement, and grammatical structure. This course is designed for students who would like to pursue certification in interpreting.

**ASL 103 Finger Spelling***2 Cr. Hrs. – 2 Contact Hrs. ㉔**Prerequisite: ASL 101 or instructor permission.*

This course is designed for students who would like to pursue certification in interpreting using American Sign Language. Students will develop fluency in receptive and expressive finger spelling and numbering. They will also learn the correct usage of finger spelling and numbering.

## Anthropology

### ANTH 103 Cultural Diversity in Contemporary Society **FWS**

3 Cr. Hrs. – 3 Contact Hrs.

*Prerequisite: Meet Ready to Succeed Requirement*

Cultural Diversity in Contemporary Society is an ethnographic analysis of various cultural groups and the regions where they originate. Such groups as African-American, Asian-American, Hispanic-American, and Native-American will be the focus. Emphasis will be placed on their cultural similarities and differences. Students will compare such topics as the cultures' socialization process, education, gender roles, marriage and family living, religion, health, death and dying, etc.

### ANTH 105 Introduction to Physical Anthropology/Archaeology

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

Introduces the student to the fields of physical anthropology and archaeology through a study of man's biological and cultural adaptation. Emphasis will be placed upon the prime fossil record, dating methods, the emergence of races as adaptations to different environments, molecular, and population genetics, and the prehistorical cultural sequence in both the Old and New Worlds.

### ANTH 110 Introduction to Cultural Anthropology

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite: None*

Introduces the student to the field of cultural anthropology through a study of language, kinship, technology, political organization, social organization, religion and healing, among other topics. Emphasis will be placed upon an investigation of selected pre-modern groups representative of the world's major cultural regions.

## Art

### ART 101 Beginning Art

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: None*

Development of artistic skills through a broad range of studio experiences: drawing, printmaking, design, ceramics, sculpture and painting.

### ART 104 Drawing I

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: None*

Concentrated attention on drawing as a fine arts medium with study in various subject matter.

### ART 105B Two-Dimensional Form and Surface

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite: None*

Two-Dimensional Form and Space is a first-year art course that introduces students to basic design concepts with a focus on how to work with two-dimensional compositional arrangements, illusionary space, depth, and texture. It is a foundation-level requirement in art departments at any transfer school-students considering a major in painting/drawing, printmaking, photography, art education, digital arts, graphic design, or video game design should start with this course. Students learn how to develop strong, imaginative compositions based on the creative process: brainstorming, problem-solving, experimentation with traditional and nontraditional materials and techniques, and the effective use of the language of art (visual elements and design principles as they pertain to two-dimensional images and surfaces).

### ART 107 Painting I

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: None*

The study of oils or acrylics through diverse subject matter.

**ART 108 Ceramics I**

3 Cr. Hrs. – 6 Contact Hrs. **F****W**

*Prerequisite: None*

A study of the nature of clay through hand building, pottery processes, and glazing, stressing skill development and expressive experimentation.

**ART 109 Sculpture I**

3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite: None*

An introduction to the basic materials and techniques of sculpture.

**ART 117 Three-Dimensional Form and Space**

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisite: Meet Ready to Succeed Requirement*

Three-Dimensional Form and Space is a first-year art course that introduces students to basic design concepts with a focus on how to work with actual space, texture, and mass. It is typically a foundation-level requirement in art departments at any transfer school- students considering a major in sculpture, ceramics, glass, jewelry/metals, fiber arts, art education, theatrical set design, film production, architectural design, industrial design, product design, or video game design should start with this course. Students learn how to develop strong, imaginative compositions based on the creative process: brainstorming, problem-solving, experimentation with traditional and nontraditional materials and techniques, and the effective use of the language of art (visual elements and design principles as they pertain to three-dimensional objects and space).

**ART 198 Art History I**

3 Cr. Hrs. – 3 Contact Hrs. **F****W****S**\*

*Prerequisite: Meet Ready to Succeed Requirement*

Ancient art to renaissance. A historical survey of art from Ancient times to 1400 tracing the development of styles and the

influences of major social, religious and political events. \**Summer sections are offered only in even numbered years.*

**ART 199 Art History II**

3 Cr. Hrs.– 3 Contact Hrs. **F****W****S**\*\*

*Prerequisite: Meet Ready to Succeed Requirement*

Renaissance to modern. A historical survey tracing the development of art from the Renaissance to the present with an emphasis on painting. \*\**Summer sections are offered only in odd numbered years.*

**ART 202 Contemporary Art History**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite: Meet Ready to Succeed Requirement*

A comprehensive survey of art and art styles of the 20<sup>th</sup> & 21<sup>st</sup> centuries. A study of backgrounds and origins of certain current styles, the course draws from examples in painting, sculpture and architecture of America and the world. Changing ideas and trends are analyzed through lecture and discussion.

**ART 204B Drawing II - Transfer Portfolio Preparation**

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisite: ART 104 or instructor permission.*

A continuation of ART 104, with an emphasis on preparing an art portfolio for the college transfer process, thematic development, concentration on the relationship of form to content and further experimentation in varied media and techniques.

**ART 207 Painting II**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite: ART 107 or instructor permission.*

Concentration in a particular medium of the student's choice with a study of the nature of that medium through a creative approach to painting problems.

**ART 208 Ceramics II***3 Cr. Hrs. – 6 Contact Hrs.* **F** **W***Prerequisite: ART 108 or instructor permission.*

A study of traditional pottery processes through concentrated work on the potter's wheel, glazing, and firing experiences.

**ART 209 Sculpture II***3 Cr. Hrs. – 6 Contact Hrs.* **D***Prerequisite: ART 109 or instructor permission.*

A continuation of ART 109, with concentration in materials of individual interest.

**ART 211 Art Education Workshop***3 Cr. Hrs. – 6 Contact Hrs.* **D***Prerequisite: Meet Ready to Succeed Requirement*

Experience through studio work with art materials and methods appropriate to grade school use.

**ART 220 Figure Drawing***3 Cr. Hrs. – 6 Contact Hrs.* **F***Prerequisite: Meet Ready to Succeed Requirement, ART 104, or GRD 130*

Students will learn how to draw the human figure from observation using a variety of techniques and a range of drawing media. Portions of the course will include computer applications where students scan and manipulate hand-drawn imagery on the computer and also use Wacom tablets to draw directly onto the computer screen.

**ART 240 Professional Practices in Art***3 Cr. Hrs. – 3 Contact Hrs.* **D***Prerequisite: Instructor permission.*

This course will help students develop a professional visual identity by generating business logos, letterhead, a web presence, digital portfolio, and other materials related to the pursuit of an art- or design-based businesses. This course covers business related issues involved in any artistic or design based profession including professional artist, gallery owner, museum

and gallery curator, art critic, historian, graphic designer, interior designer, game designer, illustrator, and photographer.

**ART 250 Gallery/Collection Practicum***3 Cr. Hrs. – 3 Contact Hrs.* **D***Prerequisite: Meet Ready to Succeed Requirement and instructor permission and 12 or more credit hours of "C" work or better completed in ART coursework required.*

Students will gain practical experience in art gallery operations and the proper handling and care of artworks. Emphasis is placed on standard concepts and methods of exhibiting art as practiced in the professional art world. Students assist art faculty in the basic operations of the MCC Overbrook Art Gallery and the MCC Art Collection as a "hands-on" learning laboratory. Priority is given to students enrolled in the Visual Art Entrepreneur Degree program.

**ART 290CI Art Cooperative Internship***1-4 Cr. Hrs. – 1-4 Contact Hrs.* **D***Prerequisite: Instructor permission with priority given to students enrolled in the Visual Art Entrepreneur degree and/or those who have taken one or more art history courses (ART 198, 199, or 202). Student must have a GPA of 2.5 or better and have completed a minimum of 12 credits in art.*

The Cooperative Internship Program is a paid or non-paid fieldwork experience within the student's major area of study, typically at an art museum, community art center, or commercial gallery. Variable credit may be earned dependent upon the number of work hours available from the employing organization. A student may sign up for as many internships as desired; however, only 3 credit hours can be applied specifically toward the Visual Art Entrepreneur degree. This course is offered on a pass/no pass basis.

## Astronomy

### ASTR 101 General Astronomy

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

This course is a broad, generally non-mathematical, survey of the science of astronomy. Topics include: historical astronomy, the mechanics and clockwork of the night sky, astronomical instruments, the solar system, stellar evolution, the Milky Way, galaxies and theories about the origin and evolution of the universe. There will be opportunities for observation of astronomical objects with observatory telescopes.

### ASTR 105A Cosmology

4 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisites: MATH 050 or assignment by Math Placement Test.*

While Astronomy is concerned with the contents of the Universe, Cosmology is the science of the origin, current state and ultimate fate of the universe. In this course, the foundations of Modern Cosmology are presented from a historical perspective, covering the physical fundamentals, the impact of Einstein's Theories of relativity on modern cosmologies and finally from the perspective of the most recent astronomical discoveries.

## Automotive Technology

**Students in these courses must have approved safety glasses.**

### AT 101 Intro to Automotive Technology

2 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: None*

This class prepares students for situations that automotive technicians will encounter on the job. Students complete this course will have a strong foundation in problem solving and dealing with issues all eight areas of Automotive Service Excellence (ASE). They will perform inspection of cars

in brakes, steering and suspension, electrical, transmission, and engine performance. Students diagnose and determine basic preventive maintenance that needs to be addressed by vehicle owners.

### AT 114 Automotive Power Plants (Engine Rebuilding)

3 Cr. Hrs. – 6 Contact Hrs. **FW**

*Prerequisite: None*

This course includes the proper procedures and machine operations necessary to service completely, overhaul, repair or rebuild the automotive engine. Theory of engine operation and construction are also dealt with.

### AT 120 Intro to Electrical Systems I

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Co-requisite: AT 121.*

A study of fundamentals of electricity, ignition (Electronic Computer Control including DIS), cranking and charging systems. Basic electrical test equipment is also covered.

### AT 121 Electrical Systems II

3 Cr. Hrs. – 6 Contact Hrs. **FW**

*Co-requisite: AT 120*

Covers testing and servicing of ignition, cranking and charging systems. Includes the use of modern electronic test equipment and industry diagnostic methods.

### AT 122 Fuel Systems and Emission Controls

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisites: AT 120 and AT 121 or instructor permission.*

*Co-requisite: AT 123.*

This course will cover a study of fuel system (including TBI and PFI) and emission controls (including 4 gas analyzer). Diagnosis and service of system components is also covered. The operation of 2-cycle and 4-cycle engine theory is introduced.

**AT 123 Engine Tune Up (Driveability)**

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisites:* AT 120 and AT 121 or instructor permission.

*Co-requisite:* AT 122.

A study of the engine accessories included under electrical, ignition and fuel systems. Covers the diagnosis, servicing, and repair of these systems and component parts as related to the entire engine operation in the vehicle.

**AT 140 Intro to Hybrids and Alternative Fuels**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite:* None.

This class will provide an overview of hybrid and alternative fueled vehicles. Practical manufacturing theory and production methods of both biodiesel and ethanol will be explored. Students will engage in small scale production of both biodiesel and ethanol. Exposure to various alternative powered vehicles will occur as available.

**AT 150 Automotive Brakes**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite:* None

This course covers theory, repair, and adjustment of hydraulic and Antilock Braking Systems (ABS) brake systems and related machining equipment. Students will learn in this class through hands on experience how to diagnose problems with ABS and Electronic Stability Control in addition to rebuild and bleed advanced braking systems. Students have the opportunity to become certified via the State of Michigan test in the area of brakes.

**AT 160 Automotive Air Conditioning**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite:* None

This course covers theory, repair, and service of the automotive air conditioning system. Air conditioning for both R12 and R134A diagnosis testing and service is covered. Students have the opportunity to become certified via the State of Michigan test in the area of air conditioning.

**AT 210 Power Trains (Manual Drive Trains)**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite:* None

This course gives the student experience in theory, diagnosis and repair of automotive drive trains. It includes study of clutches, drive shafts, universal joints, differentials, axles, and manual FWD & RWD transmissions.

**AT 211 Automatic Transmissions**

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisite:* None

A study of the theory of operations, hydraulic circuits, gearing adjustments, and repair of automatic transmissions, both FWD & RWD (including electronic controls).

**AT 212 Alignment and Suspension**

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisite:* None

This course covers theory, repair, and adjustment of steering and suspension systems as well as the operation of modern four-wheel alignment and wheel balancing equipment.

**AT 213 Brakes and Air Conditioning**

3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite:* None

This course covers theory, repair and adjustment of hydraulic and ABS brake systems and related machining equipment. Air conditioning both R12 and R134A diagnosis testing and service is covered.

**AT 214 Service Management**

3 Cr. Hrs. – 3 Contact Hrs. **S**

*Prerequisite:* Must be second year automotive student.

A course covering the responsibilities of a service manager in large and small service garages. Lectures, tours, and outside speakers emphasize industrial practice in customer, mechanic, and management relationships.

**AT 223 Advanced Engine Performance***3 Cr. Hrs. – 6 Contact Hrs. ⑤**Prerequisite: None*

This course provides a variety of learning and assessment activities students can use to analyze engine mechanical integrity; induction systems and exhaust systems. Students will have hands on experience in the repair process of these systems. Theory and operation of electronic engine controls includes: alternative fuels; electronic fuel injection, electronic ignitions, on-board diagnostics and current emission systems. Laboratory practice includes proper set up and use of digital storage oscilloscopes, scan tools, engine analyzer and five-gas emission analyzers.

**Biology****BIOL 101BEL / ICS 101BEL****International Cultural Studies and Biological Field Studies in Belize***2 Cr. Hrs. – 2 Contact Hrs. ⑥**Prerequisite: Instructor permission and acceptance of the terms of participation.*

This is an interdisciplinary travel-study course providing students an introduction to international culture and biology through cultural and biological field studies. This hybrid course will contain online and on-campus components and includes a seven-day visit to Belize. Emphasis will be placed on Mayan culture and the tropical rain forests of Belize. The student will study Mayan culture and history as well as Mayan past and current interaction with the rain forest ecosystem. This course will cover classification of organisms, basic ecological principles, experimental design, field sampling techniques and scientific communication. Specific biology topics emphasized will vary each year. This course will also involve working with local Belizeans, offering MCC students the opportunity to meet people from diverse backgrounds. It is offered in conjunction with the Sibun Educational and Adventure Lodge in Belize. Students will spend a

great portion of each day in the field and should be in good physical condition. Beyond tuition and texts, additional costs include the airfare to Belize, package price for room and board, and spending money while in Belize.

**BIOL 103L&L Introductory Biology***4 Cr. Hrs. – 7 Contact Hrs. ⑥WS**Prerequisite: Meet Ready to Succeed Requirement*

A one-semester laboratory course in biological science. Biological concepts are studied as they relate to the human organism as part of the living world. Basic principles of organization of living matter, including cell structure and function, metabolism, human systems, reproduction, development, heredity, and evolution are examined.

**BIOL 104L&L Introductory Biology II***4 Cr. Hrs. – 7 Contact Hrs. ⑥W**Prerequisite: Meet Ready to Succeed Requirement*

With relevance to students' lives, Introductory Biology II will provide exploration into the diversity, classification, ecology, and evolution of the natural world and the importance of photosynthesis and other cellular processes. Different types of organisms, such as bacteria, protists, fungi, plants, and animals will be studied to compare structure and function. Several field trips may be taken but hours will most likely not extend beyond weekly contact hours for laboratory. Students may also be required to attend one committee/council meeting from a list of designated environmental groups from the Muskegon area. If student opts not to carpool in the school van for field trips, they will need to provide their own transportation (no gas costs or mileage will be paid to students and carpooling is highly recommended). No prerequisites.

**BIOL 105L&L****Anatomy and Physiology I**

4 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement, and BIOL 103L&L (Introductory Biology) and AH 101 (Medical Terminology) are highly recommended OR successful completion of high school AP biology and its placement test are also highly recommended.*

This laboratory course is designed to meet the needs of students in nursing and other health-related fields. The course deals primarily with the normal structure and function of organs and organ systems of the body. Cell biology, histology and introductory anatomy and physiology of the skeletal, muscular, nervous, digestive, cardiovascular, respiratory, urinary, endocrine and reproductive systems are studied.

**BIOL 106L&L****Anatomy and Physiology II**

4 Cr. Hrs. – 6 Contact Hrs. **WS**

*Prerequisite: BIOL 105L&L with a grade of “C” or better: (A course in Chemistry is recommended.) BIOL 105L&L and BIOL 106L&L may not be taken concurrently.*

This laboratory course is a continuation of BIOL 105L&L for students in nursing and other health-related fields that require an intensive study of the anatomy and physiology of the human organism. Emphasis is on the skeletal, muscular, nervous, digestive, cardiovascular, respiratory, urinary, endocrine and reproductive systems.

**BIOL 109 Food Technology**

4 Cr. Hrs. – 4 Contact Hrs. **S**

*Prerequisite: Meet Ready to Succeed Requirement*

A study of chemical, biological, and physical principles as they pertain to food preparation, processing and production. Students apply and study the concepts in a food preparation laboratory. This course is offered Summer Session only.

**BIOL 110 Environmental Science**

4 Cr. Hrs. – 6 Contact Hrs. **FS**

*Prerequisite: Meet Ready to Succeed Requirement*

An introductory laboratory course for all students. A study of local natural communities and human impacts on the environment. Through service learning, students will apply the scientific process by collecting, analyzing, and then presenting local ecosystem data to interested community members. Ecosystem monitoring at local sites may possibly extend beyond scheduled lab times and field trips may include a boat trip, a brownfield tour, and a renewable energy building tour. No prerequisites. A \$25 fee includes boat trip cost.

**BIOL 115 Introduction to Anatomy and Physiology**

4 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite: Meet Ready to Succeed Requirement*

This course is a structural and functional approach to the human body through the study of cell, tissues, and body systems. This course is geared to students in the Medical Records and Billing Certificate program and the Administrative Assistant–Medical degree program. Emphasis will be placed on cell biology, tissues, and the structure and function of the integumentary, skeletal, muscular, nervous, circulatory, lymphatic, respiratory, digestive, urinary, endocrine, and reproductive systems. While there is no lab component to this course, students will utilize high quality images to study the spatial relationships between anatomical structures. This course is intended to fulfill the anatomy and physiology requirement for students in the medical coding and billing certificate and degree programs only, and will not count towards any allied health or any degree or certificate requiring anatomy and physiology.

**BIOL 120 Flowering Plants of Southwestern Michigan***1 Cr. Hr. – 1 Contact Hr.* Ⓢ*Prerequisite: Meet Ready to Succeed Requirement*

A 3 ½ - 4 week study of the identification, ecology and distribution of the flowering plants of southwestern Michigan. This course includes lectures, laboratory study, and field trips to a variety of habitats. This is a one-credit /one contact elective course with total contact hours of at least 15 hours during the 3.5 – 4 week course. Drive time to various locations may be in addition to the 15 hours. Typically offered during Summer Session.

**BIOL 120F Autumn Flowering Plants of Southwestern Michigan***1 Cr. Hr. – 1 Contact Hr.* Ⓢ*Prerequisite: Meet Ready to Succeed Requirement*

A study of the identification, ecology and distribution of the flowering plants of southwestern Michigan during the autumn season. This course includes lectures, laboratory study, and field trips to a variety of habitats during the fall semester. This is a one-credit / one contact elective course with total contact hours of at least 15 hours during the 3.5 – 4 week course. Drive time to various locations may be in addition to the 15 hours.

**BIOL 122B Allied Health Microbiology***2 Cr. Hrs. – 2 Contact Hrs.* Ⓢ*Prerequisite: Meet Ready to Succeed Requirement*

This is an introductory laboratory course primarily designed for students in allied health programs. Emphasis is on general characteristics of micro-organisms, the means of disease transmission, immunity to disease, and physical and chemical agents that control micro-organism growth. This course is also recommended for students who plan to take BIOL 207.

**BIOL 200 Introductory Evolution***1 Cr. Hr. – 1 Contact Hr.* Ⓢ*Prerequisite: Any Biology course at the 100 level or higher or instructor permission.*

This course is a preparatory study of the historical development, the evidence, and the mechanisms of the biological evolution theory. Scientific hypotheses on the origin of organic molecules will also be investigated along with the examples of biological evolution in today's community. This course provides a learning experience on a central unifying concept of biology for non-majors and majors interested in exploring the diversity and similarities among living organisms.

**BIOL 200L Introductory Evolution Laboratory***1 Cr. Hr. – 1 Contact Hr.* Ⓢ*Prerequisite: Meet Ready to Succeed Requirement*

In this laboratory course which is an optional

Co-requisite course for BIOL 200 Introductory Evolution, students will continue to explore biological evolution and its effects on biodiversity. A day field trip, perhaps to the Field Museum in Chicago, is required for this course and may extend contact time beyond the listed two hours per week. Laboratory students must also be registered for BIOL 200 Introductory Evolution, but students taking BIOL 200 are not required to take BIOL 200L. A non-refundable \$50 fee will be included in the class fee, which will cover the laboratory supplement, materials, software usage, and a field trip.

**BIOL 207 Microbiology Lecture**

3 Cr. Hrs. – 3 Contact Hrs. **F****W**

*Prerequisite:* BIOL 105L&L with a grade of “C” or better or other biology course with instructor permission. CHEM 100 and BIOL 106L&L are recommended.

*Co-requisite:* BIOL 207A.

This is a general microbiology course designed primarily for students in allied health programs. Emphasis is on the general characteristics of micro-organisms and the diseases they cause. Included are ways to control micro-organisms with antimicrobials, the immune system, and physical and chemical agents. Emerging diseases and bioterrorism are also covered.

**BIOL 207A Microbiology Laboratory**

1 Cr. Hr. – 3 Contact Hrs. **F****W**

*Prerequisite:* BIOL 105L&L with a grade of “C” or better.

*Co-requisite:* BIOL 207 LEC.

This course is designed for students in allied health programs. It includes preparing stained smears, culturing micro-organisms, conducting immunology experiments, performing tests to identify bacteria and fungi, and studying microbial growth control methods.

**BIOL 290CI Biology Internship.**

*Contact Instructor or Life Science chairperson* **D**

**BIOL 299 Independent Study**

*Variable credit.* **D**

*Prerequisite:* Meet Ready to Succeed Requirement

Open to students who have successfully completed four hours of Biology, or with permission of the instructor. The independent study will include field or laboratory study and library research. The instructor will aid the student in the selection and development of the study in keeping with the philosophy, techniques and methods of research. Open enrollment.

**Each student should check with his/her counselor to ensure that planned coursework meets the requirements for graduation from Muskegon Community College as well as specific requirements of other institutions where a student may wish to transfer.**

**Business**

**(Accounting, Management, Marketing, Business Technology)**

**ACC 100 Fundamentals of Accounting (formerly BUS 100)**

3 Cr. Hrs. – 3 Contact Hrs. **F****W****S**

*Prerequisite:* None, but a 10<sup>th</sup> grade reading level on the Nelson-Denny Test is recommended.

This course is an introductory basic bookkeeping and accounting class that emphasizes the accounting cycle. Day-to-day accounting activities are covered, through the preparation of the financial statements and the process of closing the financial records. Upon successful completion of this class, the student will be well prepared to take ACC 201 Principles of Accounting I. (Students having difficulty with ACC 201 may transfer to this class through the end of the add/drop period with no loss of tuition.)

**ACC 201 Principles of Accounting I (formerly BUS 101)**

4 Cr. Hrs. – 4 Contact Hrs. **F****W****S**

*Prerequisite:* Meet Ready to Succeed Requirement

This course introduces principles of accounting including the accounting cycle with emphasis upon theory and financial statements. Other topics covered include cash, receivables, temporary investments, inventories, plant assets, intangible assets, and payroll.

**ACC 202 Principles of Accounting II**  
*(formerly BUS 102)**4 Cr. Hrs. – 4 Contact Hrs. FW**Prerequisite: A grade of “C” or better in ACC 201.*

A continuation of ACC 201 covering partnerships, corporations, and manufacturing accounting with emphasis on financial and cost accounting concepts.

**ACC 203 Payroll Accounting**  
*(formerly BUS 103)**3 Cr. Hrs. – 3 Contact Hrs. D**Prerequisite: ACC 201 or instructor permission.*

This course covers in detail the accounting and filing requirements for federal payroll taxes. ACC 203 is offered only as an independent study course. Contact the Business Department to arrange an independent study.

**ACC 206 QuickBooks Computerized Accounting**  
*(formerly BUS 106)**3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisite: ACC 100 or ACC 201 or instructor permission.*

In this hands-on course, you will learn QuickBooks, the accounting software used by most small- to medium-size businesses and organizations. This course is for everyone who will be entering transactions or using related data for decision making. You will learn to organize QuickBooks’ features to suit your company – as well as how to generate customized financial reports and statements. Entering cash disbursements, cash receipts, accounts receivable, accounts payable, billing, purchasing, inventory, payroll and general journal are all covered. This course counts as a business elective.

**BUS 104 Accounting for Business Owners***3 Cr. Hrs. – 3 Contact Hrs. FW**Prerequisites: BUS 131 or instructor permission.*

This hands-on course focuses on the basic

accounting skills and financial knowledge students need to start and operate a business. Students will learn accounting fundamentals and how to use Quickbooks (industry leading accounting software). This knowledge will be applied to create the standard financial statements necessary in a business plan and to support start-up loan applications.

**BUS 105/MATH 115 Business Statistics***3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisite: Must have earned a grade of “C” or better in MATH 050 or assignment based on Math Placement Test.*

Probability and statistics for business, social sciences, mathematics, and biological science majors. Topics include descriptive statistics, probability, probability distributions, hypothesis testing, analysis of variance, regression, and non-parametric statistics. Graphing calculators will be utilized.

**BUS 114 Personal Finance***3 Cr. Hrs. – 3 Contact Hrs. W**Prerequisite: Meet Ready to Succeed Requirement*

This course is oriented to the practical needs of the citizen-wage-earning-consumer. This course will consider the structure of the American economic system, the impact of government on this system, and prudent economic management of the individual’s finances, such as insurance, budgeting and the use of credit. This course is designed for the student’s personal needs in today’s society.

**BUS 121 Introduction to Business***3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisite: Meet Ready to Succeed Requirement*

This is a general course in business principles, problems, and practices, which provides an understanding of the operation of the American Business System and its place in the economy. Information concerning more effective use of business

services in personal affairs is included as well as preparation for future business courses.

### **BUS 122 Principles of Management**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

A study of the managerial functions of planning, organizing, staffing, directing, and controlling with analysis of the on-going process; knowledge which a manager must have in order to achieve coordination for the attainment of company objectives.

### **BUS 123 Business Law I**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

This course is a study of the Uniform Commercial Code Text and of the general laws applicable to business covering law and society contracts, agency and employment, commercial paper, personal property, bailments and sales.

### **BUS 124 Business Law II**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: Meet Ready to Succeed Requirement*

Study of the Uniform Commercial Code Text concerning corporations, property sales, negotiable instruments, insurance and bankruptcy.

### **BUS 125 Supervision**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

A review of basic leadership skills needed to effectively supervise people with emphasis on communications, human relations, and the supervisor's role in employee recruitment, selection, training and evaluations. Role-playing and other participation methods will be used.

### **BUS 126 Business Math**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Math Placement Test is recommended.*

This course covers a review of basic computational skills, percentages, inventories, depreciation, and other financial applications. The course is designed to increase competence in fundamental mathematical skills which apply to business.

### **BUS 127 Human Relations**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

A study of the problems of working with people in a business environment. The focus is on dealing positively with employee morale, motivation, leadership, group behavior, personality, productivity, hiring, and training.

### **BUS 131 Intro to Entrepreneurship**

1 Cr. Hr. – 1 Contact Hr. **FWS**

*Prerequisite: None*

This is the first course in the Entrepreneur degree program's core set of classes. It is open to all students interested in learning about the advantages and challenges of starting a business. Students research the definition of entrepreneur, explore how to identify business ideas, and examine the preparation, time commitments, personal skills, and resources needed for a successful business startup. They will develop and evaluate their own business ideas. Successful entrepreneurs from the community will guest lecture to add their expertise and insights.

### **BUS 161A Effective Selling**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

This course includes an analysis of the sales transaction with classroom sales demonstrations. Attention is given to topics such as: consumer characteristics, buying motives, product performance, sales aids, overcoming customer objections, and closing the sale.

**BUS 162 Principles of Retailing**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite: None*

A survey of past and present retailing practices and procedures. Retail management methods are studied, along with retail store locations and layout, equipment, display advertising, personnel policies, maintenance, inventory and cost control.

**BUS 166 Quality Customer Service**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite: None*

A course in understanding what customer service is and how to implement it into today's organization.

**BUS 179 Keyboarding**

1 Cr. Hr. – Variable Contact Hr. **FWS**

*Prerequisite: None*

This course is designed for the student with no previous formal typing instruction. A student with a typing speed of 20-25 wpm should enroll in BUS 181C. This course develops basic alpha and numeric touch keyboarding skills for persons who will be using computer terminals for processing information. This is an BT Lab course.

**BUS 180C Introduction to Word Processing Part I**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

*Recommended*

*Co-requisite: BUS 181C*

This course is designed for the person who types 25-35 words per minute. Introductory and intermediate word processing features and concepts are taught, as well as document formatting. Through extensive hands-on training, students will be given the opportunity to become proficient with Microsoft Word.

**BUS 181C Office Procedures I – Document Formatting**

3 Cr. Hrs. – Variable Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

*Recommended*

*Co-requisite: BUS 180C.*

This course is designed for the person who has had no formal training in formatting business documents, has minimal word processing skills, and types 25-35 words per minute. The purpose of this course is to develop correct techniques and basic keyboarding skills to increase speed and accuracy. The major portion of the course covers correct formatting procedures for business correspondence, reports, and tables using Microsoft Word. Recommended for all persons regardless of major. This is an BT Lab course.

**BUS 182C Office Procedures II – Document Production**

3 Cr. Hrs. – Variable Contact Hrs. **FWS**

*Prerequisites: BUS 180C and BUS 181C (minimum grade of C-) or equivalent.*

A student must achieve a grade of C- or higher to advance to BUS 281C. This course has two major objectives: to provide the student with skill-building opportunities through the use of specially designed software and to allow the student to integrate word processing and document formatting skills while improving production speed and accuracy. This is an BT Lab course.

**BUS 185B Electronic Calculator**

2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

This is an introductory course in the operation of the electronic printing calculator. The student will learn the basic functions of the calculator with applications in practical business problems. This is an BT Lab course.

### **BUS 187A Electronic Records Management**

2 Cr. Hrs. – Variable Contact Hrs. **FWS**  
*Prerequisite: BUS 179 or BUS 181C and experience within a Windows environment.*

This course presents the principles of alphabetic, numeric, geographic, and subject systems of records management, as well as maintenance of records. Database applications, using Access, will be utilized to complete the microcomputer applications simulating records management in a typical office.

### **BUS 188A1 Voice Transcription, Administrative**

3 Cr. Hrs. – Variable Contact Hrs. **FWS**  
*Prerequisites: BUS 180C and BUS 182C or equivalent.*

Marketable skills are developed in the use of office transcribing machines and transcription techniques using word processing. Language skills (grammar and punctuation usage) are emphasized as necessary prerequisite skills for transcribing proficiency. The practice correspondence in the course provides realistic documents from career sites of some of the fastest-growing employment areas. This is an BT Lab course.

### **BUS 188B Voice Transcription, Legal**

3 Cr. Hrs. – Variable Contact Hrs. **D**  
*Prerequisites: BUS 180C and BUS 182C.*

This course helps the student to develop a marketable skill in the use of an office transcribing machine and transcription techniques using word processing, with particular emphasis on legal terminology and transcription of legal documents. This is an BT Lab course.

### **BUS 188D Voice Transcription, Medical Part I**

2 Cr. Hrs. – Variable Contact Hrs. **D**  
*Prerequisites: BUS 180C, BUS 182C, and AH 101.*

This course enables the student to develop a marketable skill in the use of specialized transcription software and hardware to produce medical reports using

word processing software. Emphasis will be on medical terminology and editing of transcription for the following specialties: dermatology, ophthalmology, otorhinolaryngology, pulmonology, and cardiology. Transcription includes office notes, operative reports, consultation letters, letters of referral, chart summaries, discharge summaries, radiology reports, and history and physical reports.

### **BUS 188E Voice Transcription, Medical Part II**

2 Cr. Hrs. – Variable Contact Hrs. **D**  
*Prerequisite: BUS 188D (Part I - minimum grade of C-).*

This course enables the student to develop a marketable skill in the use of specialized transcription software and hardware to produce medical reports using word processing software. Emphasis will be on medical terminology and editing of transcription for the following specialties: gastroenterology, obstetrics and gynecology, urology and nephrology, orthopedics, neurology and psychiatry, hematology-oncology, and immunology. Transcription includes operative reports, consultation letters, letters of referral, chart summaries, discharge summaries, radiology reports, history and physical reports, pathology reports, labor and delivery reports, emergency department reports, and autopsy reports.

### **BUS 188F Introduction to Medical Transcription**

3 Cr. Hrs. - 3 Contact Hrs. **FWS**  
*Prerequisites: AH 101, BUS 182C, and BUS 180C*

This BT Lab course enables the student to develop skill in the use of transcribing hardware and software along with transcription techniques. Particular emphasis will be on medical terminology including the transcription of office notes and the following reports: operative, pathology, radiology, labor and delivery, history and physical, emergency department, discharge summary, and autopsy. Transcription will be completed for various medical specialties.

**BUS 194 Business English Essentials***1 Cr. Hr. – Variable Contact Hrs. FWS**Prerequisites: BUS 179 and a basic knowledge of a word processing software package.*

This course is designed for the student with a desire to improve grammar and punctuation skills to aid in composing business correspondence and business reports. This course will also develop general proofreading skills needed for any printed copy. This is an BT Lab course.

**BUS 195 Medical Records Management***3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisite: Meet Ready to Succeed Requirement and have basic computer knowledge.*

This course uses the Medisoft patient accounting software package that is in use in thousands of medical offices across the country. The student will learn how to use the basic features of the software including: inputting patient information, processing patient transactions, producing various reports, printing statements, and scheduling appointments. The course also covers the theory and procedures for the medical billing process.

**BUS 196 Electronic Health Records***3 Cr. Hrs. - 3 Contact Hrs. FWS**Prerequisite: CIS 120A or CIS 110 or CIS 100, or instructor permission*

This course introduces students to the electronic health record. Topics include background and history of electronic health records, terminology, gathering patient information, scheduling appointments, recording of examination information, processing lab tests, selecting codes, and more. Students will have hands-on experience with electronic health records software including medical documentation skills that are transferable. Students will gain conceptual theory and hands-on practice that they need to work in today's medical office.

**BUS 200 International Business***3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisite: Meet Ready to Succeed Requirement*

This is an introductory course designed to help students become familiar with, understand, and appreciate people from different cultures to promote a more effective basis for working together in the business world. Emphasis and application are placed upon business etiquette and business practice as they differ in various cultures. The course will explore reasons companies choose to enter the international market. Students will learn how companies use various strategic marketing approaches and government resources to expand their operations into the international market.

**BUS 220 E-Business***3 Cr. Hrs. – 3 Contact Hrs. F**Prerequisites: CIS 110 or CIS 120A and Meet Ready to Succeed Requirement*

This course provides an overview of the aspects and opportunities of doing business on the Internet, by examining how e-business strategies differ from those of a land only based business. Topics include the history of business on the Internet, viability of a business using the Internet, what makes an effective e-business web site, opportunities for e-business in international markets, cultural and technical considerations of international e-business, mobile e-business, technology, marketing, payments, safety, security, customer service, regulation, ethics, intellectual property, and other current issues facing businesses using the Internet. As part of this class students will create a functional e-commerce store front.

**BUS 222 Fundamentals of Organizational Behavior***3 Cr. Hrs. – 3 Contact Hrs. W**Prerequisite: BUS 122.*

Organizational Behavior will revolve around the seven major competencies essential to managing an organization.

Managing self, managing communication, managing diversity, managing ethics, managing across cultures, managing teams, and managing change.

### **BUS 230 – Entrepreneurial Planning**

3 Cr. Hrs. – 3 Contact Hrs. **FW**

*Prerequisites: BUS 131 or instructor permission*

This is the first of a two-course sequence that will help students prepare a business plan based on their idea. Students will begin this process by researching and completing two critical elements of their business plan: marketing and human resources. They will identify customers and create marketing/sales strategies with tactics to reach potential customers. They will also determine the human resource requirements necessary to begin operations. Students will work within small groups to explore different perspectives, identify problems and possible solutions.

### **BUS 240 Entrepreneurship Capstone**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisites: BUS 230 and BUS 104*

This is the final class of the entrepreneur core requirements. Students will research and create a written operations plan for their new business. They will integrate their marketing, human resources, and financial plans from prior entrepreneurship program courses with their operational plan, into one comprehensive business plan. Students will practice communicating about their business in formal and social media environments. Finalized business plans will be presented to faculty, financial experts, and/or entrepreneurs. Students may compete in local or national business plan competitions.

### **BUS 260 Principles of Marketing**

3 Cr. Hrs. – 3 Contact Hrs. **FW**

*Prerequisite: Meet Ready to Succeed*

*Requirement (Recommended: BUS 121 or sophomore standing.)*

The study of the task and importance of marketing, the movement of goods from producer to consumer, channels

of distribution, marketing functions and institutions, the ultimate consumer, the industrial consumer, and the retailing and wholesaling systems.

### **BUS 262/COM 262 Social Media**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: CIS 110 or CIS 120A, and ENG 101 or BCOM 101 or equivalent.*

Students explore emerging social media technologies and processes and study their application in a variety of contemporary settings. Students will learn how to use and author content for such online tools such as blogs, microblogs, collaboration mechanisms, podcasts, RSS-feeds, video, bookmarking, and other emerging web technologies. The course will also study how to use these technologies to monitor conversations on the Internet, engage online communities, identify influencers, and establish thought leadership.

### **BUS 263 Advertising Dynamics**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite: None*

This course presents methods and techniques in modern advertising strategy, providing information to prepare an entire advertising campaign including selection of media, copywriting and advertising decision-making.

### **BUS 266 Quality Customer Service II**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite: BUS 166 or instructor permission.*

Measurement, Plan, and Action. This course will take the basic concepts of Customer Service taught in BUS 166 and allow students to measure the outcome that it has on customers. With the results of these surveys, individuals will then be able to formulate a customer service plan and then put this plan into action.

**BUS 273A Human Resource Management***3 Cr. Hrs. – 3 Contact Hrs. ㉔**Prerequisite: None*

Overview of personnel relationships in a business institution covering areas of recruiting, selecting, training, evaluating, motivating, and rewarding of employees and the process involved in the accomplishments of such objectives.

**BUS 274 International Studies in Human Resources***1 Cr. Hr. – 1 Contact Hr. ㉔**Prerequisite: Meet Ready to Succeed**Requirement*

This course is taught via the Internet. Approximately one-half of the students will be from MCC and one-half will be from a college located in another country. Through researching and responding to questions related to case problems, students will become familiar with global issues that impact the field of Human Resources, and how various HR practices differ from country to country.

**BUS 280C Word Processing Part II***3 Cr. Hrs. – 3 Contact Hrs. ㉔㉕**Prerequisites: BUS 180C (minimum grade of C-) and BUS 182C or instructor permission.*

This course builds on the skills and concepts learned in the introductory course. All advanced features of Word are covered, including graphics, templates, and merging. BUS 280C is a hands-on course and provides students the opportunity to be well prepared for Microsoft Office Word Expert Certification. This is an BT Lab course.

**BUS 281C Office Procedures III - Desktop Publishing***3 Cr. Hrs. – Variable Contact Hrs. ㉔㉕**Prerequisites: BUS 182C (minimum grade of C-) and BUS 280C.*

This course is required by BT students enrolled in an A.A.S. degree program and gives students the opportunity to integrate several Microsoft applications with an

emphasis on desktop publishing features using simulated office projects and tasks. The focus is also on increased speed and accuracy. Communication skills, decision-making, and working without supervision are also reinforced in realistic applications. This is an BT Lab course.

**BUS 290CI Cooperative Internship Program***1–4 Cr. Hrs. ㉔**Prerequisite: BCOM 101, and a GPA of 2.5 or better, and have completed a minimum of six credits in their major field of study, and 30 hours of credit toward a degree.*

The Cooperative Internship Program is a paid or non-paid field work experience in business and/or industry within the student's major area of study. Variable credit may be earned dependent upon the number of work hours available from the employing organization. A student may sign up for as many internships as desired; however, the number of credit hours which can be applied toward a degree/certificate depends on the student's course of study and departmental requirements. The maximum number of hours of cooperative internship is 12 credit hours depending upon the program. This course is offered on a pass/no pass basis.

**Business and Technical Communications****BCOM 101 Business and Technical Communications***3 Cr. Hrs. – 4 Contact Hrs. ㉔㉕**Prerequisite: A score of 69 or better on the COMPASS writing test, an ACT English score of 19 or higher, a level 1 or level 2 score on both reading and writing on the MME tests, or successful completion of ENG 091 with a grade of "C" or better.*

This course is designed for students who choose to specialize in a business or technological field. All phases of the communication process will be covered with major emphasis placed on effective written communication for business and industry,

including intercultural communication strategies. Revision and proofreading skills necessary for appropriate business and technical correspondence are emphasized, and students will develop abilities to organize thoughts, which will allow them to write clearly, accurately, and quickly. Business and technical writing styles, formats, and techniques will be covered. Lab hours outside of the scheduled class time will be necessary. A grade of “C” or better required to advance.

### **BCOM 102 Advanced Business and Technical Communications**

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite:* A grade of “C” or better in BCOM 101 and knowledge of any word processing software.

This course is designed for business and technical students and for people already in the work force who want to become proficient in business and technical communications. Major emphasis is placed on writing effective reports, manuals, instructions, and directions for specific audiences using appropriate style and format. While development of effective writing is the purpose of any English class, no other course concentrates on specific business and technical reporting styles, formats, and techniques. Revision and proofreading skills necessary for appropriate business and technical correspondence are stressed. Lab hours outside of scheduled class time will be necessary.

## **Chemistry**

**Students who have not successfully completed Chemistry 100 must take a Chemistry Placement Test before enrolling in Chemistry 101. This test can be taken in the Testing Center. Test results will help place a student correctly into the MCC chemistry sequence.**

### **CHEM 100 LEC Fundamentals of Chemistry**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite:* Must have earned a grade of “C” or better in MATH 050 or its equivalent as determined by the Math Placement Test.

*Co-requisite:* CHEM 100A.

A course emphasizing fundamentals, symbols, formulae, nomenclature, oxidation states, atomic structure, the periodic law, writing and balancing equations, stoichiometry, solutions, and gas law problems.

### **CHEM 100A Fundamentals of Chemistry Laboratory**

1 Cr. Hr. – 3 Contact Hrs. **FWS**

*Co-requisite:* CHEM 100 LEC.

Laboratory theory and practice of topics included in CHEM 100.

### **CHEM 101 LEC General and Inorganic Chemistry**

4 Cr. Hrs. – 4 Contact Hrs. **FS**

*Prerequisites:* Must have earned a grade of “C” or better in CHEM 100 LEC or its equivalent as determined by the Chemistry Placement Test and must have earned a grade of “C” or better in MATH 109 or 111 or its equivalent as determined by the Math Placement Test.

*Co-requisite:* CHEM 101A.

Course topics are: the physical states of matter, structure of matter, bonding, quantitative relationships involving mass and energy, solutions, ideal and real gases, gas mixtures, oxidation-reduction, and elementary thermodynamics.

## CHEM 101A General and Inorganic Laboratory

1 Cr. Hr. – 3 Contact Hrs. **FS**

Co-requisite: CHEM 101 LEC.

Laboratory theory and practice of topics included in CHEM 101.

## CHEM 102 LEC General and Inorganic Chemistry

4 Cr. Hrs. – 4 Contact Hrs. **WS**

Prerequisite: CHEM 101 and CHEM 101A.

Co-requisite: CHEM 102A.

Topics of the course are kinetics, chemical equilibrium, acid-base chemistry, nuclear chemistry, electrochemistry, some introductory organic chemistry as well as advanced topics from thermodynamics (including entropy, spontaneity and free energy). Successful completion of CHEM 102A is required for transfer credit in CHEM 102.

## CHEM 102A General and Inorganic Laboratory

1 Cr. Hr. – 3 Contact Hrs. **WS**

Prerequisite: CHEM 101 and CHEM 101A.

Co-requisite: CHEM 102 LEC.

Course divided between elementary qualitative analysis and laboratory theory and practice of topics covered in CHEM 102 LEC.

## CHEM 109 LEC Chemistry for Health Science

4 Cr. Hrs – 4 Contact Hrs. **FWS**

Prerequisite: Must have earned grades of "C" or better in both MATH 040 and MATH 041 or both MATH 040 and MATH 050, or their equivalents as determined by the Math Placement Test.

Co-requisite: CHEM 109A.

This is a chemistry course for non-science majors and some students going into specific health programs which do not require general Chemistry 101 and 102. The course is designed to provide students insight into the chemical sciences, technology, and the environment. Conversions, atomic structure, bonding, the periodic table, chemical reactions, energy, organic chemistry, nuclear

chemistry, acids and bases, carbohydrates and lipids (biochemistry) are covered. This course is not equivalent to a two semester general, organic, biochemistry course.

## CHEM 109A Chemistry for Health Science Lab

1 Cr. Hr. – 3 Contact Hrs. **FWS**

Prerequisite: Must have earned grades of "C" or better in both MATH 040 and MATH 041 or both MATH 040 and MATH 050, or their equivalents as determined by the Math Placement Test.

Co-requisite: CHEM 109 LEC.

An introductory, one semester laboratory course in chemistry. This is the lab component of Chemistry 109 for non-science majors and some students going into specific health programs which do not require general Chemistry 101 and 102. The course is designed to provide students insight into the chemical sciences, technology, and the environment. Conversions, atomic structure, bonding, the periodic table, chemical reactions, energy, organic chemistry, nuclear chemistry, acids and bases, carbohydrates and lipids (biochemistry) are covered. This course is not equivalent to a two semester general, organic, biochemistry course.

## CHEM 201E Organic Chemistry Lecture

4 Cr. Hrs. – 4 Contact Hrs. **D**

Prerequisite: CHEM 101 LEC, CHEM 101A, CHEM 102 LEC, CHEM 102A.

Co-requisite: CHEM 201F.

Course covers the nomenclature, preparation, properties and reactions of saturated and unsaturated hydrocarbons, aldehydes, ketones, acids and their derivatives. Stereochemistry and IR, ultraviolet spectroscopy are also introduced.

## CHEM 201F Organic Chemistry Laboratory

1 Cr. Hr. – 4 Contact Hrs. **D**

Co-requisite: CHEM 201E.

Laboratory work includes the synthesis of compounds representing typical reactions,

together with study of the chemical and physical properties and IR spectra of the substances prepared. Both macro and microscale techniques are employed.

### **CHEM 202F Organic Chemistry Lecture**

4 Cr. Hrs. – 4 Contact Hrs. **D**

*Prerequisite:* CHEM 201E and CHEM 201F.

*Co-requisite:* CHEM 202G.

A continuation of CHEM 201. Course covers nomenclature, preparation, properties and reactions of aromatic hydrocarbons, phenols, organic nitrogen and sulfur-containing compounds, carbohydrates, proteins and synthetic polymers. Nuclear magnetic resonance spectroscopy are also introduced.

### **CHEM 202G Organic Chemistry Laboratory**

1 Cr. Hr. – 4 Contact Hrs. **D**

*Co-requisite:* CHEM 202F.

Laboratory work includes Diels Alder and ylid reactions, a multi-step synthesis, qualitative analysis of typical organic compounds using spectral evidence as well as simple tests.

## **College Success Center (See English and Mathematics)**

### **College Success Seminar**

#### **CSS 100 College Success Seminar**

2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisite:* None

This course helps develop and reinforce the skills, abilities, and behaviors that promote academic and personal success: effective note taking, productive study skills, reading and remembering, critical thinking, library skills, basic computer skills, free career and job resources, stress management, relationships and winning attitudes.

## **Communications**

### **COM 101 Oral Communications**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite:* None

An introduction to the fundamentals of oral communications. Study and application of intrapersonal, interpersonal, small group, and public speaking. Class presentations are required.

### **COM 102 Mass Media**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite:* None

To create an awareness and understanding of the history, structure and effect of mass media systems. (Includes newspapers, film, radio and television.)

### **COM 107 Introduction to Journalism**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite:* ENG 101 or instructor permission.

A basic course stressing the news-gathering techniques and news-writing style utilized by newspapers, radio and television. Includes an orientation to style, copy-reading, editing, headline writing, and page layout.

### **COM 112 Audio Production**

2 Cr. Hrs. – 2 Contact Hrs. **F**

*Prerequisite:* None

A basic course in the fundamentals, principles, practices, and techniques of radio production. Laboratory hours by arrangement.

### **COM 113 Practical Radio**

2 Cr. Hrs. – 2 Contact Hrs. **W**

*Prerequisite:* COM 112.

A continuation of COM 112 designed to give the student the opportunity to develop skill and experience at a local radio station.

**COM 201 Public Speaking**

3 Cr. Hrs. – 3 Contact Hrs. **F****W**

*Prerequisite: Meet Ready to Succeed*

**Requirement**

A consideration of the principles of public speaking with emphasis on the theories of argumentation and persuasion. Class performances required.

**COM 202 Human Communication**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: None*

A study of everyday communication and how it affects perceptions, self, and environment. Emphasis is on dyadic and small group interaction.

**COM 203/ENG 208****Introduction to Cinema**

3 Cr. Hrs. – Variable Contact Hrs. **F****W****S**

*Prerequisite: ENG 101 and ENG 102.*

An introduction to the art of film; the course will include representative foreign and domestic films, at least one documentary film, and several (2-4) experimental and/or underground films. In addition to thematic study of films, the course explores the various elements of movie-making (i.e., script, light, sound, color, acting, directing, editing).

**COM 210 Introduction to Debate**

3 Cr. Hrs. – 5 Contact Hrs. **D**

*Prerequisite: None*

An introduction to the theory and practice of modern debate.

**COM 212 Television Production**

3 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite: None*

A basic course designed to acquaint the student with the principles, practices, and techniques of television production. Within an operating television studio, students gain hands-on experience operating studio cameras, recording devices, a video switcher, lighting, audio mixing, microphone setup, teleprompter, monitors, props, green screens and other

accessories. Activities involving scripting, storyboarding, editing, safety and security will also be provided.

**COM 262/BUS 262 Social Media**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite: CIS 110 or CIS 120A, and ENG 101 or BCOM 101 or equivalent.*

Students explore emerging social media technologies and processes and study their application in a variety of contemporary settings. Students will learn how to use and author content for such online tools such as blogs, microblogs, collaboration mechanisms, podcasts, RSS-feeds, video, bookmarking, and other emerging web technologies. The course will also study how to use these technologies to monitor conversations on the Internet, engage online communities, identify influencers, and establish thought leadership.

**COM 290CI Cooperative Internship Program**

1 – 4 Cr. Hrs. – Variable Contact Hrs. **D**

*Prerequisite: students must have a GPA of 2.5 or better with at least 21 credit hours successfully completed within the core requirements and 30 credit hours completed toward degree completion, and a recommendation from department faculty*

The Cooperative Internship Program is a paid or non-paid work experience in broadcasting/multi-media within the student's major area of study. Variable credit hours (1-4 Cr. Hrs. per semester) may be earned dependent upon the number of work hours available from the employing organization. A student may sign up for as many internships as desired; however, the number of credit hours which can be applied toward a degree/certificate depends on the student's course of study and departmental requirements. The internship course starting and ending dates are determined on an individual basis. This course is offered on a pass/no pass basis.

## Computer-Aided Drafting and Design

### CAD 100 Introduction to Drafting

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: None.*

The purpose of this course is to provide an introduction to drafting and CAD for students with no prior CAD/drafting experience. Emphasis will be placed on sketching skills and basic fundamentals of computer-aided drafting.

### CAD 110 Introduction to Computer-Aided Drafting (2D)

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: CAD 100, high school drafting, or instructor permission.*

This course is an introduction to basic computer-aided drafting using AutoCAD™. Basic 2D CAD drafting skills will be the primary focus of this course.

### CAD 120 Descriptive Geometry

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: CAD 100, high school drafting, or instructor permission.*

Descriptive Geometry is the science of graphical representation and solution of spatial problems. Techniques used to develop solutions to point, line, and surface projections, intersections, and developments will be presented.

### CAD 130 Drafting Standards and Conventions I

3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite: CAD 110.*

This course is an introduction to working drawings, orthographic projection, multi-view drawings, dimensioning, section views, auxiliary views, screw threads, and fasteners. ASME standards will be stressed throughout this course.

### CAD 135 Engineering Graphics

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: CAD 110.*

The essentials of Engineering Graphics include working assembly drawings and geometric dimensioning and tolerancing. Included in this is the utilization of section and auxiliary views to create better illustrations of parts and assemblies.

### CAD 140 Drafting Standards and Conventions II

3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite: CAD 130.*

This course involves advanced topics concerning ASME standards and conventions. Advanced dimensioning, tolerancing, and GD&T will be covered.

### CAD 150 Blueprint Reading

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: MATH 040 or TMAT 101A.*

This course is designed to teach students how to read and interpret engineering drawings.

### CAD 151 Geometric Dimensioning & Tolerancing

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: CAD 150 or instructor permission.*

This course is designed to teach how to read, interpret, and apply geometric dimensioning and tolerancing per ANSI Y14.5M standards.

### CAD 152 Residential Architecture

3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite: CAD 110.*

This course involves the basic construction details for framed residential buildings.

### CAD 153 Commercial Architecture

3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite: CAD 110.*

This course involves the layout of a small commercial building, the basic structure being concrete and steel.

**CAD 184 Introduction to Computer Animation**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite: None*

This course will introduce students to 3ds Max modeling, rendering and animation environments. Those who complete the course will be able to operate the user interface to navigate and import objects from other CAD programs, create complex computer models, use program modifiers for the manipulation of models and animations, apply graphic maps and materials, create complex lighting setups, and create photo realistic rendered scenes.

**CAD 210 Parametric Design I; Part Modeling**

3 Cr. Hrs. – 6 Contact Hrs. **F****W**

*Prerequisite: CAD 110*

This course is an introduction to 3-D modeling and parametric design. Working and presentation drawings will be produced, and rendering fundamentals will be presented.

**CAD 220 Parametric Design II; Assemblies**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite: CAD 210.*

This course covers advanced part modeling concepts and multiple part assemblies. Rendering and animation fundamentals will be presented.

**CAD 230 Tool Design**

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisite: CAD 210 or CAD 250.*

This course covers design of drilling jigs and machining fixtures commonly used in industry.

**CAD 240 Product Design**

3 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite: CAD 210 or CAD 250.*

Working as a team, students will collaborate to design assigned products. Working and presentation drawings will be created,

and manufacturing costs, materials, and tolerancing will be critical requirements. Class presentations will be required.

**CAD 250 Introduction to SolidWorks®**

3 Cr. Hrs. – 6 Contact Hrs. **F****W****S**

*Prerequisite: CAD 110 or instructor permission.*

This course is an introduction to 3D modeling and parametric design using SolidWorks®. Working and presentation drawings will be produced, and rendering fundamentals will be presented.

**CAD 251 Die Design**

3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite: CAD 130.*

An introductory course in the basic fundamentals of sheet metal stamping dies. A simple blanking die, a compound blank and pierce die, and a progressive die will be designed by the student.

**Computer Information Systems****CIS 100 Introduction to Personal Computers**

1 Cr. Hr. – 1 Contact Hr. **F****W****S**

*Prerequisite: None*

This course introduces students to the proper use and operation of the Intel-compatible microcomputers using the Windows operating system. Students learn to create documents using word processing programs, create line art using graphic programs, send and receive e-mail with attachments, access the Internet using a browser, and use online course management software. Common system activities that include customizing the desktop, formatting disks, using file management procedures, and creating back-ups are a part of the introduction to personal computer operating procedures.

## CIS 100 L&L Introduction to Personal Computers with Lab

1 Cr. Hr. – 2 Contact Hrs. **FWS**

*Prerequisite: None.*

This course is designed for students with little to no experience with computers. Students have an extra lab hour with their instructor to meet the same objectives as CIS 100. This course introduces the student to the proper use and operation of the Intel-compatible microcomputers using the Windows operating system. Student learn to create documents using word processing programs, create line art using graphic programs, send and receive email with attachments, access the Internet using a browser, and use online course management software. Common system activities that include customizing the desktop, formatting disks, using file management procedures, and creating back-ups are a part of the introduction to personal computer operating procedures.

## CIS 101EW Introduction to Electronic Spreadsheets

1 Cr. Hr. – 1 Contact Hr. **FWS**

*Prerequisite: CIS 100, CIS 110, CIS 120A, or proficiency with Windows or instructor permission.*

This is a “hands-on” course designed for people with little or no previous experience with electronic spreadsheets. The student will create and edit worksheets and workbooks. The student will use basic formulas, functions, charting, formatting, and printing options to create functional worksheets. Suffix: EW stands for Excel for Windows.

## CIS 102EW Intermediate Electronic Spreadsheets

1 Cr. Hr. – 1 Contact Hr. **FWS**

*Prerequisite: CIS 101EW or instructor permission.*

The student will use advanced formulas and functions, built-in data and table features, and perform what-if analysis using solver and scenarios. Advanced charting and

formatting skills will also be covered. Suffix: EW stands for Excel for Windows.

## CIS 109 Personal Computer Maintenance

2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisite: CIS 110, CIS 120A or instructor permission.*

This course provides students with the skills needed in the upgrading and maintenance of personal computers. Students learn how to install integrated circuits for memory into a computer’s motherboard, upgrade video displays, upgrade disk controller boards, replace disk drives, and perform diagnostic tests on equipment. Common system problems are also covered as part of hands-on troubleshooting using Intel-based computers.

## CIS 110 Computer Concepts

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

A survey course on computer concepts and applications associated with the current generation of computer technology. In addition, technological trends and the potential impact computers have on careers and lifestyles are discussed. Computer Concepts also provides hands-on work with computers through the introduction of commonly used application packages—word processing, electronic spreadsheets, presentation graphics, image editing, and Internet browsing software within the Windows operating environment. Students interested in business applications and the introduction to computer programming should enroll in CIS 120A Introduction to Computer Information Systems.

### **CIS 115WW Introduction to Word Processing**

*1 Cr. Hr. – 1 Contact Hr. FWS*

*Prerequisites: CIS 100, CIS 110, or CIS 120A, and BUS 179 or proficiency in Windows.*

This is a hands-on course designed for people with little or no experience with word processing. The student will create, edit and format professional-looking documents. These documents will include templates, themes, styles, tables and graphics. Suffix: WW stands for Word for Windows.

### **CIS 119PP Introduction to Presentation Graphics**

*1 Cr. Hr. – 1 Contact Hr. FWS*

*Prerequisite: CIS 100, CIS 110, CIS 120A, or instructor permission.*

This is a “hands-on” course designed for people with little or no previous experience with slide show management. The student will design professional-looking slide shows using themes, animation, slide transitions, graphics, sound, and video. Suffix: PP stands for PowerPoint for Windows.

### **CIS 120A Introduction to Computer Information Systems**

*3 Cr. Hrs. – 3 Contact Hrs. FWS*

*Prerequisite: Meet Ready to Succeed Requirement (Recommended: BUS 179, keyboarding, or equivalent.)*

A business-oriented introduction to data processing principles and information systems. Course topics include the analysis and design of business computer systems, the components of a computer system, the capabilities and limitations of computer technology, and careers for the information age. Students work with computers by learning to operate Internet browsers, electronic spreadsheets, and database systems within the Windows operating environment along with programming computers using popular programming languages. Students are expected to be able to use word processing software before enrolling in this course. This course was formerly offered as CIS 120A: Introduction to Data Processing.

### **CIS 121 File Design and Utilities for Midrange Computers**

*1 Cr. Hr. – 1 Contact Hr. FW*

*Prerequisite: CIS 120A or CIS 120A Co-Req for CIS majors with Instructor permission*

This course introduces students to the fundamentals of file design in a midrange computing environment. Students learn a midrange data definition language and use the utilities of a midrange operating system to create and maintain physical and logical files, database relationships, and queries.

### **CIS 124 Introduction to Game Development**

*3 Cr. Hrs. – 3 Contact Hrs. FW*

*Prerequisite: CIS 120A or instructor permission.*

This class will provide an overview of the game industry which includes game history, analyzing the psychological reasons why people play games, understanding the different types of games and their history, how games are developed, how game designs are influenced by their business models, and identifying the salient features of a game and how they relate to human needs and fluidly of play. A full understanding of graphics evolution, game play example, systems evolutions are explored. Students experience in collaborative groups how to propose game ideas, and work through game concepts and features. , Class goals are to impart to the student a fluency in understanding of how games are created, what influences how a game is developed and be able to identify industry specific areas of focus that will align with their personal interests and skills.

### **CIS 129 Introduction to Technology**

*3 Cr. Hrs. – 6 Contact Hrs. FW*

*Prerequisite: None.*

This course provides an “integrated” introduction to the current computer-based technologies of manufacturing. Students will develop a foundation of understanding through hands-on experience in: basic microcomputer operations, Computer-Aided Design (CAD), Computer-Aided

Machining (CAM), Computer Numerical Control (CNC), robotics, Computer Automated Process Control, spreadsheets, and word processing. The course also promotes problem solving, group process decision-making, and communication skills.

### **CIS 130 COBOL Programming**

*3 Cr. Hrs. – 3 Contact Hrs. D*

*Prerequisite: CIS 120A or instructor permission.*

This first course in COBOL covers the fundamentals of designing and developing structured programs, sequential and indexed files, input validation techniques, branching, and conditional structures. Output includes detail, summary, and exception reports. Students design, write, test and document COBOL programs within a midrange operating environment.

### **CIS 131 Operations and Commands for Mid-range Computers**

*1 Cr. Hr. – 1 Contact Hr. W*

*Prerequisite: CIS 120A.*

This course introduces students to a midrange operating system. Students learn fundamental skills necessary to interface with the system, including using control language commands, prompting, and handling job queues, output queues, and messages. Students will also become familiar with the operating system's architecture, and will be briefly introduced to control language programming.

### **CIS 143 Introduction to Local Area Networks**

*3 Cr. Hrs. – 3 Contact Hrs. F*

*Prerequisite: CIS 110 or CIS 120A. (Recommended: CIS 193A or CIS 210.)*

This course provides a comprehensive coverage of the skills necessary for network management. Topics include concepts related to the planning of network file systems, implementation of security, the installation of application software as well as more advanced concepts such as protocol support, server management and performance issues.

### **CIS 153AW Introduction to Database Management**

*1 Cr. Hr. – 1 Contact Hr. FWS*

*Prerequisite: CIS 100, CIS 110, CIS 120A, or proficiency with Windows, or instructor permission.*

This is a hands-on course designed for people with little or no experience with database management software. The student will create, manipulate and query relational databases along with developing data entry forms and reports. Suffixes: AW stands for Access for Windows.

### **CIS 157 Introduction to the Internet**

*1 Cr. Hr. – 1 Contact Hr. D*

*Prerequisite: CIS 100, CIS 110, CIS 120A or instructor permission*

This course is designed to introduce students to the wide area network called the Internet. All of the skills required to navigate the Internet to find and retrieve information in an easy to understand format are covered. Students also learn how to communicate with other Internet users. This course provides hands-on experience using popular browser software.

**CIS 162 – Visual C# Programming***3 Cr. Hrs. – 3 Contact Hrs. ⑥**Prerequisite: CIS 120A or CIS 120A**Co-Req for CIS majors with Instructor permission*

The C# programming language, from Microsoft, will be introduced to the students from within the .NET framework. Students will study, design and write programs in the object-oriented format while becoming familiar with the fundamentals of C# and of the .NET environment. The C# (C Sharp) programming language, from Microsoft's Visual Studio (VS) development framework, is introduced and then used to present the visual programming environment, the object-oriented programming environment and the .NET environment. Students will learn to work with the VS interface to develop skills in developing projects and managing objects. Programming techniques will focus on decisions, looping, data management, and exception management.

**CIS 163VB Visual Basic for Applications***1 Cr. Hr. – 1 Contact Hr. ④**Prerequisite: CIS 100, CIS 110,**CIS 120A, or proficiency with Intel-compatible microcomputer operations.*

This course is designed to be an elementary introduction to the BASIC programming language and editor. Students taking this class are taught to create programs that interact with the user. CIS 110 students with an interest in learning to program are advised to take this class.

**CIS 167FL Introduction to Internet Animation***1 Cr Hr. – 1 Contact Hr. ⑥**Prerequisite: CIS 100, CIS 110, or CIS 120A.*

This course provides students with hands-on experience creating web-based animation using an animation editor. Topics include working with the various tools and objects available in the Flash editor, creating and manipulating multi-layered graphics, an

introduction to scripting, working with animation frames and tweening, and publishing the graphics for use on the Internet.

**CIS 170 RPG Programming***3 Cr. Hrs. - 3 Contact Hrs. ⑥**Prerequisite: CIS 121*

This course covers fundamentals of designing and developing computer programs written using the RPG IV programming language. Topics include program logic, arithmetic operations, decision-making structures, external input and output definitions, sequential processing of batch files, and an introduction to interactive programming. Students design, write, test and document RPG IV programs within the IBM i operating environment.

**CIS 177DW Introduction to HTML Editors***1 Cr. Hr. – 1 Contact Hr. ④⑤**Prerequisite: CIS 100, CIS 110, CIS 120A*

This course introduces students to creating and managing web sites and pages through the use of an HTML editor. Students will learn to maintain a site by utilizing an HTML editor to create and edit HTML documents. This includes changing text properties, adding and deleting design elements, creating hyperlinks to other web pages and inserting multimedia objects. Students learn to work with HTML code through class demonstration and completing assignments using Dreamweaver.

**CIS 183 Networking Technologies***3 Cr. Hrs. –3 Contact Hrs.**Prerequisite: CIS 110 or CIS 120A. ④*

This course focuses on essential issues related to data communications and networking technologies. Topics include established networking standards and terminology, the OSI model, physical and logical network topologies, the use and function of various networking hardware, media, protocols, and the fundamentals of internetworking.

**CIS 185 C Programming***3 Cr. Hrs. – 3 Contact Hrs.* **F****W***Prerequisite: CIS 120A or CIS 120A**Co-Req for CIS majors with Instructor permission.*

The major elements of the C programming language are introduced through a series of applications featuring C program structure, variables, integer and floating point arithmetic, looping, conditionals, arrays, functions, strings, pointers, structures and sequential file syntax. Syntactical, structural and procedural differences of C++ object-oriented methodologies are integrated into the course after a firm foundation in standard C is presented.

**CIS 187 Multimedia Digitizing***3 Cr. Hrs. – 3 Contact Hrs.* **F***Prerequisite: CIS 100, CIS 110, CIS 120A, or instructor permission.*

This course serves as an introduction to many of the multimedia devices that allow the acquisition, manipulation, and storage of non-text media. Devices and topics include full-color, flatbed scanners, slide and negative scanners, frame-grabbers, digital camera use, audio digitizing, video digitizing, Zip drives, USB Flash drives, and CD-DVD burners. The class uses state of the art devices and software to manipulate the digital data. Additional costs include a pair of stereo headsets, blank CD and DVD disks, a blank VHS videotape, and removable read/write media as dictated by the current syllabus. This course was formerly offered as CIS 297DD: Introduction to Digital Data.

**CIS 193A Introduction to Operating Systems***1 Cr. Hr. – 1 Contact Hr.* **W***Prerequisite/Co-requisite: CIS 110 or CIS 120A.*

This course surveys disk operating systems for Intel-compatible microcomputers. Students learn to take advantage of a microcomputer's disk operating system by working with common commands and

utility programs. In class discussions and demonstrations will focus on terms and basic concepts of memory management, hard disk management and personalizing computer operations.

**CIS 198 Computer Forensics***3 Cr. Hrs. – 3 Contact Hrs.* **D***Prerequisites: CIS 120A and CJ 101 or instructor permission.*

This course is designed to introduce the student to the world of computer forensics and cyber crime. The student will gain a basic understanding of the application of computer investigations and analysis techniques in the interest of determining potential legal evidence.

**CIS 209 Personal Computer Maintenance II (A+ Certification)***3 Cr. Hrs. – 5 Contact Hrs.* **F****W***Prerequisite: CIS 109, ELTR 109 or instructor permission.*

This course is designed to take the successful PC Maintenance student to the next, more in-depth level of PC maintenance and repair. The Web presentations, text assignments, demonstrations, and related CD-ROM teaching materials will help prepare the student to be competent to pass the A+ Certification written exam. The related labs will provide the needed hands-on experience to develop system understanding and competent analysis and repair procedures. Lab experience will include the building of a complete computer system, with troubleshooting and analysis of the system. It is recommended that CIS 143 be taken to provide more network background before taking the A+ exam.

**CIS 210 Operating Systems Concepts**

3 Cr. Hrs. – 3 Contact Hrs. **F****W**

*Prerequisite:* CIS 110, CIS 120A, CIS 193A, or instructor permission.

This course takes a functional view of the essential concepts relative to computer operating systems. Topics include principles of memory management, processor management, concurrent processes, device management, file management, and system management. The course incorporates how these essential principles are applied to Personal Computer (PC) operating systems in practice with a hands-on approach. Primary operating systems studied included MS-DOS and Windows operating systems.

**CIS 217 Introduction to JavaScript Programming**

1 Cr. Hr. – 1 Contact Hr. **W**

*Prerequisite:* CIS 257A.

Students will learn how to program by using JavaScript. Students will learn how to write JavaScript programs that use the latest language techniques. Students will also learn how to write programs that are compatible with previous versions of the language and are cross-browser compatible. They will also be required to implement scripts on a web page and publish a web site on the Internet using File Transfer Protocols (FTP).

**CIS 220 E-Business**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisites:* CIS 110 or CIS 120A and Meet Ready to Succeed Requirement.

This course provides an overview of the aspects and opportunities of doing business on the Internet, by examining how e-business strategies differ from those of a land only based business. Topics include the history of business on the Internet, viability of a business using the Internet, what makes an effective e-business web site, opportunities for e-business in international markets, cultural and technical considerations of international e-business, mobile e-business, technology, marketing,

payments, safety, security, customer service, regulation, ethics, intellectual property, and other current issues facing businesses using the Internet. As part of this class students will create a functional e-commerce store front.

**CIS 243 Telecommunications**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite:* CIS 110 or CIS 120A

*Recommended:* CIS 143 or CIS 183

This course provides an introduction to telecommunication concepts and network configurations. Students learn standard procedures and protocols for data transmission over various communication channels and study the components of a telecommunications system. Network architectures and designs are examined through the use of discussion and case studies.

**CIS 244 Game Scripting**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite:* Any programming course (CIS 162, CIS 185, CIS 130) or instructor permission.

The students will work independently and in teams to design, create and code game systems for current games on the market. Focus will be put on how to create scripts that address the logic behind combat systems, implementing expert systems and artificial intelligence, implementing conditional and branching conversations, event triggers, creation of timed events, and how to create dynamic game environments. Further there will be discussion on version control, software configuration management, software development methodologies and how to successfully work in distributed development environments.

### **CIS 250 Developing Information Systems**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisites: CIS 120A and previous (or current) enrollment in an advanced level programming course.*

This course reviews and applies traditional systems development methodologies implemented by project teams. Classroom discussion centers on the design and development of user-oriented information systems. Course content includes feasibility studies, systems analysis, design concepts, and implementation strategies.

### **CIS 253A Database Design and Implementation**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisites: CIS 153AW and a programming course (CIS 162, CIS 185, CIS 130, CIS 163VB) or instructor permission.*

This course provides students with systems development experience within a database environment. Fourth-generation languages using structured query language (SQL), report generators, and other system design tools are used in conjunction with case studies to provide real-life applications of the systems development process.

### **CIS 257A HTML for Internet Web Page Design**

3 Cr. Hrs. – 3 Contact Hrs. **F****W**

*Prerequisites: CIS 110 or CIS 120A or CIS 157 or permission of instructor.*

Students will learn the fundamentals of the Hypertext Markup Language (HTML5), CSS and web page design. Students will use Internet browsers, image editors and text editing software to create and edit web pages for traditional computers and mobile devices. They will also learn to create a web page and publish a website on the Internet using File Transfer Protocols (FTP). Students will be expected to critique other web pages and, time permitting, there will be demonstrations of JavaScript and other Internet tools.

### **CIS 260A Visual Basic Programming**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite: CIS 162.*

The Visual Basic .NET programming language and ADO.NET (ActiveX Data Objects), from Microsoft's Visual Studio (VS) development framework, will be presented to the students from within the .NET framework. Students will study, design and write programs in the object oriented format while becoming familiar with the fundamentals of Visual Basic.NET and will develop more complex, multi-document user interfaces, processing data to and from database engines and other file structures. In addition, students will utilize ADO.NET to select, insert, update, and delete database information that has been bound to the Visual Basic application being developed. Students will be expected to know the Visual Studio Integrated Development Environment (IDE) upon entry to the class through the successful completion of CIS 162 – Visual C# Programming.

### **CIS 267ASP Server-Side Web Programming Using ASP**

3 Cr. Hrs. – 3 Contact Hrs. **W**\*\*

*Prerequisite: Both CIS 257A and CIS 162 or instructor permission.*

This course is an introduction to the server-side scripting language for use in the creation and maintenance of interactive web sites that access online databases. Students design, code, test, debug and navigate interactive web sites using server-side programming. Topics will include broad exposure to language-specific functions and processes, security and file uploads and writes, along with database functionality including reads, writes, selects (searches), inserts and updates. This technology is widely used within Internet applications including blogs, search engines, e-commerce shopping carts, discussion forums, content management systems and social networking platforms. Suffix: CIS 267ASP for .NET applications and CIS 267PHP for open source applications. \*\**This course is offered only in odd numbered years.*

## **CIS 267PHP Server-Side Web Programming Using PHP**

*3 Cr. Hrs. – 3 Contact Hrs. ④*

*Prerequisite: CIS 257A or instructor permission.*

This course is an introduction to the server-side scripting language for use in the creation and maintenance of interactive web sites that access online databases. Students design, code, test, debug and navigate interactive web sites using server-side programming. Topics will include broad exposure to language-specific functions and processes, security and file uploads and writes, along with database functionality including reads, writes, selects (searches), inserts and updates. This technology is widely used within Internet applications including blogs, search engines, e-commerce shopping carts, discussion forums, content management systems and social networking platforms. Suffix: CIS 267ASP for .NET applications and CIS 267PHP for open source applications.

## **CIS 270A Advanced RPG Programming**

*3 Cr. Hrs. - 3 Contact Hrs. ④*

*Prerequisite: CIS 170*

This course is a capstone course in midrange programming. Topics include interactive applications, file maintenance, procedures, subprocedures, modular programming, subfiles, embedded SQL, and other emerging IBM technologies used by industry. Students design, write, test and document RPG IV programs in a midrange operating environment.

## **CIS 275 Linux Operating System**

*3 Cr. Hrs. – 3 Contact Hr. ④*

*Prerequisite: CIS 210 (Recommended: CIS 143)*

This course provides introductory coverage of the Linux operating system. Students will learn the fundamentals of Linux and its environment, both from a user's and administrator's standpoint. Specific topics include installation, configuration, basic Linux administration; exploring the Desktop

environments; understanding the text commands, using the Shell; understanding users and file systems; managing processes; basic Linux networking, using network clients; understanding system initialization, managing software packages and file systems; managing users and groups; configuring networks; understanding system and kernel management. We will also cover a few advanced topics that include network file sharing (NFS) services, security and Samba. We will use the Red Hat's free open-source Linux operating system, known as Fedora, as our primary operating system. This course also serves as a guideline that maps to the CompTIA Linux+ certification exam.

## **CIS 277 Internet Site Administration**

### **CIS 277LA Linux and Apache**

### **CIS 277MS Microsoft**

*3 Cr. Hrs. – 3 Contact Hrs. ④*

*Prerequisites: (CIS 110 or CIS 120A) and CIS 193A and CIS 257A.*

This class is designed to teach students how to setup and administer an Internet Web server using popular operating system and server software. Students will set up their own Web server by installing the operating system software, establishing user accounts and rights, creating designated work spaces, and installing appropriate server software. In addition, students use the server software to establish an Internet domain, support HTML documents, and run server side programs.

## **CIS 280 Java Programming**

*3 Cr. Hrs. – 3 Contact Hrs. ④*

*Prerequisite: CIS 185.*

This course addresses advanced level object-oriented programming techniques using the Java programming language. Coverage includes construction of basic Java programs, use of input/output and other common instance and static methods, unique syntactical constructs, conditions and iteration, differences between the C++ environment and the Java environment,

the acquisition and installation of the Java compiler and runtime platform, and the interpretation of common errors and warnings. These concepts are presented through the use of extensive examples and assignments.

### **CIS 283 Advanced Local Area Network Administration - Server 2008**

*3 Cr. Hrs. – 3 Contact Hrs.* **W**

*Prerequisites: CIS 143, CIS 243, CIS 183, CIS 209 (CIS 183 and/or CIS 209 may be taken as co-requisite(s) with instructor permission.)*

This course covers the fundamentals of designing and installing network hardware and software for a small LAN. Topics include network adapters and cabling, disk expansion, common network problems, and troubleshooting. Students are provided with a series of lecture and lab exercises intended to develop ability to design, implement, troubleshoot and solve network problems.

### **CIS 284 Interactive Media and Game Design**

*3 Cr. Hrs. – 3 Contact Hrs.* **W**

*Prerequisites: CIS 124 and GRD 120.*

This class is the capstone course for any degree track within the Interactive Media and Game Design curriculum. Students will work in a collaborative team, from initial concept through final release in a single game development cycle to develop a game modification to an existing professionally published work. Students will work on professional grade tools, will face all of the challenges, decision points and experience of creating a published game. This includes initial concept, storyboarding, game scripting, voice acting, art creation, writing, game design, map design, level design, 3D modeling, model rendering, as well as community management, project management and product placement. The course goal is to create a published “Mod” that will become a cornerstone for the students published portfolio as a referenced published work.

### **CIS 286 Programming for Mobile Applications**

*3 Cr. Hrs. – 3 Contact Hrs.*

*Prerequisites: CIS 162 or CIS 280.*

CIS 286 is the capstone course for those students completing the Computer Programmer – Mobile Developer Track. With the widespread usage of smart phones, tablets, etc., students are provided with new opportunities in the development of applications for these devices. Students will develop mobile applications using either C#.NET or Java for multiple mobile platforms and mobile operating systems. Specific applications that are to be developed by each student will be determined, with instructor approval, at the beginning of the semester.

### **CIS 287 Personal Computer Digital Video Editing**

*3 Cr. Hrs. – 3 Contact Hrs.* **W**

*Prerequisite: CIS 110 or CIS 120A or instructor permission.*

This course serves as an introduction to video editing on the PC. Topics covered include importing still and video images, audio editing, cutting scenes, transitions, basic and advanced titling, compositing, slow and fast motion, color balance, and exporting projects to a variety of industry-standard formats. Additional costs include a pair of stereo headsets and removable read/write storage media as dictated by the current syllabus.

### **CIS 293 Network Security**

*3 Cr. Hrs. – 3 Contact Hrs.* **W**

*Prerequisites: CIS 283 and all other courses in the Networking Degree curriculum or permission of the instructor.*

This course is offered as a topics course relative to computer network security. It is a capstone course where students will apply the summation of their knowledge from all previous networking courses to the study, analysis and understanding of computer network security. The course is designed to include research, lecture and discussion.

## Criminal Justice

### CJ 101 Introduction to Law Enforcement

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

A study of the organization and jurisdiction of local, state, and federal law enforcement, judicial, and correctional systems. Also includes the history and philosophy, career opportunities and qualifying requirements, terminology and constitutional limitations of the system.

### CJ 102 Police Administration I

3 Cr. Hrs. – 3 Contact Hrs. **WS**

*Prerequisite: None*

A study of the principles of police administration and organization; administration of staff units; function and activities of Criminal Justice Agencies.

### CJ 104 Criminology

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

The study of deviance and society's role in defining behavior. Theories of criminality and the economic, social, and psychological impact of crime, victimization, and relationship between statistics and crime trends.

### CJ 109 Crime Prevention and Juvenile Delinquency

3 Cr. Hrs. – 3 Contact Hrs. **FW**

*Prerequisite: None*

A practical study of the history and development of juvenile justice theories, procedures and institutions. Problems of juvenile delinquency, theories of causation and prevention programs. Police prevention programs, juvenile courts, federal, state and local treatment and prevention.

### CJ 110 Defensive Tactics

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisites: Passing pre-admission physical test, and student must be enrolled in a certified police academy or be a sworn peace officer.*

The focus of attention in this course will be the use of basic techniques. Each technique demonstrated by the instructor will have a variety of uses. All techniques will be designed to incapacitate the object of focus as quickly and professionally as possible. The importance of documentation followed by court testimony techniques will be strictly emphasized throughout the entire course. 1 lecture hour / 3 lab hours.

### CJ 112 Emergency Vehicle Operations

1 Cr. Hr. – 1 Contact Hr. **D**

*Prerequisite: Valid driver's license and enrolled in a certified police academy or be sworn officer or certified EMS provider.*

This course is designed for Emergency and Commercial vehicle operators. The course will emphasize the legal aspects of emergency vehicle operation, vehicle dynamics, vehicle maintenance, vehicle inspections and human dynamics. The practical exercise of the course will be conducted at an outdoor site, where the student will practice, then demonstrate their individual proficiency in operating the type of vehicle appropriate for their individual operation. The outdoor course will be set up in conformance with the recommended National Law Enforcement Driver's Training Guide and Federal Emergency Management Agency Training Guide. 1 hour lecture.

### CJ 120 Firearms Certification

2 Cr. Hrs. – 4 Contact Hrs. **D**

*Prerequisite: Student must be registered as part of a law enforcement or corrections program.*

This course will prepare a student to use firearms safely. The course will be conducted in compliance with the curriculum set forth by the National Rifle Association Police Practical Course. It will cover areas such

as semiautomatic handguns, shotguns, use of force, safe handling of guns, ballistics, malfunctions and overall safety. 1 hour lecture and 3 hours lab.

### **CJ 122 The Police Patrol Function**

*3 Cr. Hrs. – 5 Contact Hrs. D*

*Prerequisite: Student must be enrolled in the Law Enforcement AAS degree Program.*

A study of the history, theory, duties and responsibilities of the patrol division; communications, development of observational powers, care and use of protective weapons, patrol vehicles & other equipment. Handling of emergency request for assistance, vehicle stops, burglary, robbery, sex offenses, the mentally ill and other kinds of situations. 2 hours lecture / 3 hour lab.

### **CJ 123 Traffic Enforcement**

*3 Cr. Hrs. – 5 Contact Hrs. D*

*Prerequisite: Student must be enrolled in the Law Enforcement AAS degree program.*

This course provides the student with the knowledge needed to analyze traffic control problems and the fundamentals of traffic accident investigations. The course will include motor vehicle laws in the state of Michigan. 2 hours lecture / 3 hours lab.

### **CJ 130 Tactical Communication**

*3 Cr. Hrs. – 3 Contact Hrs. D*

*Prerequisite: None*

The class focuses on a basic introduction to tactical Spanish with an emphasis on commands and informational phrases for the Emergency and Law Enforcement personnel. This allows them to handle situations, to acquire information about what they see, and to read necessary information to others in Spanish. 3 hours lecture.

### **CJ 193 HAZ-MAT Communications**

*1 Cr. Hr. – 1 Contact Hr. D*

*Prerequisite: None*

A study of the 29 Codes of Federal Regulations (CFR), Section 1910.1200 and the Hazard Communications (Right to Know) Regulation. The course focuses on the impact these regulations have on the occupational workforce. Requirements for the implementation and monitoring of the regulations are examined. Also included are the studies of Federal Regulations cited in Section 301, Title III, Superfund Amendments and Reauthorization Act (SARA) of 1968, Right To Know Act of 1968. 1 lecture hour.

### **CJ 198 Computer Forensics**

*3 Cr. Hrs. – 3 Contact Hrs. D*

*Prerequisites: CIS 120A and CJ 101 or instructor permission.*

This course is designed to introduce the student to the world of computer forensics and cyber crime. The student will gain a basic understanding of the application of computer investigations and analysis techniques in the interest of determining potential legal evidence.

### **CJ 201 Criminal Law**

*3 Cr. Hrs. – 3 Contact Hrs. FWS*

*Prerequisite: None*

The study of the philosophy of legal sanctions and their historical development, from common law to modern American criminal law. Includes the judicial process, classification of crimes, elements of and parties to crimes, general definitions of crimes, and common defenses.

**CJ 202 Police Administration II***3 Cr. Hrs. – 3 Contact Hrs. ⑥**Prerequisite: None*

The study of theories, procedures and methods of operation of public police with emphasis on discretionary powers. This course is a study of the administration of police line operations; including theories, types and methods of patrol, liaison between units, enforcement policy, manpower distribution and analysis of operations. We will discuss the operation of the detective and juvenile divisions and such problems as organized crime, vice, etc. Also includes a review of career opportunities and current trends in law enforcement.

**CJ 204 Criminal Investigation***3 Cr. Hrs. – 3 Contact Hrs. ⑥**Prerequisite: None*

An introduction to criminal investigation procedures including theory of investigation, conduct at crime scene, collecting and preservation of criminal evidence. Methods in the use of police science laboratory, fingerprinting, ballistics, documents, report writing and procedures in the courtroom are covered. Additionally, study in case preparation, interviewing, and basic investigative techniques will be included.

**CJ 205 Interrogation and Case Preparation***3 Cr. Hrs. – 3 Contact Hrs. ⑥**Prerequisite: None*

Comprehensive study of Miranda decision; principles of psychology of questioning, interrogation of suspects, interviewing witnesses and informants, preparation of statements, declarations and confessions, problems in case preparation, and mechanical means of deception.

**CJ 206 Evidence and Criminal Procedure***3 Cr. Hrs. – 3 Contact Hrs. ⑥**Prerequisite: None*

This course deals with rules of evidence of particular import at the operational level in law enforcement and with criminal procedures in important areas such as arrest, force and search and seizure. An introduction to major court holdings, procedural requirements that stem from these holdings, and their effects on daily operations of the criminal justice system.

**CJ 207 Police and Community Relations***3 Cr. Hrs. – 3 Contact Hrs. ⑥**Prerequisite: None*

The primary objective of this course is to acquaint the student with the need for the police to become a part of the community rather than apart from it. An examination of the attitude of people towards the police, as well as the feelings of the police about the community they are sworn to protect will be made. Public relations will be distinguished from community relations. The image of the police will be examined as well as the current methods being used by police agencies to better their relations with the community. A study of the police officer's role in attaining and maintaining public support. Including recognition and understanding of community problems, community action programs, methods of coping with crisis situations, victimology, ethics and minority cultures, environments, crime prevention and police operations.

**CJ 208 Police Science Laboratory I***3 Cr. Hrs. – 3 Contact Hrs. ⑥**Prerequisite: None*

General course in police laboratory techniques: photography, recording the crime scene, collection and preservation of evidence and fingerprints, development of studies in the area of firearms, hair microscopy and chemistry.

**CJ 250 Corrections I**

3 Cr. Hrs. – 3 Contact Hrs. **F S**

*Prerequisite: Meet Ready to Succeed*

**Requirement**

History, development and philosophy of corrections; tribal and biblical antecedents; Western adaptations; developments in the U.S.; current forms and approaches to include probation, parole, medium security concepts; the work of related agencies.

**CJ 251A Legal Issues in Corrections**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite: None*

Exploration of probation, sentencing and philosophies, legal concepts applicable to probation, parole, sentencing and incarceration; objectives of the correctional process and factors influencing correctional decision-making.

**CJ 252A Correctional Institutions/  
Facilities**

3 Cr. Hrs. – 3 Contact Hrs. **W S**

*Prerequisite: Meet Ready to Succeed*

**Requirement**  
This course is designed to provide a more in-depth study of corrections as part of the Criminal Justice System and specific discussions of the evolution of corrections, organization and development of jails in America, alternatives to incarceration, probation, parole and the concept of community-based corrections. Emphasis will be placed on community-based corrections and corrections as it could be in the year 2000. The course will provide the student with a background for coursework in corrections. Particular emphasis will be placed on the Michigan Department of Corrections with some discussions of alternatives to the current correctional philosophy in Michigan.

**CJ 257 Client Relations in Corrections**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite: None*

This course is designed to provide a basic understanding of the meaning and function

of culture, the impact and meaning of discrimination and discussion of the various minorities represented in the State of Michigan. Attitude formation, including such topics as self-perception, human relations and group and peer pressure will be studied. Affirmative action will be highlighted.

**CJ 258A Client Growth and  
Development**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite: None*

This course is designed to examine the growth and development of the correctional client, with particular emphasis on early environment, psychological and sociological factors. Specific problems such as substance abuse, sexual deviations, medical disorders and mental disorders will be discussed. Intervention strategies will be considered.

**CJ 290CI Criminal Justice Cooperative  
Internship**

Variable 1-4 Cr. Hrs. **F W S**

*Prerequisites: The student must have a GPA of 2.5 or higher. The student must have completed a minimum of 6 credit hours in their major field of study and 30 credit hours toward a degree.*

The Cooperative Internship Program is a paid or non-paid field work experience in the industry within the student's major area of study. Variable credit (1-4 cr. hrs. per semester) may be earned dependent upon the number of work hours available from the employing organization. A student may sign up for as many internships as desired, however, the number of credit hours which can be applied towards a degree/certificate depends on the student's course of study and departmental requirements. The maximum number of hours of cooperative internship is 12 credit hours depending upon the program. This course is offered on a pass/no pass basis.

**CJ 298 Instructor Skill Development***3 Cr. Hrs. – 3 Contact Hrs. ①*

*Prerequisite: Student must be a certified law enforcement or corrections officer, currently employed by an agency.*

This course is designed to impart a wide range of teaching skills, concepts, and techniques specific to the law enforcement trainer. Topics covered include adult learning, training needs, research methodology, instructional methodology, and evaluation techniques. 3 lecture hours.

**Dance****DNC 100 Modern Dance I***1 Cr. Hr. – 2 Contact Hrs. ①*

*Prerequisite: Meet Ready to Succeed*

**Requirement**

Basic exercises and technique for the beginning student in modern dance. Movement, rhythmic and compositional forms will be studied.

**DNC 101 Modern Jazz Dance I***1 Cr. Hr. – 2 Contact Hrs. ②*

*Prerequisite: Meet Ready to Succeed*

**Requirement**

Basic dance exercises, technique, and jazz sequences will be taught in this course. Students will gain the ability to recognize appropriate music and various phases of jazz dance history.

**DNC 102 Ballet I***1 Cr. Hr. – 2 Contact Hrs. ①*

*Prerequisite: Meet Ready to Succeed*

**Requirement**

Beginning and intermediate level Ballet dance exercises, techniques, and Ballet dance sequences will be taught in this course.

**DNC 106 Social Dance***1 Cr. Hr. – 2 Contact Hrs. ②①*

*Prerequisite: Meet Ready to Succeed*

**Requirement**

Beginning dance steps and techniques relating to social dance, including ballroom

and contemporary novelty dances. A study of the history, music and rhythms that are related to social dance.

**DNC 138 Dance Choreography and Design***2 Cr. Hr. – Variable Contact Hrs. ①*

*Prerequisite: DNC 100 or instructor permission.*

Application of choreographic knowledge in the design of a dance work to include the principles of dance composition, direction and performance.

**DNC 200 Modern Dance II***1 Cr. Hr. – 2 Contact Hrs. ①*

*Prerequisite: DNC 100 or instructor permission.*

Intermediate work in modern dance composition and technique. History of modern dance is also studied as well as different dance forms used in composing dance.

**DNC 201 Modern Jazz Dance II***1 Cr. Hr. – 2 Contact Hrs. ②*

*Prerequisite: DNC 101 or instructor permission.*

Continuation of beginning and intermediate level jazz dance exercises, techniques and sequences will be taught in this course.

**DNC 206 Social Dance***1 Cr. Hr. – 2 Contact Hrs. ②①*

*Prerequisite: DNC 106 or permission of the instructor.*

Intermediate dance steps, variations, and techniques relating to social dance, including ballroom and contemporary novelty dances. A study of history, music and rhythms that are related to social dance. Field trips to either a dance club or workshop in social dance are offered with this course and an additional fee may be required.

**DNC 210 A-D****Repertory Dance Tour Company**

2 Cr. Hrs. – 4 Contact Hrs. **F****W**

*Prerequisite:* Instructor permission.

Credit will be given for practical work as a dancer for participating in the Repertory Dance Tour Company. This company will tour area schools, organizations, institutions, etc., presenting creative and educational aspects of performing dance. Performing dance positions by audition only prior to class registration.

**DNC 210A** - First Semester

**DNC 210B** - Second Semester

**DNC 210C** - Third Semester

**DNC 210D** - Fourth Semester

**Economics****ECON 101 Principles of Economics**

4 Cr. Hrs. – 4 Contact Hrs. **F****W****S**

*Prerequisite:* MATH 040

A course appropriate for economics, social science, business administration, and engineering majors, and any other students interested in how their economic system works. This is a course in macroeconomics, which attempts to show how a market system determines levels of employment and unemployment, and the factors affecting inflation and economic growth. Various theories of the macro economy are examined. Government attempts at economic stabilization, including the role of the Federal Reserve System are discussed.

**ECON 102 Principles of Economics**

4 Cr. Hrs. – 4 Contact Hrs. **F****W**

*Prerequisite:* MATH 040.

A course in microeconomics, especially suited for social science, business and engineering majors. Various types of competition and how these affect decision making by the firm are discussed. Price and output determination by the firm are also examined. Other topics include the pricing of resources, the role of trade unions, international trade and finance, income distribution and poverty, and the basic

characteristics of the economic systems of selected countries other than the United States.

**Education****ED 101A Introduction to Education**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite:* Meet Ready to Succeed Requirement

A comprehensive survey of preschool, elementary and secondary teaching, stressing objectives and philosophy, student guidance, curriculum study, and methods of teaching. Opportunities to explore professional education as a career, directed observation and professional readings are included. Students are introduced to Muskegon Community College's library; facilities and research techniques are discussed by library staff. Twenty-five (25) hours of fieldwork are required, allowing for practical experience in the field.

**ED 106 Introduction to Outdoor Education**

2 Cr. Hrs. – 2 Contact Hrs. **D**

*Prerequisite:* None

This course presents information, techniques and activities for exploring the positive relationships between the individual and the natural environment of the outdoor world. It provides students hands-on learning experiences and teaches learning functions of community living and cooperation away from home. Emphasis is placed upon living and learning with children in an outdoor educational environment. Twenty-five hours of on-site field work are required. (May be taken for CDA renewal.)

**ED 107 Child Care: Operating a Successful Business***3 Cr. Hrs. – 3 Contact Hrs.* **F***Prerequisite: None*

Existing licensed centers and child care providers will develop an understanding of administrative and business responsibilities, record keeping, taxes, curriculum development, personnel, parent involvement and the developmental growth needs of child care setting. Twenty-five hours of field work are required. (May be used for CDA renewal.)

**ED 109 The Parent-Child Connection***3 Cr. Hrs. – 3 Contact Hrs.* **F****W***Prerequisite: None*

This course will develop an understanding of the parenting process and present content and research basic to the fundamental concepts, issues and skills in child rearing. Twenty-five hours of field work are required. (May be used for CDA renewal.)

**ED 111 Introduction to the Education of Young Children***3 Cr. Hrs. – 3 Contact Hrs.* **F****W***Prerequisite: An interview with the program coordinator.*

The course is designed to introduce students to the field of early childhood education, and to the certificate programs offered by the Education Department. The education of young children will be examined from a broad perspective. Various philosophies, program models and current trends in early childhood education will be emphasized. Criteria for “safe”, “healthy”, exemplary early childhood programs, developmentally appropriate practices, and learning environments – including multi-cultural and special needs – will be examined. Training prescriptions will be developed for all students. Field trips to day care centers or preschools, and twenty-five hours of field work are required.

**ED 111 is a prerequisite for all students seeking the CDA Certificate.**

**ED 118 Creative Curriculum for Children***3 Cr. Hrs. – 3 Contact Hrs.* **F****\****Prerequisite: None*

Program development will be offered in the areas of science, social studies, art, music, outdoor environment, language arts, math, multi-cultural learning, and reading. Instructional techniques, curriculum materials, guidance, school/family relationships, and community resources will be investigated. Twenty-five hours of field work are required. (May be used for CDA renewal.) *\*This course is offered only in even numbered years.*

**ED 120A Early Childhood Education***3 Cr. Hrs. – 4 Contact Hrs.* **F***Prerequisite: Meet Ready to Succeed Requirement*

An introduction to current practices in early childhood education as related to the total growth and development of young children. Professional staff responsibility, program development, scheduling, evaluation and instructional techniques will be investigated. Curriculum materials, guidance, school-family relationships, community resources and significant child development research will be explored. Twenty-five hours of field work are required.

**ED 200 Literacy Birth to Five***3 Cr. Hrs. – 3 Contact Hrs.* **W***Prerequisite: None*

Emphasis will be placed on developing literacy in the young child age 0-5 through appropriate practices, processes, and contexts. Theory and Practice will be linked for success; and Evaluating and Directing Learning will occur. Twenty-five hours of field work are required.

**ED 202 Teaching of Reading in the Elementary School***3 Cr. Hrs. – 3 Contact Hrs.* **W***Prerequisite: None*

A study of current philosophies, instructional strategies and materials in

the teaching of reading from preschool through middle school grades. Lectures, discussions, readings, research, workshops, and classroom observation/participation will be included. Particular interests in reading at specific age/grade levels may be pursued in depth. Twenty-five hours of field work are required.

### **ED 207 Principles of Elementary Education**

*3 Cr. Hrs. – 3 Contact Hrs. ①*

*Prerequisite: None*

Appropriate for the elementary school curriculum, this course will include educational philosophies, learning theories, teaching strategies, teaching and support staff responsibilities, parent/community/volunteer involvement, curriculum modeling, trends and innovations, behavior management, scheduling and evaluation, multi-cultural learning opportunities, developmental and special learning and growth needs of children with different learning abilities, special topics, and current research. Particular interests at specific age/grade levels may be pursued in depth. Twenty-five hours of field work are required.

### **ED 210 Child Care and Guidance**

*3 Cr. Hrs. – 3 Contact Hrs. ①*

*Prerequisite: Departmental approval.*

This is the culminating course in the early childhood education sequence. Instruction is provided in competency and guidance techniques for the young child. Students will write, have proofed and finalize the six “competency goals.” These are required for the credential, in preparation for the final evaluation. Their autobiography and an individualized training prescription will be written by the field advisor following the on-site observation. Counseling, evaluations and recommendations for the completion of the program are provided. A twenty-five hour practicum is required.

### **ED 211 Behavior Management**

*3 Cr. Hrs. – 3 Contact Hrs. ①②*

*Prerequisite: None*

A comprehensive review of the theory and practice of behavior management in applied settings. Emphasis will be placed on the development of entry-level competency in behavior analysis and treatment. This will include, but not be limited to, an introduction to the principles of behavior modification as well as the theories and techniques associated with the psychodynamic, biophysical, and environmental perspectives as they relate to the broad field of behavior management. Eighty percent of the classroom content and discussion will be identifying and targeting strategies applicable to the 0-8 year old age group. Students learn three levels of classroom supports: Universal, Targeted and Intensive. Classroom lecture is supported with evidence-based practice. Twenty-five hours of field work are required. (May be used for CDA renewal.)

### **ED 214 Infants and Toddlers**

*3 Cr. Hrs. – 3 Contact Hrs. ①②*

*Prerequisite: None*

The development of the newborn to 36-month-old child is examined in this course. Current research practices and publications of leading child specialists are reviewed as they relate to the cognitive, language, social, emotional and sensorimotor growth of the infant and toddler. Twenty-five hours of field work are required.

### **ED 216 Educating the Exceptional Child and Young Adult**

*3 Cr. Hrs. – 3 Contact Hrs. ①*

*Prerequisite: None*

A comprehensive survey of professional research, practice, trends and laws in the education of people with special needs. Areas of impairment studied include mental, hearing, visual, physical, emotional, and learning disabled. The exceptionality of gifted and talented are examined as well. Twenty-five hours of field work are required. (May be used for CDA renewal.)

**ED 219 Science in the Elementary Classroom***3 Cr. Hrs. – 3 Contact Hrs. ①**Prerequisite: None*

The focus of this course is on learning science concepts and methods relating to the physical environment, and learning to teach the concepts to children. Basic life, earth and physical science content will be taught, as well as instructional methods for application in the elementary school classroom. Students will gain practical knowledge through field work and on-site investigations. The course is designed for prospective elementary school classroom teachers, and is a part of the elementary school curriculum in many colleges. Twenty-five hours of field work are required.

**ED 220A Early Childhood Assessment***2 Cr. Hrs. – 2 Contact Hrs. ①②**Prerequisite: None*

An introduction to techniques and strategies assessing the behavior, achievement and performance of young children. The importance and value of observations of children, types and varieties of assessment, role of assessment in multi-cultural settings, importance of portfolio development and observation systems will be discussed. Twenty-five hours of field work are required.

**ED 221 Teaching Students with Learning and Behavior Problems***3 Cr. Hrs. – 3 Contact Hrs. ①**Prerequisite: ED 211.*

This course is designed to enable students to effectively teach children with learning disabilities and emotional or behavioral impairments. The emphasis is on teaching skills and content areas, methods and procedures, interventions and strategies helpful in educating children at risk. It is highly desirable and recommended for any student who plans to work with special needs children, or in inclusive classrooms. Twenty-five hours of field work are required.

**ED 222 Educating the Deaf***3 Cr. Hrs. – 3 Contact Hrs. ①**Prerequisite: None*

This course deals with the educational, social and psychological implications of deafness. Historical perspectives and contemporary practices in elementary, secondary and post-secondary deaf education will be explored. Causal factors relative to deafness will be investigated along with current developments in treatment. An additional focus of the course will be interpersonal relationships of deaf members. “No-voice” class assignments and examinations will be designed to develop basic competency in receptive (seeing and understanding) and expressive (signing) use of American Sign Language (ASL). The course could be used as an elective in the A.S.A. degree or in any of the certificate programs. Twenty-five hours of field work with hearing impaired are required. (May be used for CDA renewal.)

**ED 223 Child Care Center Administration***3 Cr. Hrs. – 3 Contact Hrs. ②**Prerequisite: None*

This course is designed for those who wish to begin a child care business as well as those already engaged in working as a child care center director. It deals with the nature of childcare, the challenges and procedures of building a new center, classroom design, and analysis of the problems faced by a start up business. Emphasis will be placed on solving practical problems by developing a personnel notebook, parent/guardian notebook, center notebook, a budget/business plan, designing room space and being prepared to order age appropriate equipment and materials. Twenty-five hours of field work are required.

**ED 225 Child Development***3 Cr. Hrs. – 3 Contact Hrs. ①②③**Prerequisite: None*

Basic issues in the development of infants and children, and methods of studying

children will be discussed. In-depth exploration of the physical, behavioral, psychosocial and cognitive development of children will be viewed from a multi-cultural perspective. This course may be used in addition to, or in place of ED250 (Human Growth and Learning) to fill the requirements of all Education Department certificate and degree programs. It may also be used to meet the academic requirements of C.D.A. certificate renewal. Twenty-five hours of field work are required.

### **ED 226 Interdisciplinary Approaches to Early Interventions**

3 Cr. Hrs. – 3 Contact Hrs. **W**\*

*Prerequisite: Meet Ready to Succeed Requirement*

This course is a comprehensive review of the needs, services and issues for infants and toddlers ages 0-3 at risk and with special needs. The students will begin to understand/develop a team base and collaborative approaches when working with and providing services to children with special needs. In addition, the role of parents and caregivers will also be emphasized. Twenty-five hours of field work are required, including lab experiences at selected sites.

### **ED 227 Educational and Assistive Technology**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisites: Meet Ready to Succeed Requirement and have completed ED 101A and CIS 100 or higher.*

This course will explore the use of technology in teaching as a managerial and instructional tool. There will be a focus of communicative technology for special needs students, especially those that fall on the autism spectrum. Evaluation of various software and technology applications will be provided on an experiential basis. This course is designed to meet the requirements of pre-service technology adopted by the state of Michigan for all entry-level teachers. A minimum of twenty-five (25) hours of fieldwork will be required for all

students in an autistic classroom or a special needs classroom that includes autistic diagnosed children and/or adults.

### **ED 228 Creative Curriculum, Infants, Toddlers and Twos**

3 Cr. Hrs. – 3 Contact Hrs. **W**\*

*Prerequisite: Meet Ready to Succeed Requirement*

This class will provide participants with an overview and thorough understanding of Infant and Toddler Curriculum and its utilization for Infants, Toddlers and Twos. The class will include how to best use a curriculum tool, as well as how to use an assessment piece for curriculum as a means of collecting useful outcomes information that will benefit programs with future planning. A site visit is required if the student has not had one for the ED 120A class. A minimum of twenty-five (25) hours of fieldwork will be required for all students in the area of Infants & Toddlers. \*This course offered only in odd numbered years.

### **ED 229 Fundamental Concepts of Autism Spectrum**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisites: Meet Ready to Succeed Requirement and have completed ED 101A and CIS 100 or higher.*

This course will explore autism from birth through adulthood in four distinctive age groups. It is designed to assist caregivers, family, educators, health care professionals and others in recognizing autistic characteristics and understanding the effects of implementation of early intervention strategies and programs. A minimum of 25 hours of fieldwork will be required for all students in an autistic classroom or special needs classroom that includes ASD diagnosed children and/or adults.

**ED 230 Children's Literature**3 Cr. Hrs. – 3 Contact Hrs. **F** **W***Prerequisite: None*

This course will investigate literature for children, and appropriate learning activities suitable for the preschool, elementary and middle school student. Relationships are explored between child development, school curricula, instructional strategies, language arts, multi-cultural activities, and literature. Particular interests in the practical application of literature with specific age/grade levels may be pursued in depth. Twenty-five hours of field work are required.

**ED 231 Introduction to Autism Spectrum Disorders (ASD) Therapies I**3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisites: Meet Ready to Succeed Requirement and have completed ED 101A and CIS 100 or higher.*

This is the first course in a series of two that transmit information on how teachers and others can support and teach students on the ASD (autism spectrum disorder) spectrum. Participants will also learn how we can make life for all persons on the autism spectrum more rich and rewarding. Students will have the opportunity to learn up-to-date, comprehensible, and usable information on autism in order to support those on the spectrum. Students must pass a background check and complete 25 hours of fieldwork.

**ED 232 Advanced Autism Spectrum Disorders (ASD) Therapies II**3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: Meet Ready to Succeed Requirement and have completed ED 101A and CIS 100 or higher.*

This is the second course in a series of two that transmit information on how teachers and others can support and teach students on the ASD (autism spectrum disorder) spectrum. Participants will also learn how we can make life for all persons on the autism spectrum more rich and rewarding.

Students will have the opportunity to learn up-to-date, comprehensible, and usable information on autism in order to support those on the spectrum. Students must pass a background check and complete 25 hrs. of fieldwork.

**ED 250 Human Growth and Learning**3 Cr. Hrs. – 3 Contact Hrs. **F** **W** **S***Prerequisite: None*

A comprehensive study of the human life cycle will be explored. This course will include all stages of growth and development—from birth to death, language acquisition and information processing, learning theories and basic theoretical models. Domains of cognitive, affective, physical and social development will be explored. Current research in the field will be investigated. Students may pursue in-depth interests in human growth/learning at specific age/grade/ability levels. Twenty-five hours of field work are required. (May be used for CDA renewal.)

**ED 251 Health Needs of the Young Child**3 Cr. Hrs. – 3 Contact Hrs. **W***Prerequisite: None*

The emphasis in this course is on identification, treatment, and prevention of common childhood illnesses, and the promotion of good health, safety and nutrition for the young child. Physical and dental health will be emphasized, along with signs and symptoms of illness within varying age groups. Treatment options and procedures for non-professionals will be discussed. Prevention will be focused on how to promote optimum health, how to prevent injuries, and nutritional requirements of young children. Twenty-five hours of field work are required. (May be used for CDA renewal.)

**ED 252A Child Development Practicum**3 Cr. Hrs. – 6 Contact Hrs. **W***Prerequisite/Co-requisite: ED 210.*

On-the-job experience under the supervision of Education Department with cooperating childcare sites. Written materials and performance appraisal required. This course is graded. Early Childhood Education students only.

**ED 272 Education Practicum**3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisites: ED 101A, ED 109, or ED 211; and ED 225 or ED 250; and 2.5 GPA; and Education Coordinator's Approval.*

This course will provide a 240 hour practical on the job experience under guidance of a supervising teacher and college faculty. Placements will include a K-12 setting and give a prospective in preparing for various education environments and student needs.

**Education Related**

**(These courses may be used for CDA renewal)**

**ART 211 Art Education Workshop**3 Cr. Hrs. – 6 Contact Hrs. **D**

*Prerequisite: Meet Ready to Succeed Requirement*

Experience through studio work with art materials and methods appropriate to grade school use.

**MATH 105 Mathematics for Elementary Teachers**4 Cr. Hrs. – 4 Contact Hrs. **FW**

*Prerequisite: Assignment by Math Placement Test, or must have earned a grade of "C" or better in Math 050.*

Not a "methods" course. A general course for students majoring in elementary education. The basic ideas behind our number system and geometric concepts are discussed. Topics include: problem solving, sets, system of numeration, the real number system, geometry and metric measure.

**MU 192 Music for the Classroom Teacher**4 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite/Co-requisite: MU 190C, or instructor permission.*

This course is required for future elementary classroom teachers. No previous musical training is necessary. The course provides a background in the fundamental elements of music through singing, playing classroom rhythm and melody instruments, recorder and autoharp. Includes introduction to methods of teaching music, observation and participation in area schools.

**PEP 201 Elementary Physical Education for the Classroom Teacher**2 Cr. Hrs. – 2 Contact Hrs. **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

A theory and activity course designed to acquaint the prospective classroom teacher with planning and teaching his/her own physical education program. Concepts of program planning plus practical experience in teaching varied levels of physical education activities are included. This course is required for physical education majors and suggested for elementary education majors.

**PSYC 202 Educational Psychology**3 Cr. Hrs. – 3 Contact Hrs. **FW**

*Prerequisite: A grade of "C" or better in PSYC 201 or permission of the instructor.*

This course explores interrelationships between the fields of psychology and education. Research data, learning theories, cultural pluralism and special topics reflective of current educational change are examined. Particular interests in educational psychology at specific age/grade levels may be pursued in depth. Forty-five (45) hours of classroom experience in the public/private schools will be required. Exceptions to be approved by the instructor.

## Electricity

### ELTC 101 L&L Electricity-Basic

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: None*

This course is not a requirement of the Electronics Technology Program. A theory and activity course designed to introduce the basic relationships between voltage, current, and resistance. Topics include: soldering, DC circuits, volt-ohm-amp meter operation, alternating current, relays, ladder diagrams, residential wiring, and safety. Practical laboratory experiments reinforcing the above topics are provided.

### ELTC 103 Residential Wiring

3 Cr. Hrs. – 4 Contact Hrs. **F**

*Prerequisite: ELTC 101 L&L.*

A study of the layout, installation and testing of electrical components and circuits found in residential wiring. Extensive hands-on assignments are combined with the application of the current National Electrical Code governing residential wiring.

### ELTC 150 Industrial Electricity

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: ELTC 101 L&L or instructor permission*

This course is intended for electrical maintenance personnel with some previous electrical experience or coursework. It will review basic DC and AC electrical theory and components, safety, use of test instruments and electrical symbols. Other topics include: ladder diagrams, control circuits, starters, contactors, relays and overload devices. “Troubleshooting” will be emphasized and there will be an introduction to the use of programmable controllers for machine control.

### ELTC 152 National Electrical Code

3 Cr. Hrs. – 3 Contact Hrs. **S**

*Prerequisite: None*

This course covers the National Electrical Code as currently adopted by the State of Michigan. Designed for the apprentice

electrician, this course is also approved by the State of Michigan for the required upgrade for Journeymen and Master Electricians.

### ELTC 160 L&L Programmable Controllers

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: ELTC 150 or instructor permission.*

This course introduces the concept of machine control through programmable controllers. Program design, controller operation, wiring techniques, programming techniques, and applications are examined; related lab exercises will be conducted with Allen-Bradley SLC 500 controllers and RSLogix 500 Software.

### ELTC 203 Advanced Programmable Controllers

3 Cr. Hrs. – 4 Contact Hrs. **S**

*Prerequisite: ELTC 160 L&L or instructor permission.*

This course is a continuation of ELTC 160. Applications and programming of advanced instructions from the Allen-Bradley SLC 500/MicroLogix 1000 instruction set are covered. Topics include data handling, logic functions, bit shift/sequencer functions, math operations, analog I/O, subroutine files and interrupts.

## Electronics

### ELTR 101 Electronics-Basic

4 Cr. Hrs. – 6 Contact Hrs. **F**

*Prerequisite: None*

*Co-requisite: ELTR 111*

Topics include: series and parallel circuits, batteries, electromagnetism, conductors, insulators, volt-ohm-amp-meters, oscilloscopes, capacitance, inductance, resonance, impedance matching, and transformers. Laboratory experiments reinforcing the above topics are provided. This course covers: familiarity with common hand tools, safety practices, soldering, use and care of common laboratory equipment.

**ELTR 102A Active Devices and Circuit Analysis***4 Cr. Hrs. – 6 Contact Hrs. W**Prerequisites: ELTR 101 and ELTR 111.*

This is a course in solid state devices and circuits. It includes performance measurements, device testing, multi-stage amplifiers, coupling techniques, amplifier design, and feedback principles. Some devices covered are BJT's, JFET's, MOSFET's, and diodes. Laboratory experiments will be required.

**ELTR 109 Personal Computer Maintenance***2 Cr. Hrs. – 2 Contact Hrs. FW**Prerequisite: CIS 110, CIS 120A or instructor permission.*

This course provides students with skills needed in the upgrading and maintenance of personal computers. Students will learn how to install integrated circuits for memory into a computer's motherboard, upgrade video displays and drivers, upgrade disk controller boards, replace disk drive, install a multimedia system, and perform diagnostic tests on equipment. Common system problems will also be covered as part of hands-on troubleshooting using Intel-based computers.

**ELTR 111 Electronic Mathematics***5 Cr. Hrs. – 5 Contact Hrs. F**Prerequisite: TMAT 101A or MATH 040**Co-requisite: ELTR 101*

One year high school algebra recommended. This course gives the beginning electronics student the mathematical skills necessary to solve electronic problems. Topics include: basic algebra, series and parallel circuits, direct and alternating current solutions, Kirchoff's loop equations, Thevinin's Theorem, right triangle trigonometry, vector algebra, logarithmic and exponential equation solution.

**ELTR 112 Digital Electronics I***3 Cr. Hrs. – 4 Contact Hrs. W**Prerequisite: None*

Digital Electronics I is the first course in a three-semester sequence of digital courses. Content includes number systems, codes, logic gates, Boolean algebra and combinational logic circuits. Relevant laboratory experiments will be required of students each week.

**ELTR 201A Communications (Principles & Servicing)***4 Cr. Hrs. – 6 Contact Hrs. F**Prerequisite: ELTR 102A*

A study of the electronic devices, theory, and circuits used in modern communication systems. Topics to be covered include: modulation and transmission principles, antenna theory, demodulation system, troubleshooting techniques, and servicing procedures. A.M., F.M. stereo, and color television receivers will be used for laboratory experience.

**ELTR 202A Industrial Electronic Systems***4 Cr. Hrs. – 6 Contact Hrs. W**Prerequisite: ELTR 102A.*

The advanced study of electronic circuits and their application to the control of industrial and commercial equipment and processes. The design, construction and analysis of operational circuits includes power supplies, SCRs, UJTs, diacs, triacs, phototransistors, relays, programmable controllers, timing circuits and motors with their associated control circuits. Proper procedures are stressed in laboratory assignments which are designed to provide practical experiences for the student.

**ELTR 205 Electronic Circuit Design***3 Cr. Hrs. – 4 Contact Hrs. ❸**Prerequisite: ELTR 102A.*

This course deals with the application of linear integrated circuits. The student will be given a series of design specifications for a number of circuits which he/she will convert into practical working models. Circuits found in communications electronics, industrial electronics, and instrumentation electronics will be used as a basis for the design problems. Some of the topics will be inverting and non-inverting amps, comparators, op amp filters, timers, and voltage regulators.

**ELTR 209 Personal Computer Maintenance II (A+ Certification)***3 Cr. Hrs. – 5 Contact Hrs. ❹❺**Prerequisite: ELTR 109, CIS 109, or instructor permission.*

This course is designed to take the successful PC Maintenance student to the next, more in-depth level of PC Maintenance and Repair. The Web presentations, text assignments, demonstrations, and related CD-ROM teaching materials will help prepare the student to be competent to pass the A+ Certification written exam. The related labs will provide the needed hands-on experience to develop system understanding and competent analysis and repair procedures. Lab experience will include the building of a complete computer system, with troubleshooting and analysis of the system. It is recommended that CIS 143 be taken to provide more network background before taking the A+ exam.

**ELTR 210 Introduction to Microprocessors***3 Cr. Hrs. – 4 Contact Hrs. ❸**Prerequisite: ELTR 112.*

This course deals with basic concepts common to all microprocessors such as bus structure, memory, C.P.U. functions and timing. The student will construct and troubleshoot input and output ports and device select circuits. A number of

assignments will be given which require the student to program a microcomputer trainer in assembler language.

**ELTR 211A Microcomputer Interfacing***3 Cr. Hrs. – 5 Contact Hrs. ❷**Prerequisites: ELTR 205 and ELTR 210 or instructor permission.*

The third in a series of digital courses in which principles and techniques of interfacing a microprocessor to special peripheral hardware are examined. The student will design and construct circuits to interface data converters, stepper motors, and AC/DC loads to a variety of I/O port configurations.

**ELTR 212 Medical Instrumentation and Measurement***4 Cr. Hrs. – 6 Contact Hrs. ❷**Prerequisites: AH 101 and ELTR 205.*

This course introduces the student to operating and servicing basic medical instrumentation such as EEG, ECG, defibrillators, safety analyzers, etc. Basic physiological signals and terminology are covered. Typical medical equipment circuits are constructed and tested. Electrical safety is emphasized.

- ❷ This course is only offered when Demand is great enough.
- ❸ This course is typically offered during the Fall semester.
- ❷ This course is typically offered during the Winter semester.
- ❸ This course is typically offered during the Summer semester.

## Engineering

**MCC offers the pre-engineering courses required by all ABET accredited engineering schools in Michigan. A BSE in Manufacturing Engineering is available from Western Michigan University on the MCC campus. Before enrolling in these courses, you must demonstrate that you are ready to succeed.**

### **ENGR 105 Introduction to Engineering**

*4 Cr. Hrs. – 4 Contact Hrs. **F***

*Prerequisite: MATH 050 or its equivalent as determined by the Math Placement Test.*

An introduction to the engineering profession and to its various disciplines; to the professional skills required of engineers; including oral and written communications, ethics of the profession, and team building and teamwork; and to the design process. Video presentations of professional activities and studies will be shown.

### **ENGR 202 Statics**

*3 Cr. Hrs. – 3 Contact Hrs. **F***

*Prerequisites: Must have earned grades of “C” or better in both PHYS 203 L&L and MATH 162.*

A study of force systems in two and three dimensions. Composition and resolution

of forces and force systems, principles of equilibrium applied to various bodies, simple structures, friction, centroids, moments of inertia. Vector algebra is used where appropriate. Graphing calculators will be utilized.

### **ENGR 204 Engineering Dynamics**

*3 Cr. Hrs. – 3 Contact Hrs. **W***

*Prerequisites: Must have earned a grade of “C” or better in ENGR 202.*

Vector description of force, position, velocity, and acceleration in fixed and moving reference frames. Kinematics and kinetics of particles, assemblies of particles and rigid bodies. Includes translation, plane motion, rotation, impulse-momentum and work-energy methods. Introduction to vibrations and time response. Graphing calculators will be utilized.



## English

### IT IS IMPORTANT FOR STUDENTS TO TAKE ENGLISH CLASSES EARLY!

Knowledge of the English language and skill in using it are required in many aspects of life, including one's employment and, consequently, many MCC courses, programs, and degrees require competency in English composition. If you are contemplating earning an ASA degree or are planning to earn a bachelor's degree at a four-year school, you are strongly advised to follow the guidelines below. If you are planning to enter another program or are unsure of your plans, see a counselor for specific requirements that may apply to you.

### STUDENTS MUST TEST BEFORE ENROLLING IN ENGLISH CLASSES.

Before enrolling in any college-level English courses, you must meet the Ready to Succeed Requirement (See below). Also, you must either submit an ACT Reading and Writing score based on the chart below, take the COMPASS Placement Test, or submit a level 1 or 2 on both reading and writing on the MME tests. Call the MCC Testing Center at (231) 777-0394 or go to Room 134 to schedule an appointment if you do not meet the ACT requirements. Placement tests are required to facilitate placement in classes and/or programs. Such tests are not intended to prevent participation but to help students make appropriate choices.

#### Ready to Succeed

Before enrolling in many courses, you must meet the **READY TO SUCCEED** (*Reading Competency*) requirement by test scores or course completion.

COMPASS	Reading score of 76 or higher
ACT	Reading score of 19 or higher
MME	1 or 2 on both Reading and Writing
College Credits	15 College credits (100 level or higher) with cumulative 2.0 or higher GPA
Reading Course	Earning a "C" grade or better in Reading 040 or Reading 050

### Course Placement Using COMPASS, ACT and MME

READING			
COMPASS Reading	ACT Reading	MME	Placement
76-100	19 or higher	Level 1 or 2 on Reading & Writing	No Reading course required. "Ready to Succeed" requirement met.
56-75	18	****	RDG 050
11-55	12-17	****	RDG 040
0-10	****	****	See a Counselor

\*\*\*\**COMPASS Placement Testing Required*

WRITING			
COMPASS Writing	ACT Writing	MME	Placement
80-100	19 or higher <i>(You must still meet Reading Requirement)</i>	Level 1 or 2 on Reading & Writing	ENG 101 or BCOM 101
69-79	18 <i>(You must still meet Reading Requirement)</i>	****	ENG 101 or BCOM 101 and ENG 114
31-68	****	****	ENG 091
11-30	****	****	ENG 085 or ENG 089
0-10	****	****	See a Counselor

\*\*\*\**COMPASS Placement Testing Required*

## GUIDELINES

If you are required to take English 091, take it your first semester. Take English 101 in your second semester and English 102 in your third semester.

If you are not required to take English 091, take English 101 within your first 15 hours of course work, even if you are required to take English 114 concurrently, and English 102 within your first 30 hours of course work.

**All English courses use computers for writing, so knowledge of some word processing program is helpful.**

### ENG 085 Essential Writing Skills

2 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

This course will prepare the student for ENG 091 or ENG 101. Essential Writing Skills is an equivalent to ENG 089, but is offered in a classroom setting. The student will work on writing skills, learn the writing process, practice group editing, and study basic sentence structure.

### ENG 089 Refresher English

2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisite: None*

Refresher English offers an individualized introduction to basic writing through process oriented instruction. The self-paced course covers basic skills, including sentence structure, writing journals, paragraphs, and essays.

### ENG 091 Introduction to English Composition

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: A score between 31-68 on COMPASS writing, or successful completion of ENG 085 or ENG 089 with a grade of "C" or better.*

A course in which students concentrate on mastering basic principles of English grammar, sentence structure, punctuation, usage, and mechanics. Emphasis is placed on writing clear sentences, effectively developed paragraphs, and short essays. The course is intended to prepare students for English 101 as well as to assist them in other college courses in which writing is required. This course includes a one-hour laboratory to be used for group instruction or individual instruction as deemed necessary by the instructor, and assumes entry level computer skills of each student.

**ENG 101 English Composition**

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: A score of 69 or better on COMPASS writing, an ACT English score of 19 or higher, or a level 1 or level 2 on both reading and writing on the MME tests*

A course in which students will develop the abilities to read critically, to think logically, to discuss intelligently, and primarily to write effectively using exposition, argumentation, and research. A grade of “C” or better is required to enter into English 102.

**ENG 102 English Composition**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: A grade of “C” or better in ENG 101.*

A course in which the student will develop the ability to interpret and criticize a variety of literary forms, especially fiction, drama and poetry. Students will discuss these works and write critical essays.

**ENG 114 Refresher English**

1 Cr. Hr. – 1 Contact Hr. **FWS**

*Prerequisite: COMPASS writing score of 69-79, or ACT writing score of 18*

This writing course is designed to improve basic skills so that students can successfully complete college level writing assignments. Emphasis is placed on sentence writing, punctuation, paragraph development, and research skills. This course is individualized and self-paced. It should be taken before or at the same time as English 101.

**ENG 130/WS 101 Introduction to Women’s Studies**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisites: English 091 and Meet Ready to Succeed Requirement*

This is a fundamentals course in which students study women’s diverse experiences, perspectives, and contributions by examining cultural beliefs and stereotyped images of women and their roles in different times and places. Interdisciplinary in its range of course content, ENG 130/WS101

explores representations of women and their efforts to define new identities through work, creative activity, and feminism, both historically and at present. The course covers socialization, sexuality, the history of the women’s liberation movement, and different perspectives in feminism. Course goals: raise awareness, make connections, read, think, and write critically, and apply course knowledge and issues to personal experiences.

**ENG 199A Personalized Writing**

1 Cr. Hr. – 1 Contact Hr. **FWS**

*Prerequisite: None*

Personalized Writing is an individualized course to expand writing skills. Students pursue a self-paced study emphasizing specific skills needed at work, in school, or in everyday life. Course content depends on individual needs. Students meet once a week with an instructor for direction, instruction, and encouragement.

**ENG 199B Personalized Writing**

2 Cr. Hrs – 2 Contact Hrs. **FWS**

*Prerequisite: None*

Similar to ENG 199A.

**ENG 200 Literature of Western Civilization**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisites: ENG 101 and ENG 102.*

An intensive study of selected major literary works of Western Civilization from 2600 B.C. through the Renaissance.

**ENG 201 Literature of Western Civilization**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisites: ENG 101 and ENG 102.*

A continuation of English 200. Study of world literary classics from the Renaissance until modern times.

**ENG 204 Introduction to Fiction***3 Cr. Hrs. – 3 Contact Hrs. W**Prerequisites: ENG 101 and ENG 102 or concurrent enrollment in ENG 102 and instructor permission.*

An analytical study of novels, novellas and short stories ranging from Robinson Crusoe to modern African short stories with the purpose of developing and enlarging an understanding of and appreciation for cross-cultural literary forms and fiction itself.

**ENG 205 Introduction to Poetry***3 Cr. Hrs. – 3 Contact Hrs. D**Prerequisites: ENG 101 and ENG 102.*

An introduction to the study of poetry with the purpose of developing critical values and the ability to read with understanding and appreciation. Students will each select a poem by a leading English or American poet as the basis of a major critical study.

**ENG 206 Introduction to Drama***3 Cr. Hrs. – 3 Contact Hrs. D**Prerequisites: ENG 101 and ENG 102.*

A study of representative dramas and theaters from Greek to modern times.

**ENG 207 Diverse Voices***3 Cr. Hrs. – 3 Contact Hrs. W**Prerequisites: ENG 101 and ENG 102 or concurrent enrollment in ENG 102 and instructor permission.*

This course focuses on literature of multicultural origins: ethnic voices from America, representative fiction from Japan, India, Russia, Africa, South and Central America, Western Europe and developing national communities. This course analyzes the literature from these varied cultures by exploring ethnic, aesthetic, and thematic cultural inspirations.

**ENG 208/COM 203 Introduction to Cinema***3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisites: ENG 101 and ENG 102.*

An introduction to the art of the film; the course will include representative foreign and domestic films, at least one documentary film, and several (2-4) experimental and/or underground films. In addition to thematic study of films, the course explores the various elements of movie-making (i.e. script, light, sound, color, acting, directing, editing).

**ENG 210 The Nature of Language***3 Cr. Hrs. – 3 Contact Hrs. S**Prerequisites: ENG 101 and ENG 102*

Introduction to the English language through a study of its history and characteristics as described by structural and transformational grammarians and cultural mavens.

**ENG 211 World Mythology***3 Cr. Hrs. – 3 Contact Hrs. W**Prerequisites: ENG 101 and ENG 102 or instructor permission.*

Overview of representative Greco-Roman, Middle Eastern, Norse, English, Pacific Island, Indian, Chinese, Japanese, African, South American, Native American mythology and epics. Surveyed for understanding of creation, Fertility and Hero myths and their meaning in our cultural and personal attitudes and ideas.

**ENG 213 Literature of Shakespeare***3 Cr. Hrs. – 3 Contact Hrs. FW**Prerequisites: ENG 101 and ENG 102 or instructor permission.*

Overview of Western Civilization's most respected and famous author, William Shakespeare. The course explores several plays and poems in depth as well as the culture and traditions of Shakespeare's England. In addition, students will discover Shakespeare's influence on our contemporary world. Field trips are anticipated (optional).

**ENG 218 Popular Literary Genres:  
Horror, Fantasy and Science Fiction**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisites: ENG 101 and ENG 102 or concurrent enrollment in ENG 102 and instructor permission.*

This course focuses on three genres of literature possessing rich histories in the development of folklore, literary forms, and literary criticism, as well as abundant connections with the development of popular culture in the twentieth and twenty first centuries. The class will read five novels spanning these genres, as well as selected short works of fiction and commentary by authors and critics active in these fields. In addition, films with connections to the literature will be viewed to better understand the themes expressed in the literature and their popular reception in a visual medium.

**ENG 221 Advanced Writing**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisites: ENG 101 and ENG 102 or instructor permission.*

A writing “workshop” course designed to introduce students to the practice of expository prose. Students will read and write in a variety of essay forms – from personal narratives to critical reviews – as well as critique each other’s work.

**ENG 222 Creative Writing**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisites: ENG 101 and ENG 102 or instructor permission.*

Written recommendation of the freshman composition instructor may be required. The study of writing techniques as well as actual writing and critical discussion of various types of short fiction are stressed. Students are encouraged to take a literature course prior to enrolling in this writing-intensive course.

**ENG 223 Poetry Writing Seminar**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisites: ENG 101 and ENG 102 or instructor permission.*

An informal forum in which students experiment writing their own poetry. It includes the study of open forms and patterned forms. Students discuss each other’s work as well as the works of modern and contemporary poets.

**ENG 225 Major American Writers/  
American Literature I**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisites: ENG 101 and ENG 102 or concurrent enrollment in ENG 102 and instructor permission.*

This course is a study of representative literature of the United States from the earliest settlement to 1865. Serving both the historical and critical perspectives, the focus is upon certain recurring themes which have grown out of the American experience and their continuing relevance for today’s student.

**ENG 226 Major American Writers/  
American Literature II**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisites: ENG 101 and ENG 102 or concurrent enrollment in ENG 102 and instructor permission.*

Continuation of English 225, from the Civil War to the present.

**ENG 227 British Literature 1 (673-1744)**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisites: ENG 101 and ENG 102 or concurrent enrollment in ENG 102 with instructor permission.*

In Introduction to British Literature I (673-1744), students will survey the realm of British Literature and discuss its forms, functions, meanings and themes. Students will write formal and informal interpretations of the writings and complete essays and take two exams.

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## **ENG 228 British Literature II (1750-today)**

*3 Cr. Hrs. – 3 Contact Hrs.* **W**

*Prerequisites: ENG 101 and ENG 102 or concurrent enrollment in ENG 102 with instructor permission.*

Completion of English 227, British Literature I (673-1744) is recommended. In Introduction to British Literature II (1750-today), students will survey the realm of British Literature and discuss its forms, functions, meaning and themes. Students will write formal and informal interpretations of the writings and complete essays and take two exams

## **ENG 231 – Themes in Women’s Literature**

*3 Cr. Hrs. – 3 Contact Hrs.* **F**

*Prerequisites: ENG 101 and ENG 102, or instructor permission.*

This course examines women in contemporary American culture viewed from literary, historical, psychological, political, sociological and multicultural perspectives. The course explores the variety of writing styles women have used to think about issues such as the search for identity, power, societal roles, relationships and conflict, marriage, sexuality, treatment as the other, responses to patriarchy, achievement, and daily life. Students will be exposed to contemporary feminist criticism and encouraged to think critically about the impact of gender on literature, expression, and experience.

## **ENG 234D Library Skills/Research Skills**

*1 Cr. Hr. – 1 Contact Hr.* **D**

*Prerequisite: ENG 101 or instructor permission.*

This course is designed to acquaint the student with resources available in the library: print, electronic resources, online databases, and the Internet. It will give the student basic knowledge for developing search strategies, conducting research, evaluating source material, and compiling an extensive bibliography.

## **ENG 250 Poetry Workshop**

*3 Cr. Hrs. – 3 Contact Hrs.* **D**

*Prerequisite: None*

Generally a summer offering with specialists in poetry. Workshop includes writing and criticism. May be elected for a maximum of six credits over a period of two summers - three credits per summer.

## **Foreign Languages**

### **Chinese**

#### **CHIN 101 Basic Chinese**

*4 Cr. Hrs. – 4 Contact Hrs.* **F**

*Prerequisite: The student must have either completed ENG 101 or be presently enrolled in ENG 101, have passed the English Placement Exam indicating they may enroll in ENG 101 or have the permission of the instructor.*

This is a basic introduction to the Chinese Mandarin language. This course is designed for students who have little or no experience with Chinese. It aims to help students develop the four basic language skills of listening, speaking, reading and writing Chinese. Students will learn Pinyin (the Chinese sound system) as a tool to pronounce Chinese characters. The focus of the course will be learning Chinese characters, vocabulary, grammar and cultural information. Students are required to participate in a Cultural Observation Project (e.g. field trip to a Chinese restaurant) which requires active participation in the target language. The field trip will occur during class time when possible.

## French

### FR 101 Basic French

4 Cr. Hrs. – 4 Contact Hrs. **F**

*Prerequisite:* The student must have either completed ENG 101 or be presently enrolled in ENG 101, have passed the English Placement Exam indicating they may enroll in ENG 101, or have instructor permission.

This is a beginning course for students who have had no previous study of French. The emphasis is on developing communication in French through listening, speaking, reading and writing activities.

### FR 102 Basic French

4 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite:* Must have earned a grade of “C” or better in FR 101, or successful completion of two recent years of high school French, and have instructor permission.

A continuation of FR 101. The student continues to develop the capacity to understand, speak, read and write French.

### FR 201 Intermediate French

4 Cr. Hrs. – 4 Contact Hrs. **D**

*Prerequisite:* Must have earned a grade of “C” or better in FR 102 or satisfactory completion of three recent years of high school French, and have instructor permission.

This second year course is designed to improve the four basic skills begun in the first year. This course reviews and reinforces material learned in the first year, examines more tenses and other aspects of grammar, and provides practice in expanding capabilities in reading, writing, speaking and understanding French.

### FR 202 Intermediate French

4 Cr. Hrs. – 4 Contact Hrs. **D**

*Prerequisite:* Must have earned a grade of “C” or better in FR 201, or successful completion of four recent years of high school French, and have instructor permission.

This course is a continuation of FR 201.

## German

### GER 101 Basic German

4 Cr. Hrs. – 4 Contact Hrs. **F****W**

*Prerequisite:* The student must have either completed ENG 101 or be presently enrolled in ENG 101, have passed the English Placement Exam indicating they may enroll in ENG 101, or have instructor permission.

This course is the first semester of a communicative language course to promote proficiency and practical competence in elementary German. It will focus on the essential elements of effective communication by teaching skills in listening, speaking, reading and writing. It will also provide cultural insights into life in German-speaking countries.

### GER 102 Basic German

4 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite:* Must have earned a grade of “C” or better in GER 101, or successful completion of two recent years of high school German, and have instructor permission.

This course is a continuation of GER 101 with continued emphasis on communication and proficiency.

### GER 201 Intermediate German

4 Cr. Hrs. – 4 Contact Hrs. **D**

*Prerequisite:* Must have earned a grade of “C” or better in GER 102, or successful completion of three recent years of high school German, and have instructor permission.

This is the first semester of an intermediate level German course, which stresses skills to help the student communicate competently and appropriately in various situations in German. It reflects the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines. Listening, speaking, reading and writing skills will be strengthened by using authentic, contemporary information.

**GER 202 Intermediate German***4 Cr. Hrs. – 4 Contact Hrs. D**Prerequisite: Must have earned a grade of “C” or better in GER 201, or successful completion of four recent years of high school German, and have instructor permission.*

This is a continuation of German 201 with expansion of communicative and proficiency abilities, contemporary cultural information, and grammatical knowledge.

**Spanish****SPAN 090 Workplace Conversational Spanish***3 Cr. Hrs. – 3 Contact Hrs. FS**Prerequisite: None*

This course offers an introduction to the Spanish language with particular emphasis on pronunciation, workplace greetings, farewells, courtesies, basic grammar principles, numbers, and cultural concepts as applicable to the workplace setting. Enrollment in SPAN 090 does not require the ready to succeed prerequisite.

**SPAN 091 – Workplace Conversational Spanish II***3 Cr. Hrs. – 3 Contact Hrs. D**Prerequisite: SPAN 090 or instructor permission.*

The Workplace Conversational Spanish II is the continuation course of Workplace Conversational Spanish I, an introductory course in Spanish. This course provides students with the knowledge, vocabulary, and linguistic structures necessary to use Spanish immediately in real world interactions at the beginner level. Particular emphasis is placed on workplace conversation. Students also learn about the culture and customs of Spanish speaking countries as they relate to the workplace

**SPAN 101 Basic Spanish***4 Cr. Hrs. – 4 Contact Hrs. FWS**Prerequisite: The student must have either completed ENG 101 or be presently enrolled in ENG 101, have passed the English Placement Exam indicating the student may enroll in ENG 101, or have the permission of the instructor.*

This course is for students with little or no experience with Spanish. It is designed to help the student achieve a minimal oral capability, to comprehend the structure of the language, and to develop moderate reading and writing skills. There is no laboratory requirement, but the student is required to spend five sessions with a native speaker, when available, for group conversation practice. There will be occasional sessions on cultural matters.

**SPAN 102 Basic Spanish***4 Cr. Hrs. – 4 Contact Hrs. FWS**Prerequisite: Must have earned a grade of “C” or better in SPAN 101, or successful completion of two recent years of high school Spanish, and have instructor permission.*

The student continues to develop the capacity to read, write, speak and understand Spanish. There will be occasional sessions on cultural matters. The grammatical emphasis is on identifying and using the various tenses. There is no laboratory requirement, but the student is required to spend five sessions with a native speaker when available for group conversation practice.

**SPAN 150 Intensive Basic Spanish***4 Cr. Hrs. – 4 Contact Hrs. F**Prerequisite: Student must have completed ENG 091, or have passed the English Placement Exam indicating the student may enroll in ENG 101, and have completed three or more years of high school Spanish, or be a native speaker of Spanish, or receive instructor permission to enter the course.*

This course provides a rapid review of the grammar concepts and vocabulary covered

*Continued on next page*

in SPAN 101 and SPAN 102. It is intended for students who have completed at least three years of high school Spanish who feel they are not ready for a 200 level college Spanish course. It is also appropriate for native speakers of Spanish who wish to review the grammar. Unless the student has instructor permission, this course is not open to students who have completed SPAN 101 or SPAN 102. Students who successfully complete SPAN 150 are not eligible to take SPAN 101 or SPAN 102.

### **SPAN 201 Intermediate Spanish**

*4 Cr. Hrs. – 4 Contact Hrs.* **FW**

*Prerequisite: Must have earned a grade of “C” or better in SPAN 102, SPAN 150, or successful completion of three recent years of high school Spanish, and have instructor permission.*

This course reviews and reinforces the material learned in the first two semesters, examines more tenses and other aspects of grammar, and provides practice in expanding capabilities in reading, writing, speaking and understanding Spanish. There is no laboratory requirement, but the student is required to spend five sessions with a native speaker, when available, for group conversation practice. There will be occasional sessions on cultural matters.

### **SPAN 202 Intermediate Spanish**

*4 Cr. Hrs. – 4 Contact Hrs.* **W**

*Prerequisite: Must have earned a grade of “C” or better in SPAN 201, or successful completion of four recent years of high school Spanish, and have instructor permission.*

This course focuses on the remaining tenses and on the subjunctive mood. The student will have more opportunities to develop skills in reading, writing, speaking and understanding Spanish. There is no laboratory requirement, but the student is required to spend five sessions with a native speaker, when available, for group conversation practice. There will be occasional sessions on cultural matters.

## **Geography**

### **GEOG 101A Physical Geography**

*4 Cr. Hrs. – 5 Contact Hrs.* **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

This integrated lecture and lab is a course study in Earth Systems Science; the atmosphere, hydrosphere, and surface features of the lithosphere. The course work focuses on the development of geographic models and their use as a tool to explain phenomena in man’s physical environment.

### **GEOG 104 Cultural Geography**

*3 Cr. Hrs. – 3 Contact Hrs.* **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

A study of the world’s people and how they occupy the earth. Important topics include: population density and distribution, languages, religions, political systems and international relations, economic systems, and urbanization. Emphasis will be placed on spatial thinking and global interconnectedness.

### **GEOG 105 World Regional Geography**

*3 Cr. Hrs. – 3 Contact hrs.* **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

An introductory examination of the major cultural realms of the world—areas which share similar cultural and economic conditions. The physical environment and human impact on that environment will also be studied for each region. Units of study may include: Anglo-America, Europe, Russia and her neighbors, sub-Saharan Africa, North Africa/Southwest Asia, Monsoon Asia, East Asia, and middle and South America. Emphasis will be placed on spatial thinking and global interconnectedness. A previous course in physical or human geography would be helpful, but is not mandatory.

## **GEOG 215 Introduction to Weather and Climate**

4 Cr. Hrs. – 5 Contact Hrs. **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

This integrated lecture and lab is an introductory study of the atmosphere which includes both weather and climate. Fundamental physical laws governing weather elements will be examined; such as solar radiation, temperature, moisture, pressure, winds, and weather systems. Current weather data is delivered via the internet, which is coordinated with learning activities. Students will be introduced to the excitement of weather in near real-time. Broad aspects of climates and local microclimatology will also be integrated. An optional field trip to the National Weather Service Office, Grand Rapids may be offered. No prerequisites, although physical geography, MATH 040, and the knowledge of basic computer skills including the ability to manipulate images, are recommended.

## **GEOG 230 Elements of Map Design**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: MATH 040.*

This course is an introduction to the fundamental principles of cartographic design. Students will learn the language of geography through course activities that include concepts of space, tools of map representation, and process reasoning as related to base map development. Acquisition of geographic data, geographical mathematics, and map reading and analysis skills will be developed as a foundation for further geospatial studies. Skills and concepts will be presented through professional quality maps and charts.

## **GEOG 231 Introduction to Geographic Information Systems**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisites: MATH 040 and CIS 120A. Co-requisite: GEOG 230.*

This course provides an in-depth introduction to the fundamentals of Geographic Information Systems (GIS) with applications to a variety of problems using established data sources and repositories. A review of the necessary hardware and software elements used in GIS will be made. Various applications of GIS technology used in environmental science, business and government will also be presented. Specific topics taught will include an understanding of GIS terminology, raster and vector data sources, accuracy, methods of data acquisition, conversion and input, requirements for metadata, working with spatial databases and spatial analysis. The course will include production of professional quality maps using ArcView software. This is a course in a curricular sequence developing GIS professional expertise.

## **GEOG 232 Applications of Geographic Information Systems**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: GEOG 231*

This course is a continuation to the Introduction of Geographic Information Systems (GIS). Specific topics will include geospatial data acquisition and analysis, methods of aerial data acquisition, conversion and input, further work with geodatabases and spatial analyses. During this course applications of GIS to a variety of problems using established data sources and repositories will be conducted. Various applications of GIS technology used in environmental science, business and government will also be presented. The course will include production of professional quality maps using ArcView software. This is a course in a curricular sequence developing GIS professional expertise.

## **GEOG 290CI Cooperative Internship Program**

*Variable 3–4 Cr. Hrs. ①*

*Prerequisites: GEOG 231 and the student must have a GPA of 2.5 or better.*

The Cooperative Internship Program is a paid or non-paid fieldwork experience in geospatial technology skills using geographic information systems, remote sensing, and/or global positioning systems technologies. Variable credit hours (1-3 Hrs. per semester) may be earned dependent upon the number of work hours available from the employing organization. A student may sign up for as many internships as desired; however, the number of credit hours which can be applied towards a degree/certificate depends on the student's course of study, certificate and departmental requirements. This course is offered as a pass/no pass grade. The internship course starting and ending dates are determined on an individual basis.

## **Geology**

### **GEOL 101A Introduction to Physical Geology**

*4 Credit Hrs. – 5 Contact Hrs. ③ ④*

*Prerequisite: Meet Ready to Succeed Requirement*

This integrated lecture and lab is a scientific study of the materials, structures and systems of the planet Earth. Students will investigate the processes affecting the interior and exterior of the Earth, and the rocks, minerals, and structures produced by these processes. The course may include a one-day weekend field trip, weather permitting.

### **GEOL 102 Introduction to Earth History**

*4 Credit Hrs. – 5 Contact Hrs. ④*

*Prerequisite: Meet Ready to Succeed Requirement (GEOL 101 is **not** a prerequisite for GEOL 102.)*

This integrated lecture and lab is an introduction to the geologic history of the planet Earth and its life forms. Based on

the unifying theories of plate tectonics and organic evolution, the course presents the evidence used by geologists to reconstruct Earth's ancient environments and organisms, and establishes connections between Earth's past and present environments. The course may include a one-day weekend field trip, weather permitting.

## **German** **(See Foreign Languages)**

## **Graphic Design**

### **GR 110 Introduction to Graphic Reproduction**

*3 Cr. Hrs. – 6 Contact Hrs. ③*

*Prerequisite: None*

A lecture/lab entry level course for all graphic design students. Work is done in areas of copy preparation, composition, imagesetting/film, stripping, platemaking and offset press operations. The five major printing processes will be explored with major emphasis placed on offset lithography.

### **GR 160 Digital Imaging**

*3 Cr. Hrs. – 6 Contact Hrs. ④*

*Prerequisite: None*

A lecture/laboratory course where students will study and practice designing with photographs utilizing digital photography and image editing software. Students will create product, portrait and landscape digital imagery, manipulate them in image editing software, and utilize in print graphic design projects. Student must have use of a digital camera. Emphasis will be placed on creating images and manipulating them in Photoshop and on how to achieve desired results for the final design.

**GR 200 L&L Principles of 35 mm B&W Photography***3 Cr. Hrs. – 6 Contact Hrs. ❶**Prerequisite: None*

Fundamentals of photography, including cameras, emulsion characteristics, processing, filters, chemistry, and optics. The student must have the use of a 35 mm SLR or viewfinder camera. The student will be expected to buy film and paper as directed by the instructor.

**GR 220 Electronic Publishing***3 Cr. Hrs. – 6 Contact Hrs. ❶**Prerequisite: BUS 179 or demonstrated keyboard proficiency.*

This is a lab/lecture course focusing on introduction, study and practice of publication layout and design utilizing contemporary page layout software, Adobe InDesign. Students will create design briefs for each major project assigned. Students will utilize the elements and principles of design while creating multi-page publications.

**GR 225 Intermediate Photography***3 Cr. Hrs. – 3 Contact Hrs. ❸**Prerequisite: GR 200 L&L*

Intermediate Photography is a course in photography that builds on basic camera and black and white darkroom techniques introduced in Principles of Photography, and introduces many new skills and approaches to the photographic medium. More sophisticated compositional skills and aesthetics of both shooting and printing photographs are developed throughout the course. Alternative darkroom processes are introduced, such as cyanotype, sepia toning and hand coloring. We will be experimenting outside of the conventions of the 35mm format with the Holga camera and the pinhole camera. More advanced technical skills such as learning The Zone System, using archival printing and professional presentation are also emphasized.

**GR 240 Studio Lighting For Photography***3 Cr. Hrs. – 3 Contact Hrs. ❷**Prerequisite: GR 200 L&L*

Students will study different qualities of light and their uses and effects for the photographic image. Students will apply effective lighting techniques utilizing studio lighting, continuous and strobe as well as natural lighting. A successful photograph will result from the understanding and ability to control these elements.

**GR 270 Computer Imaging for the Printing Industry***3 Cr. Hrs. – 6 Contact Hrs. ❶❸**Prerequisite: None*

This is an intermediate course in Illustrator and Photoshop. Students will review each software specific tools, palettes and menu items, work with key strokes as well work with the more advanced tools available. They will create, manipulate and edit images in both vector and bit map format within the context of creating images for designs to use in the print industry.

**GRD 100ID Introduction to InDesign***1 Cr. Hr. – 2 Contact Hrs. ❶❸**Prerequisite: None*

This course will provide an introduction to Adobe InDesign. Students will be introduced to menu items, tools and palettes in contemporary page layout software, InDesign. Students will learn basic layout tools and palettes. Students will learn the most common quick key strokes, color modes and palettes. Students will create basic layout and designs using InDesign, including importing text and images, creating multi-page layouts using master pages and importing text from Word documents.

**GRD 100IL Introduction to Illustrator***1 Cr. Hr. – 2 Contact Hrs. FWS**Prerequisite: None*

This course will provide an introduction to contemporary design software, Adobe Illustrator. Students will be introduced to menu items, tools, and palettes in Illustrator. Students will learn basic drawing tools and manipulation of points and paths to create imagery. Students will learn the most common quick key strokes, color modes, and palettes. Students will create basic layout and designs using Illustrator.

**GRD 100PS Introduction to Photoshop***1 Cr. Hr. – 2 Contact Hrs. FWS**Prerequisite: None*

This course will provide an introduction to Adobe Photoshop. Students will be introduced to menu items, tools, and palettes in the image editing software, Photoshop. Students will learn basic tools, palettes, and quick keys strokes. Students will learn different color modes, palettes, filter effects, and layers usage. Students will manipulate basic images using image editing techniques specific to Photoshop.

**GRD 107 Image Assembly***2 Cr. Hrs. – 4 Contact Hrs. W**Prerequisite: None*

Image assembly is a lecture/laboratory course which places major emphasis on precision hand work and correct interpretation of job specifications as they relate to the assembly of film and electronic images. Extensive computer file manipulation will be stressed as well as page imposition. In addition to making files ready for output, page imposition software will be used.

**GRD 120 Introduction to Graphic Design***3 Cr. Hrs. – 6 Contact Hrs. FW**Prerequisite: None*

Introduction, study and practice of basic design vocabulary, elements, and principles. Individual elements of design such as

line, shape, value, texture, space, size and color will be explored as they relate to electronically generated digital formats and print designs. Emphasis will be given to the principles of design i.e., balance, emphasis, rhythm and unity to analyze the effectiveness of printed communications and other related electronic media. Students will create basic designs in contemporary design software including Illustrator, Photoshop and InDesign.

**GRD 130 Drawing for Graphic Design***3 Cr. Hrs. – 6 Contact Hrs. FW**Prerequisite: None*

Study and practice of basic graphic design drawing elements such as line, value, texture, composition, one and two-point perspective and color. Students will apply these elements as they develop concepts for graphic design. Tools used include pencil, pen and ink, colored pencils or markers, and the computer.

**GRD 140 Introduction to Typography***3 Cr. Hrs. – 6 Contact Hrs. FW**Prerequisite: None*

Introduction and study of history, vocabulary, and principles of typography. Basic type identification, styles, and measurement will be discussed and practiced. The primary purpose of type as a means communication combining readability and legibility will be reinforced. Design elements and principles will be presented in relation to designing with type.

**GRD 150 Multimedia Production***3 Cr. Hrs. – 6 Contact Hrs. ①**Prerequisite: None*

The student will use contemporary multimedia software and prepared files to create, storyboard, assemble and produce multimedia presentations. The fundamentals and terminology of “movie” production will be taught. Techniques in basic interactivity, presentations, animation, and commercial production, as well as preparing files for various kinds of output will be stressed. The student should have strong knowledge of the computer operating system, contemporary photo editing software and drawing software.

**GRD 160 History of Graphic Design***3 Cr. Hrs. – 3 Contact Hrs. ②**Prerequisite: None*

This course will explore the evolution of graphic design from the invention of the alphabets to the age of mass media, from the invention of the printing press to the present. Students will be required to give oral presentations, participate in team exercises and write brief surveys of various elements within course readings. Outside research will be required as well as text readings.

**GRD 167FL Introduction to Internet Animation***1 Cr. Hour - 1 Contact Hr. ②**Prerequisite: CIS 100, CIS 110, or CIS 120A.*

This course provides students with hands on experience creating web-based animation using an animation editor. Topics include working with the various tools and objects available in the editor, creating and manipulating multi-layered graphics, working with animation frames and tweening, and publishing flash graphics for use on the Internet.

**GRD 184 Introduction to Computer Animation***3 Cr. Hrs. – 6 Contact Hrs. ②**Prerequisite: None.*

This course will introduce students to 3ds Max modeling, rendering and animation environments. Those who complete the course will be able to operate the user interface to navigate and import objects from other CAD programs, create complex computer models, use program modifiers for the manipulation of models and animations, apply graphic maps and materials, create complex lighting setups, and create photo realistic rendered scenes.

**GRD 200 Portfolio Preparation***3 Cr. Hrs. – 6 Contact Hrs. ④**Prerequisite: None*

This course will focus on preparing the graduating student for college transfer or interviews and portfolio reviews with prospective employers. Students will analyze, critique, and update existing designs for inclusion in their professional portfolio. Students will update existing resume, business card and letterhead. Students will have a professional portfolio deliverable in three formats; print, CD, or DVD and web-based. There are no prerequisites although students should be at or near the final semester of the graphic design curriculum.

**GRD 210 Graphic Design II***3 Cr. Hrs. – 6 Contact Hrs. ④**Prerequisite: GRD 120.*

Students will learn about concept development, communication planning, and the execution of 2 and 3 dimensional designs through the development of an identity system as defined throughout the course. Criteria will be established and the solutions must be thoughtful, logical and conclusions appropriate. Solve and manage a complex communication problem. Develop cohesive program components to the identity system. Manage time accordingly to have all components complete by the established deadline.

**GRD 290CI Production Practicum**

3 Cr. Hrs. – Variable Contact Hrs. **F**

*Prerequisite: None*

This is a capstone class. The purpose of this class is to give the student intense on-the-job experiences either in their area of interest or an area where they feel they would like further exposure that may not be available at the college.

**Health Education**

**(See Also Allied Health)**

**HE 100A Community First Aid and Safety**

2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisite: None*

Course is designed to prepare the general public with first aid knowledge and skills necessary to care for most injuries and emergencies, including First Aid, Adult, Child, and Infant CPR and AED. Accident prevention information is included. American Red Cross certification can be awarded upon satisfactory completion of 80% or better.

**HE 102 Nutrition for Fitness and Sport**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

A course designed to provide holistic health, and information to the individual who is physically active, or to those who desire to initiate a personalized fitness program. Required for individuals interested in Physical Education and Health Education majors.

**HE 106 Concepts of Health and Well-being**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

This class is designed to advance the student's knowledge and to enhance their own health. An examination of national health priorities regarding the reduction of preventable death, disease and disability will be studied. Health related issues included are: substance abuse, stress reduction, grief and loss, development of

healthy relationships, sexually transmitted diseases, life-style related diseases and principles of a healthy life-style.

**HE 110 Industrial Safety and Workplace Training**

1 Cr. Hr. – 2 Contact Hrs. **FWS**

*Prerequisite: None*

Industrial Safety and Workplace Training is a first aid, prevention, and cardiopulmonary resuscitation (CPR/AED) program to prepare individuals to respond to injuries and sudden illnesses that may arise in the workplace. This course is designed to meet the specific training needs of employers and their employees. The course gives individuals in the workplace the knowledge and skills necessary to prevent, recognize and provide basic care for injuries and sudden illnesses until advanced medical personnel arrive and take over. Included are a review of basic safety laws (MIOSHA, OSHA, HAZMAT, Safety Data Sheets) and personal safety measures, which an employee can practice at home in preparation for work.

**HE 202A Sports Injuries and Prevention**

3 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite: None*

A study of the basic fundamentals of sports injury care. The course includes the organization of and procedures for the prevention and taping of sports injuries. BIOL 105L&L is not required as a prerequisite but is strongly encouraged.

**HE 220 Internship in Athletic Training**

1 Cr. Hr. – 2 Contact Hrs. **FWS**

*Prerequisite: None*

A 40 clock-hour internship in an area sports medicine clinic. This course will give prospective athletic trainers the opportunity to acquaint themselves with the advanced therapeutic modalities and rehabilitative exercise equipment not found in the smaller athletic training setting. It will also allow the student to observe differences (and similarities) between the clinical and collegiate training facilities.

## History

### HIST 101 Western Civilization - to 1500

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

This course will examine the development of Western Civilization from pre-history to the High Middle Ages/Renaissance, investigating the legacies of the Neolithic Period, ancient Mesopotamia and Egypt, Greece, Rome, Islam and Medieval Europe. Topics will include political structures, artistic expressions, religious beliefs, and intellectual developments. Social history will be emphasized and the course *may* culminate with student participation in a Medieval Festival.

### HIST 102 Western Civilization - 1500 to Present

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

This course will investigate the development of modern Western Civilization covering the period from the Renaissance (about 1500) to the present, emphasizing the developments which have shaped the civilization of the 20<sup>th</sup>/21<sup>st</sup> century in the West: government, economics, society, religion, philosophy, ethics, science, and the arts.

### HIST 195 World History from Beginning to Present

3 Cr. Hrs. – 3 Contact Hrs. **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

The focus of this course is to demonstrate through examination of the history of the world, of the planet, the following themes: Globalization of society and culture—national histories are convenient starting points for understanding the human species, but Humanity has never been simply local—it has always been a global system. This system is characterized as: Archaic (to 1650); Intermediate (1700-1880); and Modern (1880 to present). “Civilization

Change” also characterizes each of these epochs: Archaic Globalization was the time of the agricultural revolution and the rise of early empires; Intermediate Globalization saw the rise of European Culture and Society and the last centuries of the decline of the East; the last Epoch, Modern Globalization, is the era of global capitalism. The emphasis throughout the course will be on three themes: Change within and across oecumenes; Comparison of Changes; and, Connections in communication and exchange and the relationship to change within an oecumene including the geographic location of the above.

**This course differs from Western Civilization courses (HIST 101 & HIST 102) because the focus of the course is world history not European or specifically Western European History, the scope of the course is wider and more inclusive of non-Western cultures. Second, the approach is world-systemic. World systemic means that Western European History is merely a sub-unit, and over time not a very important one, of a larger planetary history.**

### HIST 201 United States to 1877

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

A course covering the history of the United States from its Native American and European origins to the end of Reconstruction. Major topics include the development of British colonial policy, the causes of the War for Independence, the formation of the Constitution and Bill of Rights, the development of democracy during the Jefferson and Jackson Administrations, immigration, industrial and urban history, Manifest Destiny and territorial expansion, the institution of slavery, the ante-bellum reform movement, the causes and consequence of the Civil War and Reconstruction.

### **HIST 202 United States from Reconstruction to Present**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

A study of the social, economic, political, and intellectual development of the American nation and people, from Reconstruction to the present. The major topics include: territorial expansion and American foreign policy; the growth and importance of industry and business; the urban community and its problems; trade-commerce fields; the urban community and its problems; industry and business; the struggle and achievement of labor; the study of immigration and race relations; the quest for women's equality; American educational and cultural advances; the increased use of government to improve society; the Cold War, détente and current to developments in U.S. – World relations; and the transformation of American Political ideology.

### **HIST 204 Imperial and Soviet Russia 1622 to the Present**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: Meet Ready to Succeed Requirement*

A course covering the reigns of Peter the Great, Catherine the Great and the later Romanovs; political, economic and social development in the 18th and 19th centuries; the Russian Revolution of 1917-21; the Five-Year Plans; Soviet foreign policy during World War II; Soviet policy after Stalin; Soviet society and culture to its collapse in 1991.

### **HIST 207 African American History**

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite: Meet Ready to Succeed Requirement*

A study of the dynamic role of Black people in the United States from their African origins to present day America. The course emphasizes significant Black contributions in American history, and selected

achievements of African American women will be studied. Contemporary issues related to the African American experience in the U.S. will be researched. A visit to an African American historical site or event may be included in the course.

### **HIST 210 World History II: From 1500**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: Meet Ready to Succeed Requirement*

This course deals with the non-western world from 1500 to the present. This course will treat the civilizations of the world excluding the European and U.S. (These latter two areas are treated in respectively HIST 101, 102, and 201 and 202.) The course will show the development of Africa, Asia, India, Central Asia, Malaysia, the Pacific Island nations, and Latin America from approximately 1500. While Europe has an impact on each of these areas, each area has a historical, political, economic, social, and cultural development independent of Europe. This course does not ignore the impact of European colonization, but attempts to see European colonization as only one aspect of ethnic and national development within each geographic area. European history will be touched upon only within this perspective of non western, indigenous development. This course provides a good basis of preparation for future K- 12 teachers and for those who wish to go on to study international relations, comparative government and international business.

**HIST 211 Michigan History***3 Cr. Hrs. – 3 Contact Hrs. W**Prerequisite: Meet Ready to Succeed Requirement*

A study of the social, economic, and political development of Michigan. Emphasis is on Michigan's history since the time of French exploration. Major topics dealt with in the course include: American Indians; French exploration and settlement; Michigan under the British flag; "territoryhood" to statehood; Michigan's role in the Civil War; lumbering and mining activity in the latter half of the 19th century, the development of Michigan's automotive industry and the concurrent rise of industrial unionism in Michigan. Some emphasis will also be placed on Great Lakes history and the local history of the Muskegon area.

**HIST 212A Gettysburg Battlefields***1 Cr. Hr. – 2 Contact Hrs. D**Prerequisite: Meet Ready to Succeed Requirement*

This course concentrates on an intensive study of the pivotal battle for America's future: Gettysburg. Major topics include the varying causes of the Civil War, Northern and Southern armies and military strategy, and the short and long ramifications of the three day battle for Gettysburg.

**HIST 214 Siege of Vicksburg***1 Cr. Hr. – 2 Contact Hrs. D**Prerequisite: Meet Ready to Succeed Requirement*

This course concentrates on an intensive study of a ten-month campaign resulting in a siege of the city of Vicksburg. Primary topics include examination of the geography and topography of the Mississippi Valley during the 1860's as it relates to the American Civil War.

**HIST 220 Labor Studies***3 Cr. Hrs. – 3 Contact Hrs. F**Prerequisite: Meet Ready to Succeed Requirement*

A survey course studying and critically analyzing the historical, political, and legal frameworks of the labor movement, major labor laws, causes and purposes of the labor movement, union structure and behavior, and labor-management approaches to solving employment disputes in the U.S. and internationally.

**Humanities****HUM 195 Introduction to Humanities***3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisite: Meet Ready to Succeed Requirement*

This course will provide the student with an awareness of the cultural strengths and weaknesses of our changing cybernetic society. The student will study how the performing and creative arts, philosophy, psychology, religion and applied technological impact on the individual as well as society. In both an historical and individual context, the student will learn that the understanding of what it means to be human is an art which can help facilitate the development of one's full potential.

**International Cultural Studies****ICS 101BEL / BIOL 101 BEL – International Cultural Studies and Biological Field Studies in Belize***2 Cr. Hrs. – 2 Contact Hrs. F**Prerequisites: instructor permission and acceptance of the terms of participation.*

This is an interdisciplinary travel-study course providing students an introduction to international culture and biology through cultural and biological field studies.

This hybrid course will contain online and on-campus components and includes a seven-day visit to Belize. Emphasis will be placed on Mayan culture and the

*Continued on next page*

tropical rain forests of Belize. The student will study Mayan culture and history as well as Mayan past and current interaction with the rain forest ecosystem. This course will cover classification of organisms, basic ecological principles, experimental design, field sampling techniques and scientific communication. Specific biology topics emphasized will vary each year. This course will also involve working with local Belizeans, offering MCC students the opportunity to meet people from diverse backgrounds. It is offered in conjunction with the Sibun Educational and Adventure Lodge in Belize. Students will spend a great portion of each day in the field and should be in good physical condition. Beyond tuition and texts, additional costs include the airfare to Belize, package price for room and board, and spending money while in Belize.

### ICS 101 GER International Cultural Studies in Germany

2 Cr. Hrs. – 1 Contact Hr. **W**

*Prerequisite: Selection to participate in the Exchange Program between Muskegon Community College and the Kaufmännische Schule Stuttgart-Nord and acceptance of the terms of participation. German language abilities are not required but highly recommended.*

This course introduces students to the Global Community as represented by Germany. The student will study German culture, history, and politics through lectures, discussions, and actual travel to Stuttgart, Germany. It is offered in conjunction with the Kaufmännische Schule Stuttgart-Nord in Stuttgart, Germany, and culminates with a ten-day visit to Germany. Beyond tuition and texts, additional costs include the airfare to Stuttgart, Germany, and spending money while in Germany.

**Please note: This course does not carry the Ready to Succeed prerequisite, but does not fulfill the Foreign Language requirement under the International category of the ASA degree.**

## Machining Technology

### MT 101A Basic Machining

3 Cr. Hrs. – 5 Contact Hrs. **FWS**

*Prerequisite: None*

This introductory course presents theory and hands-on experience in the practical application of machining. The course is structured for the student who has little or no previous experience in the field. The course introduces the student to industrial safety, precision measuring, common manufacturing materials, fasteners, and the operation of basic machine tools. These machine tools include the pedestal grinder, drill press, lathe, vertical milling machine, horizontal milling machine, and the surface grinder. CNC machining and other advanced metalworking methods will also be discussed.

### MT 102 Intermediate Machining

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: MT 101A or instructor permission.*

This course offers an in-depth examination of the machine tools commonly found in industry. The capabilities of drilling, turning, milling, and grinding machines will be explored as well as how these methods relate to advanced machining techniques and modern machine controls. A major focus of milling and turning will be experienced in the lab portion of this course. Each student will operate a CNC machine during the lab. The precision and quality that can be expected of these processes and their relationship to manufacturing will be stressed throughout the course.

### MT 103 Advanced Machining

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisite: MT 102 or instructor permission.*

This course will explore advanced machine tool operation and advanced grinding techniques. A major focus of grinding will be experienced in the lab portion of the course. Machines to be used in this class

are: EDM, Surface Grinder, and Numerical Control Machine. Advanced operation of the Lathe, Mill, and Grinder will be discussed.

### **MT 205 NC/CNC (Numerical Control/Computer Numerical Control)**

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: MT 101A or instructor permission.*

An introductory course in practical application of numerical control machining, and off-line programming. Designed to expose students to the basic concepts of numerical control with G and M codes.

### **MT 206 2-D CAD/CAM Computer-Aided Design/Machining**

3 Cr. Hrs. – 5 Contact Hrs. **FWS**

*Prerequisite: MT 205.*

Using Master CAM software, this class first explores the fundamentals of 2-D CAM systems. Students will learn to use the design package to create part drawings and simple solid models. Tool paths for these parts will be generated using the tool path module to create CNC program for the Lathe, Wire EDM, and Mill. Part processing will be covered and reviewed in detail for each program written.

### **MT 216 3-D CAD/CAM Computer-Aided Design/Machining**

3 Cr. Hrs. – 5 Contact Hrs. **WS**

*Prerequisite: MT 206.*

This class continues the study of CAM into the realm of complex 3-D machining. Various complex surfaces will be designed, programmed, and machined. 3-D CNC programs will be created for both the Mill and Wire EDM. 3-D part processing will be covered in detail for each program. The trimming of complex surfaces is stressed. Installation of third-party software and interfacing with CAD software will also be covered. Students will also learn to create tooling and material libraries.

### **MT 225 Moldmaking**

3 Cr. Hrs. – 6 Contact Hrs. **WS**

*Prerequisite: MT 206.*

In this course, the student will learn proper machining techniques and design considerations for manufacturing many different types of molds. The student will apply precision machining methods in the production of several molds used for the manufacturing of plastic components. Molds for many common molding processes will be explored including blow molding, compression molding, thermoforming, and injection molding.

### **MT 230 Basic Diemaking**

3 Cr. Hrs. – 6 Contact Hrs. **FWS**

*Prerequisites: MT 102 and MT 206.*

This course offers an overview of Diemaking for the machinist. Components of both punching dies and simple progressive dies will be explored. Students will apply their skills to both the manufacture of single stage punches and dies and routine punch repair processes. Primary learning will focus on precision grinding, machining, and material selection. The ram EDM machine will also be introduced.

### **MT 235 Advanced Diemaking**

3 Cr. Hrs. – 6 Contact Hrs. **W**

*Prerequisite: MT 216.*

This course continues the study of Diemaking which begins in MT 230. The student will study the manufacture of compound dies for both forming and punching. Both ram and wire EDM processes will be explored. Precision grinding and machining will be stressed throughout. Common die feeding mechanisms, die setting, and die safety will also be covered.

**MT 240 Basic Machine Repair**3 Cr. Hrs. – 6 Contact Hrs. **FWS***Prerequisite: MT 101A (formerly MT 101)*

This course provides a general overview of various mechanical systems found in manufacturing equipment. Both preventive maintenance and repair skills are stressed. The systems examined are: basic mechanics and mechanical skills, lubrication systems, bearings, belt drives, chain drives, gears and gear systems, couplings, fluid power systems and variable speed drives. Troubleshooting techniques are stressed throughout the course.

**MT 245 Advanced Machine Repair**3 Cr. Hrs. – 6 Contact Hrs. **FWS***Prerequisite: MT 240.*

This course stresses preventive maintenance of the various mechanical systems found in the manufacturing environment. Both preventive and predictive maintenance will be explored in depth. This course culminates in the student preparing a computerized preventive maintenance plan for an actual manufacturing facility. Basic electronics will be covered as it relates to troubleshooting machine problems.

**Materials Technology****MET 101 Industrial Materials**3 Cr. Hrs. – 4 Contact Hrs. **FWS***Prerequisite: None*

Industrial Materials is the study of the many materials which are used by modern industry, their basic similarities and differences, their physical, chemical, and electrical properties, and the ways in which materials are altered or combined to enhance their suitability for a specific industrial application.

**MET 102 Basic Cast Metals**3 Cr. Hrs. – 5 Contact Hrs. **FWS***Prerequisite: None*

Basic cast metals is an introductory study of the processes and methods of producing castings. The student will be introduced to

patternmaking, finishing, and inspection. Laboratory tests of materials used in cast metals will be conducted. The student will be given an overview of cast metal manufacturing procedures. This course attempts to create a basic understanding and appreciation of the complexities of the cast metal industry.

**MET 201 Metallurgy**3 Cr. Hrs. – 5 Contact Hrs. **FWS***Prerequisite: None*

Metallurgy studies the physical, chemical, and electrical properties of metals and their alloys, as well as the effect on these properties of various mechanical and thermal treatments. The many indications of these properties and tests to establish their magnitude are also included.

**MET 202 Advanced Materials**3 Cr. Hrs. – 5 Contact Hrs. **D***Prerequisite: MET 101*

Advanced Metals studies adhesives, ceramics, coatings, composites, lubrication, and other emerging materials used in manufacturing. A major emphasis is placed on the testing of material to determine properties, usability, and magnitude. Students must have access to transportation as this course also involves off-campus lab experiments.

**MET 203 Materials Testing**3 Cr. Hrs. – 5 Contact Hrs. **D***Prerequisite: MET 101*

Conventional destructive and non-destructive testing and evaluation of materials. To detect and characterize flaws and microstructure changes in materials, using lab equipment and reporting the findings. Also, analysis of the relationship between externally applied forces and internal reactions in materials.

**MET 204 Introduction to Plastics**3 Cr. Hrs. – 5 Contact Hrs. **D***Prerequisite: MET 101*

This course covers an introductory study

of plastic materials, their applications, and the plastics industry. The students will be introduced to thermoplastics and thermosetting plastic materials, processing methods, applications, tooling, and plastic equipment.

fundamentals of function, metallurgical and economic designs of casting or patterns. This course will deal with risers, gating, heat transfer, solidification as well as gating ratios, metal velocity and flow rates of different casting materials.

**MET 212 Patternmaking, Gating and Riser**

3 Cr. Hrs. - 6 Contact Hrs. **F** **W**  
 Prerequisite: MET 102

This course will combine software for both Design and Machining Casting patterns for casting materials. Each pattern will include the Gating and Risers necessary to produce quality cast products. Introduction to the

**Mathematics**

**(Includes College Success Center courses)**

Before enrolling in any math courses, you must be placed. Placement is done by your ACT Math sub-score or your COMPASS Test score. If you have ACT scores, they should be officially submitted to MCC's Testing Center. If testing is needed you must make an appointment to take the COMPASS Test by calling the Testing Center at (231) 777-0394. Students can begin the test at whatever level they wish (Pre-Algebra, Algebra, College Algebra, or Trigonometry). Placement is made at the point at which students EXIT the test.

<b>Ready to Succeed</b>	
Before enrolling in many courses, you must meet the <b>READY TO SUCCEED</b> ( <i>Reading Competency</i> ) requirement by test scores or Course Completion.	
COMPASS	Reading score of 76 or higher
ACT	Reading score of 19 or higher
MME	1 or 2 on both Reading and Writing
College Credits	15 College credits (100 level or higher) with cumulative 2.0 or higher GPA
Reading Course	Earning a "C" grade or better in Reading 040 or Reading 050

Before enrolling in math courses numbered MATH 050 or higher, you must meet the Ready to Succeed requirement

ACT Math scores will not be accepted if taken over 3 years ago and students should take the COMPASS Math Placement Test.

COMPASS Pre-Algebra	ACT Math	Placement
0-39	****	MATH 036A or MATH 036FT and MATH 038FT
40-49	****	MATH 038 or TMAT 101A
50-100	****	MATH 040 or TMAT 102A

COMPASS Algebra	ACT Math	Placement
0-24	****	MATH 038 or TMAT 101A
25-45	****	MATH 040 or TMAT 102A
46-65	20-21	MATH 050 or MATH 107 or TMAT 201
66-100	22-24	MATH 105 or MATH 109 or MATH 111 or MATH 115

\*\*\*COMPASS Placement Testing Required

COMPASS College Algebra	ACT Math	Placement
0-45	22-24	MATH 105 or MATH 109 or MATH 111 or MATH 115
46-100	25-27	MATH 112 or MATH 151

COMPASS Trigonometry	ACT Math	Placement
0-45	25-27	MATH 112 or MATH 151
46-100	28 or above	MATH 161

*Note: This placement schedule is intended for students entering degree or transfer programs where courses in algebra or higher mathematics are required. If you are planning to enroll in a Business or Technical program and will be taking Business Math or Technical Math, please see a counselor for advice.*

### **MATH 035F Metrics**

0.5 Cr. Hrs. – 0.5 Contact Hrs. **FWS**

*Prerequisite: None*

This course is an introduction to the metric system and conversions between the metric and English systems.

### **MATH 036A Basic Math**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: None*

This course covers topics in basic arithmetic including decimals, fractions, ratios and proportions, percents, English and metric measurements, geometry, integers, and algebraic expressions.

### **MATH 036FT Fast-Track Basic Math**

3 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

*Co-requisite: Math 038FT*

This course covers the same topics and satisfies the same prerequisites as Math 036A, but students complete the required coursework in the first half of the semester. Those that are successful then proceed to Math 038FT in the second half. Because of the intense pace, two hours of scheduled Supplemental Instruction are required each week. Students who select this option should be highly motivated and feel like this course will be more of a “refresher.” Those uncomfortable with an accelerated pace are discouraged from this option. Any students who are unsure should contact the College Success Center.

**MATH 038 Pre-Algebra**3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Must have earned a grade of “C” or better in MATH 036A or assignment based on Math Placement Test.*

This course is designed for students who have mastered basic arithmetic but are not yet prepared for algebra. Basic math topics are expanded upon and algebra topics such as solving basic equations, factoring, and graphing are introduced.

**MATH 038FT Fast-Track Pre-Algebra**3 Cr. Hrs. – 4 Contact Hrs. **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

*Co-requisite: Math 036FT*

This course covers the same topics and satisfies the same prerequisites as Math 038, but students complete the required coursework in the second half of the semester, after successful completion of Math 036FT. Because of the intense pace, two hours of scheduled Supplemental Instruction are required each week. Students who select this option should be highly motivated and feel like this course will be more of a “refresher.” Those uncomfortable with an accelerated pace are discouraged from this option. Any students who are unsure should contact the College Success Center.

**MATH 040 Beginning Algebra**4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Must have earned a grade of “C” or better in MATH 038 or assignment based on math placement test.*

An introductory course for students who have not successfully passed a high school algebra course, or who have lost their facility with algebra as time has passed. Fractions, signed numbers, and order of operations are reviewed. Variables and equation solving are introduced, along with exponents, polynomials, factoring, rational expressions and equations, graphing, and application problems.

**MATH 041 Mathematics for Allied Health Sciences**1 Cr. Hr. – 1 Contact Hr. **FW**

*Prerequisite: Must have earned a grade of “C” or better in MATH 038 or assignment based on Math Placement Test.*

A brief yet succinct math course designed to transition successful MATH 040 students into successful Chemistry for Allied Health students.

**MATH 050 Intermediate Algebra**4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Assignment by Math Placement Test or must have earned a grade of “C” or better in MATH 040.*

A second course in algebra in which concepts developed in Math 040 are studied in more depth and more advanced topics are introduced. New topics include fractional exponents, radicals, methods for solving quadratic equations, systems of equations with two and three unknowns, functional notations, logarithmic and exponential functions, and application problems.

**MATH 105 Mathematics for Elementary Teachers**4 Cr. Hrs. – 4 Contact Hrs. **FW**

*Prerequisite: Must have earned a grade of “C” or better in MATH 050 or assignment based on Math Placement Test.*

Not a “methods” course. A general course for students majoring in elementary education. The basic ideas behind our number system and geometric concepts are discussed. Topics include: problem solving, sets, system of numeration, the real number system, geometry, and metric measure.

**MATH 107 Mathematical Excursions**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Must have earned a grade of “C” or better in MATH 040 or assignment based on Math Placement Test.*

A survey of mathematics intended for students whose program of study has no further mathematics requirements. Its purpose is to develop mathematical literacy in today’s world. This course satisfies the general education requirements for mathematics. Topics are selected from finance mathematics, scheduling, logic, geometry, decision making, patterns and art, modeling, and applications.

**MATH 109 College Algebra with Applications**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisites: Must have earned a grade of “C” or better in MATH 050 or assignment based on Math Placement Test.*

A college algebra course stressing applications and graphing in the following areas: the process of creating a mathematical model of a real life situation, linear, quadratic, periodic, exponential and logarithmic models; mathematics of finance; selected topics in probability. Graphing calculators will be utilized.

**MATH 111 Algebra With Coordinate Geometry**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisites: Must have earned a grade of “C” or better in MATH 050 or assignment based on Math Placement Test.*

Pre-calculus algebra and analytic geometry designed for the student who will be taking calculus. Topics include: solving equations and inequalities algebraically and graphically; functions and graphs; polynomial functions; rational functions and functions involving radicals; exponential and logarithmic functions; linear systems and matrices. Graphing calculators will be utilized.

**MATH 112 Trigonometric Functions with Coordinate Geometry**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite: Must have earned a grade of “C” or better in MATH 111 or assignment based on Math Placement Test.*

Pre-calculus trigonometry and analytic geometry designed for the student who will be taking calculus. Topics include: trigonometric functions, identities and equations, graphs of trigonometric functions and their inverse functions, solution of triangles, sequences and series, polar coordinates, parametric equations, DeMoivre’s Theorem, the Binomial Theorem, mathematical induction, and conic sections. Graphing calculators will be utilized.

**MATH 115/BUS 105 Business Statistics**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisites: Must have earned a grade of “C” or better in MATH 050 or assignment based on Math Placement Test.*

Probability and statistics for business, social science, mathematics, and biological science majors. Topics include: descriptive statistics, probability, probability distributions, confidence intervals, hypothesis testing, analysis of variance, regression, and non-parametric statistics. Graphing calculators will be utilized.

**MATH 151 Survey of Calculus**

4 Cr. Hrs. – 4 Contact Hrs. **D**

*Prerequisite: Must have earned a grade of “C” or better in MATH 111 or assignment based on Math Placement Test.*

The study of limits, continuous functions, derivatives, integrals, and their applications in business, economics, life sciences and social sciences. This is a terminal, one-semester course and should not be elected by those taking the calculus sequence of MATH 161, 162, 283 and 295. Graphing calculators will be utilized.

**MATH 161 Calculus I**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite:* Must have earned a grade of “C” or better in MATH 112 or assignment based on Math Placement Test.

The calculus of elementary functions of one variable. Topics include: definition of a derivative, limits, derivatives and integrals of functions of one variable, related rates, maxima and minima, Rolle’s Theorem, the Mean Value Theorem, and the Fundamental Theorem of Calculus. Graphing calculators will be utilized.

**MATH 162 Calculus II**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisites:* Must have earned a grade of “C” or better in MATH 161.

*Recommended*

*Co-requisite:* MATH 276

A continuation of the calculus of functions of one variable. Topics include: methods of integration such as substitution, parts, trigonometric substitution and partial fractions; improper integrals; applications of integrals to area, volume, and arc length; an introduction to differential equations; and infinite series. Graphing calculators will be utilized.

**MATH 215 Probability & Statistics for Engineering**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite:* Must have earned a grade of “C” or better in MATH 161.

This is a calculus-based statistics course. However, no previous statistics experience is required. Topics include: descriptive statistics, probability, discrete and continuous probability distributions, joint probability distributions, confidence intervals, hypothesis testing, analysis of variance, correlation and linear regression, non-parametric techniques, and quality control methods. Graphing calculators will be utilized.

**MATH 276 Linear Algebra with Applications**

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite:* MATH 161.

*Co-requisite:* MATH 162, depending on transfer school. Check with a counselor.

A study of matrices, matrix operations, systems of linear equations, determinants, vectors, real and complex vector operations, vector spaces, eigenvalues, linear transformations, linear programming, and numerical methods. Applications used in science, engineering, business, computer science, and higher mathematics are integrated.

**MATH 283 Calculus III**

4 Cr. Hrs. – 4 Contact Hrs. **FWS**

*Prerequisite:* Must have earned a grade of “C” or better in MATH 162.

The calculus of functions of more than one variable. Topics include: vectors, vector functions, surfaces, the Dot Product, the Cross Product, limits and continuity in 3 dimensions, partial derivatives, chain rule for partial derivatives, gradients, multiple integrals, and vector calculus. Graphing calculators will be utilized.

**MATH 295 Differential Equations with Linear Algebra**

4 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite: Must have earned a grade of “C” or better in MATH 162.*

An introduction to the theory and solution of ordinary differential equations with techniques involving slope fields, separation of variables, homogeneous functions, exact equations, linear equations of order one, integrating factors, Bernoulli’s equation, coefficients linear in two variables, Wronskian, differential operators, Method of Undetermined Coefficients, reduction of order, variation of parameters, power series, Euler equation, the Laplace transform, linear systems, higher order linear equations, matrix algebra, eigenvalues, eigenvectors, determinants, and modeling applications in physical, biological, and social sciences. Computer software will be used to explore some of these topics. Graphing calculators will be utilized.

**Music**

Before enrolling in these courses, you must demonstrate that you are ready to succeed.

**MU 50-89 Remedial Applied Music**

2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

The following courses are designed for students who do not meet the freshman performance proficiency level as determined by the faculty. Recommendation for participation in 100 numbered applied music courses will be made when the faculty feels that adequate advancement has been made by the student to perform at the level of a freshman music student.

**MU 50, 51**

**Voice** ..... 2 Cr. Hrs.

**MU 52, 53**

**Piano** ..... 2 Cr. Hrs.

**MU 54, 55**

**Cornet (Trumpet)** ..... 2 Cr. Hrs.

**MU 56, 57**

**Clarinet** ..... 2 Cr. Hrs.

**MU 58, 59**

**Trombone** ..... 2 Cr. Hrs.

**MU 60, 61**

**Baritone (Euphonium)** .... 2 Cr. Hrs.

**MU 62, 63**

**Tuba** ..... 2 Cr. Hrs.

**MU 64, 65**

**French Horn** ..... 2 Cr. Hrs.

**MU 66, 67**

**Flute** ..... 2 Cr. Hrs.

**MU 68, 69**

**Oboe (English Horn)** ..... 2 Cr. Hrs.

**MU 70, 71**

**Bassoon** ..... 2 Cr. Hrs.

**MU 72, 73**

**Saxophone** ..... 2 Cr. Hrs.

**MU 74, 75**

**Percussion** ..... 2 Cr. Hrs.

**MU 76, 77**

**Guitar** ..... 2 Cr. Hrs.

**MU 78, 79**

**Organ** ..... 2 Cr. Hrs.

**MU 80, 81**

**Harp** ..... 2 Cr. Hrs.

**MU 82, 83**

**Violin** ..... 2 Cr. Hrs.

**MU 84, 85**

**Viola** ..... 2 Cr. Hrs.

**MU 86, 87**

**Cello** ..... 2 Cr. Hrs.

**MU 88, 89**

**Double Bass** ..... 2 Cr. Hrs.

**MU 100 Introduction to Music Theory**

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

Designed for students with little or no theoretical background who are considering music as their major field, or high school seniors who do not have access to a high school theory course. Includes fundamentals to basic musicianship: notation, clefs, scales, intervals, triads, rhythm, meter and tonality.

**MU 101 Music Theory***3 Cr. Hrs. – 3 Contact Hrs. **F****Prerequisite: Meet Ready to Succeed Requirement**Co-requisites: MU 190A and MU 194.*

Fundamentals of basic musicianship, including notation, clefs, scales, intervals, triads, meter, rhythm and tonality. The analysis and writing of harmony in the styles of composers of the tonal period will be stressed.

**MU 102 Music Theory***3 Cr. Hrs. – 3 Contact Hrs. **FW****Prerequisites: MU 101 and MU 190A.**Co-requisites: MU 191A and MU 195.**A continuation of MU 101.***MU 103 Introduction to Music Literature***3 Cr. Hrs. – 3 Contact Hrs. **FW****Prerequisite: Meet Ready to Succeed Requirement*

A first course in listening to music designed primarily for students with little or no musical training. Starting with the basic elements of music, the course uses extensive audio and visual materials, illustrating the development of music through the ages.

**MU 104CS College Singers***1 Cr. Hr. – 2 Contact Hrs. **FW****Prerequisite: Meet Ready to Succeed Requirement*

This is a performance ensemble for students with previous musical experience. Auditions will be held at the first class session for placement within the group and to verify that the student and ensemble are a reasonable match. High standards of musical performance are upheld. There are performances held throughout the year for student and adult audiences.

**MU 105CS College Singers***1 Cr. Hr. – 2 Contact Hrs. **FW****Prerequisite: Meet Ready to Succeed Requirement**An extension of MU 104CS.***MU 108CB Concert Band (West Michigan Concert WINDS)***1 Cr. Hr. – 2 Contact Hrs. **FW****Prerequisite: Meet Ready to Succeed Requirement*

This is a performance ensemble for students with previous musical experience. Auditions will be held at the first class session for placement within the group and to verify that the student and ensemble are a reasonable match. High standards of musical performance are upheld. There are performances held throughout the year for student and adult audiences.

**MU 109CB Concert Band (West Michigan Concert WINDS)***1 Cr. Hr. – 2 Contact Hrs. **FW****Prerequisite: Meet Ready to Succeed Requirement**An extension of MU 108CB.***MU 118WMS West Michigan Symphony***1 Cr. Hr. – 2 Contact Hrs. **FW****Prerequisite: Meet Ready to Succeed Requirement*

Students who play in the West Shore Symphony Orchestra may receive college ensemble credit. Audition and consent of director determine participation.

**MU 118YWMS West Michigan Youth Symphony***1 Cr. Hr. – 2 Contact Hrs. FW**Prerequisite: Meet Ready to Succeed Requirement*

Students who play in the West Shore Youth Symphony may receive college ensemble credit. This is a performance ensemble for students with previous musical experience. Auditions will be held at the first class session for placement within the group and to verify that the student and ensemble are a reasonable match.

**MU 119A or B Symphonic Ensemble***1 Cr. Hr. – Variable Contact Hrs. FW**Prerequisite: MU 118WMS or**MU 118YWMS*

A continuation of MU 118WMS or MU 118YWMS.

**MU 127 to 147 Applied Music-Secondary Instrument***1 Cr. Hr. – Variable Contact Hrs. FWS**Prerequisite: Meet Ready to Succeed Requirement*

Private study on an instrument. The student must meet with a private instructor a specified number of hours Attendance at studio class may be required and performance is encouraged. Letters A, B, C, D, after number indicate semesters so that the correct number of credits will be shown on transcript.

**MU 127-A, B, C, D****Jazz Guitar** ..... 1 Cr. Hr.**MU 128-A, B, C, D****Voice** ..... 1 Cr. Hr.**MU 129-A, B, C, D****Piano** ..... 1 Cr. Hr.**MU 130-A, B, C, D****Cornet-Trumpet** ..... 1 Cr. Hr.**MU 131-A, B, C, D****Clarinet** ..... 1 Cr. Hr.**MU 132-A, B, C, D****Trombone** ..... 1 Cr. Hr.**MU 133-A, B, C, D****Baritone (Euphonium)** ..... 1 Cr. Hr.**MU 134-A, B, C, D****Tuba** ..... 1 Cr. Hr.**MU 135-A, B, C, D****French Horn** ..... 1 Cr. Hr.**MU 136-A, B, C, D****Flute** ..... 1 Cr. Hr.**MU 137-A, B, C, D****Oboe (English Horn)** ..... 1 Cr. Hr.**MU 138-A, B, C, D****Bassoon (Contra-Bassoon)** 1 Cr. Hr.**MU 139-A, B, C, D****Saxophone** ..... 1 Cr. Hr.**MU 140-A, B, C, D****Percussion** ..... 1 Cr. Hr.**MU 141-A, B, C, D****Guitar** ..... 1 Cr. Hr.**MU 142-A, B, C, D****Organ** ..... 1 Cr. Hr.**MU 143-A, B, C, D****Harp** ..... 1 Cr. Hr.**MU 144-A, B, C, D****Violin** ..... 1 Cr. Hr.**MU 145-A, B, C, D****Viola** ..... 1 Cr. Hr.**MU 146-A, B, C, D****Cello** ..... 1 Cr. Hr.**MU 147-A, B, C, D****Double Bass** ..... 1 Cr. Hr.

**MU 148 to 189 Applied Music – Primary Instrument**

2 Cr. Hrs. -Variable Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

Intensive private study on an instrument. Must meet with a private instructor a specified number of hours per semester. Attendance and performance at studio class may be required. There is a public-recital at the end of the year.

- MU 148, 149**  
Jazz Guitar ..... 2 Cr. Hrs.
- MU 150, 151**  
Voice ..... 2 Cr. Hrs.
- MU 152, 153**  
Piano ..... 2 Cr. Hrs.
- MU 154, 155**  
Cornet (Trumpet) ..... 2 Cr. Hrs.
- MU 156, 157**  
Clarinet ..... 2 Cr. Hrs.
- MU 158, 159**  
Trombone ..... 2 Cr. Hrs.
- MU 160, 161**  
Baritone (Euphonium) ..... 2 Cr. Hrs.
- MU 162, 163**  
Tuba ..... 2 Cr. Hrs.
- MU 164, 165**  
French Horn ..... 2 Cr. Hrs.
- MU 166, 167**  
Flute ..... 2 Cr. Hrs.
- MU 168, 169**  
Oboe (English Horn) ..... 2 Cr. Hrs.

- MU 170, 171**  
Bassoon (Contra-Bassoon) 2 Cr. Hrs.
- MU 172, 173**  
Saxophone ..... 2 Cr. Hrs.
- MU 174, 175**  
Percussion ..... 2 Cr. Hrs.
- MU 176, 177**  
Guitar ..... 2 Cr. Hrs.
- MU 178, 179**  
Organ ..... 2 Cr. Hrs.
- MU 180, 181**  
Harp ..... 2 Cr. Hrs.
- MU 182, 183**  
Violin ..... 2 Cr. Hrs.
- MU 184, 185**  
Viola ..... 2 Cr. Hrs.
- MU 186, 187**  
Cello ..... 2 Cr. Hrs.
- MU 188, 189**  
Double Bass ..... 2 Cr. Hrs.

**NOTE: There are several sections of class piano. Students with piano background should audition with instructor before enrolling.**

**MU 190A Class Piano for Music Majors**

2 Cr. Hrs. – 3 Contact Hrs. **FW**

*Prerequisite: Meet Ready to Succeed Requirement*

*Co-requisites: MU 101 and MU 194.*

This course is required of all music majors and is open also to students with some previous keyboard experience who can use these transferable humanities credits or desire the training. Special emphasis is given to sight-reading, transposition, playing by ear, harmonizing melodies, accompaniments and scales.

**MU 190B Class Piano (Non-Music Majors) **FW****

2 Cr. Hrs. – 3 Contact Hrs.

*Prerequisite: Meet Ready to Succeed Requirement*

This course is open to any student who wishes to learn to play the piano. No previous training or knowledge of music is necessary.

**MU 190C Class Piano (Basic Piano)**

1 Cr. Hr. – 2 Contact Hrs. **W**

*Prerequisite: Meet Ready to Succeed Requirement*

This course in basic piano is a required Co-requisite for students in MU 192 unless requirements can be met by examination. See instructor.

**MU 191A Class Piano (Music Majors)**

2 Cr. Hrs. – 3 Contact Hrs. **F****W**

*Prerequisite:* MU 190A.

*Co-requisites:* MU 102 and MU 195.

A continuation of MU 190A.

**MU 191B Class Piano (Non-Music Majors)**

2 Cr. Hrs. – 3 Contact Hrs. **F****W**

*Prerequisite:* MU 190B.

A continuation of MU 190B.

**MU 192 Music for the Classroom Teacher**

4 Cr. Hrs. – 4 Contact Hrs. **W**

*Prerequisite:* Meet Ready to Succeed Requirement

*Co-requisite:* MU 190C, unless requirements can be met by examination. See instructor.

This course is required for future elementary classroom teachers. No previous musical training is necessary.

The course provides a background in the fundamental elements of music through singing, playing classroom rhythm and melody instruments, recorder and autoharp. Includes introduction to methods of teaching music, observation and participation in area schools.

**MU 194 Sight-Reading and Ear Training**

1 Cr. Hr. – 2 Contact Hrs. **W**

*Prerequisite:* Meet Ready to Succeed Requirement

*Co-requisites:* MU 101 and MU 190A.

The acquisition of the skills of melodic and rhythmic sight-reading and the disciplining of the ear to reproduce melodies, harmonies and rhythms by dictation.

**MU 195 Sight-Reading and Ear Training**

1 Cr. Hr. – 2 Contact Hrs. **W**

*Prerequisite:* MU 194.

*Co-requisites:* MU 102 and MU 191A.

A continuation of MU 194.

**MU 201 Advanced Theory**

4 Cr. Hrs. – 5 Contact Hrs. **F**

*Prerequisites:* MU 101 and MU 102.

*Co-requisite:* MU 290.

A continuation of Theory required of music majors. It combines the elements of counter-point, form analysis and 20th century practices with an emphasis on creative writing and arranging. Advanced sight-singing and melodic, harmonic, and rhythmic dictations are also stressed.

**MU 202 Advanced Theory**

4 Cr. Hrs. – 5 Contact Hrs. **W**

*Prerequisite:* MU 201

*Co-requisite:* MU 291

A continuation of MU 201.

**MU 203 Vocal and Instrumental Conducting Techniques**

2 Cr. Hrs. – 2 Contact Hrs. **F**

*Prerequisite:* Meet Ready to Succeed Requirement

Practical methods and conducting techniques for instrumental and vocal ensembles, with emphasis on rehearsal preparation, interpretation and performance, and basic communication between conductor and ensemble members.

**MU 240 Professional Practices in Music**

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite:* None.

This course introduces students to career options and common business practices in the music industry. Students learn how to market their music and music performances along with how to promote themselves within the industry, through the use of multimedia which includes Web and print resources. Students are exposed to contract preparation, intellectual property considerations and introduced to performing arts unions. A key component to this course is the study of ethical practices within the music industry.

**MU 248 to 289 Applied Music - Advanced Instrument**

2 Cr. Hrs. – 2 Contact Hrs. **FWS**

*Prerequisite:* Two semesters of study on the same instrument at the 100-level. Private study of an instrument.

The student must meet with private instructor a minimum of 13 hours per semester. Attendance and performance at studio is required. There is a staff audition at the end of each semester and a public recital at the end of the year.

- MU 248, 249**  
Jazz Guitar ..... 2 Cr. Hrs.
- MU 250, 251**  
Voice ..... 2 Cr. Hrs.
- MU 252, 253**  
Piano ..... 2 Cr. Hrs.
- MU 254, 255**  
Cornet (Trumpet) ..... 2 Cr. Hrs.
- MU 256, 257**  
Clarinet ..... 2 Cr. Hrs.
- MU 258, 259**  
Trombone ..... 2 Cr. Hrs.
- MU 260, 261**  
Baritone (Euphonium) .... 2 Cr. Hrs.
- MU 262, 263**  
Tuba ..... 2 Cr. Hrs.
- MU 264, 265**  
French Horn ..... 2 Cr. Hrs.
- MU 266, 267**  
Flute ..... 2 Cr. Hrs.
- MU 268, 269**  
Oboe (English Horn) ..... 2 Cr. Hrs.

- MU 270, 271**  
Bassoon (Contra-Bassoon) 2 Cr. Hrs.
- MU 272, 273**  
Saxophone ..... 2 Cr. Hrs.
- MU 274, 275**  
Percussion ..... 2 Cr. Hrs.
- MU 276, 277**  
Guitar ..... 2 Cr. Hrs.
- MU 278, 279**  
Organ ..... 2 Cr. Hrs.
- MU 280, 281**  
Harp ..... 2 Cr. Hrs.
- MU 282, 283**  
Violin ..... 2 Cr. Hrs.
- MU 284, 285**  
Viola ..... 2 Cr. Hrs.
- MU 286, 287**  
Cello ..... 2 Cr. Hrs.
- MU 288, 289**  
Double Bass ..... 2 Cr. Hrs.

**MU 290 Class Piano**

2 Cr. Hrs. – 3 Contact Hrs.

*Co-requisite:* MU 201. **W**

A continuation of the freshman piano class plus the addition of clef and vocal score reading. Required of all music majors unless they are able to pass the requirements at the end of their freshman year.

**MU 291 Class Piano**

2 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite:* MU 290.

*Co-requisites:* MU 202

A continuation of MU 290.

**Nursing**

**NUR 100 Overview of the Nursing Profession**

1 Cr. Hr. – 1 Contact Hr. **FS**

*Prerequisites:* Entry level requirements.

*Co-requisites:* AH 111, COM 103 or Equivalent, PSYC 201, BIOL 105L&L, PEA 101A.

This course is designed to provide students with an overview for a career in the profession of nursing. The focus of the course is on the roles and responsibilities of the licensed practical nurse and the registered nurse as members of the health care delivery team. Emphasis is placed on current issues and trends in nursing practice and education, and the derivation of medical terminology.

**AH 111 Environmental Stressors and Nutrition**

*Prerequisites: Entry level requirements.*

*1 Cr. Hr. – 1 Contact Hr. **FS***

*Co-requisites: NUR 100, COM 103 or Equivalent, PSYC 201, BIOL 105L&L, PEA 101A.*

This course is designed to provide the student with the theoretical foundation for the clinical application of nutrition principles in relation to stress adaptation throughout the nursing curriculum. The focus of the course is on the identification of the role of nutrients in maintaining man's dynamic equilibrium and the use of therapeutic diets for clients. ***This course is only open to Nursing students.***

**NUR 121 Environmental Stressors and Pharmacotherapeutics**

*1 Cr. Hr. – 1 Contact Hr. **FW***

*Prerequisites: NUR 100, AH 111*

*Co-requisites: ENG 101, NUR 126*

This course is designed to provide the student with the theoretical foundation for the clinical application of pharmacotherapeutic concepts in relation to stress adaptation throughout the nursing curriculum. The focus of the course is on the identification of the major drug classifications. Emphasis is placed on the identification of the basic mode of action, therapeutic effects, adverse effects, nursing implications, and patient teaching for the most common drug groups within each classification.

**NUR 126 Family Health & Nursing Care**

*7 Cr. Hrs. - 15 Contact Hrs. **FW***

*Prerequisites: NUR 100, AH 111, COM 103, PSYC 201, BIOL 105, PEA 101A .*

*Co-requisite: NUR 121*

This course is designed to provide the student with the theoretical and clinical foundation for nursing practice in the care of the family. The student will use the nursing

process to prioritize health needs, promote wellness, and facilitate stress adaptation with the client and family. Emphasis is placed on nursing assessment skills, nurse and patient safety, and health promotion with childbearing families.

**NUR 131B Care of the Childrearing Family**

*8 Cr. Hrs. – 16 Contact Hrs. **WS***

*Co-requisite: BIOL 106L&L.*

This course is designed to provide the student with the theoretical foundation for facilitating stress adaptation related to childrearing. The focus of the course is on the application of previously learned biopsychosocial and nursing principles and processes in the care of the childrearing family. Emphasis is placed on the identification of the changing priority of health needs and adaptation problems associated with infancy through young adulthood in acute care settings.

**NUR 141B Care of the Maturing Family**

*8 Cr. Hrs. – 16 Contact Hrs. **FS***

*Prerequisite: NUR 131B.*

*Co-requisites: PHIL 204, PEA/DNC elective.*

This course is designed to provide the student with the theoretical foundation for facilitating stress adaptation related to adult maturation. The focus of the course is on the application of previously learned biopsychosocial and nursing principles and processes in the care of the maturing family. Emphasis is placed on the identification of the changing priority of health needs and medical adaptation problems associated with middle and late adulthood.

## NUR 211A Care of the Family in Psychological Crisis

4 Cr. Hrs. – 8 Contact Hrs. **WS**

Prerequisite: NUR 212B.

Co-requisite: ANTH 103.

This course is designed to provide the student with the theoretical foundation for facilitating stress adaptation in clients/families in psychological crisis. The focus of the course is on the identification of biopsychosocial and nursing principles and processes used in the care of clients with mental health needs. Emphasis is placed on all components of the nursing process, therapeutic communication, and collaboration with team members in the care of psychiatric clients.

## NUR 212B Care of the Family in Physiological Crisis

8 Cr. Hrs. – 16 Contact Hrs. **FW**

Prerequisite: NUR 141B.

Co-requisites: BIOL 207A LAB and BIOL 207LEC

This course is designed to provide the student with the theoretical foundation for facilitating man's adaptation to multiple stressors in acute care settings. The focus of the course is on the identification and application of biopsychosocial and nursing principles and processes in the care of the family with complex health needs. Emphasis is placed on the application of all components of the nursing process, including use of advanced psychomotor skills, in the care of adults in physiological crisis.

## NUR 222A Managing the Care of the Family

5 Cr. Hrs. – 11 Contact Hr. **WS**

Prerequisite: NUR 211A.

Co-requisite: ANTH 103.

This course is designed to provide the student with a theoretical foundation for managing the nursing care for groups of individual patients and their families. Previously learned biopsychosocial and nursing principles are integrated into the

nurse manager role. Emphasis is placed on the use of management principles, the nursing process, trends in nursing, and transition into the registered nurse role.

## Business Technology (See Business)

## Philosophy

### PHIL 101 Basic Concepts of Philosophy

3 Cr. Hrs. – 3 Contact Hrs. **FW**

Prerequisite: Meet Ready to Succeed Requirement

A course which presents some of the issues, questions and problems of philosophy and quasi-philosophical thought, as these issues and thoughts are developed by traditional and contemporary philosophers.

### PHIL 102 Principles of Logic

3 Cr. Hrs. – 3 Contact Hrs. **FW**

Prerequisite: Meet Ready to Succeed Requirement

A course which aims to give students an understanding of the fundamental forms of rational argument and critical reasoning skills that can be used in a wide range of disciplines and careers. There will be an examination of deductive and inductive reasoning, as well as formal and informal fallacies to facilitate the art of distinguishing correct from incorrect reasoning.

### PHIL 104 Symbolic Logic

3 Cr. Hrs. – 3 Contact Hrs. **W**

Prerequisite: Meet Ready to Succeed Requirement

An introductory course in Symbolic Logic, the most powerful system of deductive logic yet devised. Includes propositional and predicate logic through identity with an emphasis on natural deduction. Particularly of value for those interested in computer science, mathematics, logic or philosophy.

**PHIL 202 Introduction to Ethics**3 Cr. Hrs. – 3 Contact Hrs. **F***Prerequisite: Meet Ready to Succeed Requirement*

An inquiry into both the good of the individual person and the good of society. Two-thirds of the course presents logic and an in-depth analysis of such ethical theories as relativism, egoism, utilitarianism, deontology, virtue ethics, religion, and contractarianism. One-third of the course will examine a varying assortment of such applied ethical issues as euthanasia, abortion, distributive justice, sexual ethics, and environmental ethics.

**PHIL 203 Philosophy of Religion**3 Cr. Hrs. – 3 Contact Hrs. **F***Prerequisite: Meet Ready to Succeed Requirement*

A brief comparative study of the history and content of major world religions followed by philosophical inquiry into the meaning, truth and value of religious phenomena.

**PHIL 204 Biomedical Ethics**3 Cr. Hrs. – 3 Contact Hrs. **FWS***Prerequisite: ENG 101*

An inquiry into many ethical problems which are particularly connected to the health care professions, but which are of concern to all persons. Issues studied include: individual responsibility in institutional settings, paternalism, patients' rights, human experimentation, the right to die, abortion and the right to health care in the context of limited societal resources. About one-third of the course consists of a survey of those issues and results of ethical theory and logic which sharpen perception, reduce confusion and encourage headway. No prerequisite, but students who have completed Philosophy 202 will be assigned a special research project.

**PHIL 205 Business Ethics**3 Cr. Hrs. – 3 Contact Hrs. **F/W***Prerequisite: Meet Ready to Succeed Requirement*

One-third of this course presents basic ethical theory and logic which together facilitate a deeper understanding of ethical problems. The second third covers those ethical problems that are apt to confront the business person directly and frequently. The final third of the course is an inquiry into broader ethical problems confronting business and society.

**PHIL 207 Environmental Ethics**3 Cr. Hrs. – 3 Contact Hrs. **W***Prerequisite: Meet Ready to Succeed Requirement*

One third of this course presents basic ethical theory and logic that together facilitate a deeper understanding of ethical problems. Two thirds of the course will explore issues in environmental ethics such as various attitudes toward nature, individual and public policy choices that affect the local and global environment, the moral status of animals, and the proper role of science and technology in an environmentally sensitive world.

**PHIL 210 World Religions**3 Cr. Hrs. – 3 Contact Hrs. **W***Prerequisite: Meet Ready to Succeed Requirement*

In this course the student will attempt to understand and critically analyze the world's major religions and how they impact societies and individuals. The religions covered are: Hinduism, Jainism, Buddhism, Taoism and Confucianism, Shinto, Judaism, Christianity, Islam and Sikhism. Other topics that may be covered are religious movements and the impact of religion on world culture and society, Native American religion.

## Physical Education - Activity/ Dance

All Muskegon Community College Physical Education activity classes are co-ed; the strength and physical ability required should be carefully considered in registering for individual or team activities.

Students pursuing an A.S.A. must take one credit hour from: PEA 101A, PEA 103, PEA 104A, PEA 118, or PEA 201 and one PEA/DNC credit hour of choice to satisfy graduation requirements.

All DNC classes may be taken as either Aesthetic Values credit or elective Physical Education credit. Any single course, however, will not satisfy both PEA and Aesthetic Values requirements.

Many classes are offered on the modular system (fewer than fifteen weeks) to take advantage of Michigan weather. Most modular classes are 7 weeks. Check the schedule of classes for starting date. Classes meet in the gym for the initial meeting unless noted in the semester schedule.

Although it is still highly recommended, a physical examination is not mandatory for physical education activity classes. The physical education requirement may be waived by a medical excuse based on a physician's signed statement. Where the physical education requirement has been waived, the student must still complete 62 credit hours to earn a degree.

Some courses require payment of a fee in addition to tuition. Please check the appropriate semester schedule for individual amounts.

## Physical Education - Activity

### PEA 100C Hatha Yoga

1 Cr. Hr. – 2 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

Basic postures, nutrition, meditation and the psychological and philosophical principles of yoga will be studied. Breath control and focusing the mind are practiced throughout the course.

### PEA 101A Fitness, Wellness & Nutrition

1 Cr. Hr. – 2 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

A study of the body functions as they relate to exercise, postural alignment, good nutrition and diet. Students will understand and experience factors important to the physical, psychological and social well-being of the individual. Individual physical fitness testing, exercise programs, leisure-time exploration and consumer skill development will be presented.

### PEA 103 Weight Training

1 Cr. Hr. – 2 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

Weight training is a course which covers objectives, fundamental skills, safety suggestions and procedures to develop individual conditioning and weight training programs. Performance and written tests are given.

### PEA 104A Walking, Jogging and Conditioning

1 Cr. Hr. – 2 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

A co-educational course designed for individuals interested in establishing a physical fitness program emphasizing the cardiovascular component. The class includes individually prepared programs of walking/jogging, flexibility and muscular endurance conditioning.

**PEA 105 Pocket Billiards***1 Cr. Hr. – 2 Contact Hrs. F W**Prerequisite: Meet Ready to Succeed**Requirement*

This course is designed to teach the various games of pocket billiards. It will include rules, regulations, the fundamentals of the different games, and match play tactics and tournament competition.

**PEA 106 Leisure Games***1 Cr. Hr. – 2 Contact Hrs. W**Prerequisite: Meet Ready to Succeed**Requirement*

Explanation of rules, strategies and courtesies of table tennis, shuffleboard, badminton, table games and other appropriate lifetime activities. This class includes singles and doubles play.

**PEA 107 Archery***1 Cr. Hr. – 2 Contact Hrs. F S**Prerequisite: Meet Ready to Succeed**Requirement*

Fundamental skills, techniques and rules of archery are practiced and studied, shooting 10-160 yards.

**PEA 108 Bowling***1 Cr. Hr. – 2 Contact Hrs. F W S**Prerequisite: Meet Ready to Succeed**Requirement*

This course includes history, rules, courtesies, fundamental skills, and team competition. (Fee)

**PEA 109 Sport Judo and Self-Defense***1 Cr. Hr. – 2 Contact Hrs. F W**Prerequisite: Meet Ready to Succeed**Requirement*

The course will include a history of the sport, basic individual fundamentals, rules interpretation, courtesies and self-defense techniques.

**PEA 110 American Karate System I***1 Cr. Hr. – 2 Contact Hrs. F W**Prerequisite: Meet Ready to Succeed**Requirement*

Course is designed to acquaint the student with the basics and history of karate. The beginning student will learn the proper stretching and warm-up exercises. Students will be instructed to use hand and foot techniques of Karate along with self-defense.

**PEA 111A Tae Kwon Do Ap Koobi***1 Cr. Hr. – 2 Contact Hrs. F**Prerequisite: Meet Ready to Succeed**Requirement and be at least 14 years of age.*

Students will: practice the breathing, balance, rhythm, timing, and focus necessary to perform the basic blocks, punches, strikes, kicks, and turns from the front stance; demonstrate the 1st Taegeuki form; increase advantage through leverage and alignment; translate Korean terms of class protocol; discuss significance of trigrams to forms; apply self-defense escapes from wrist/hand grabs; and begin to develop an awareness of one's surroundings for safety issues.

**PEA 112 Wrestling I***1 Cr. Hr. – 2 Contact Hrs. F**Prerequisite: Meet Ready to Succeed**Requirement*

This course covers: history, explanation of rules and regulations, demonstration and practice of basic holds, rides and takedowns. Practical and written testing.

**PEA 114 Golf I***1 Cr. Hr. – 2 Contact Hrs. F S**Prerequisite: Meet Ready to Succeed**Requirement*

Fundamentals, skills, strategies and rules of golf are practiced and studied. Practice on the driving range, putting green and actual play are included. Skill and written testing. (Fee)

**PEA 116 Tennis I***1 Cr. Hr. – 2 Contact Hrs. ❸**Prerequisite: Meet Ready to Succeed Requirement*

This course includes the history, explanation of rules and regulations, practice of fundamental skills and class tournament competition. Skill and knowledge testing.

**PEA 118 Cycling***1 Cr. Hr. – 2 Contact Hrs. ❸❸**Prerequisite: Meet Ready to Succeed Requirement*

This course is designed to introduce the individual to the activity of cycling. The class will include safety factors of cycling and a progressive cycling program. Fitness and written testing are included.

**PEA 130 Beginning Swimming***1 Cr. Hr. – 2 Contact Hrs. ❶**Prerequisite: Meet Ready to Succeed Requirement*

Course is designed for beginners and advanced beginners. Materials covered include: adapting to the water, basic strokes, including swimming on front, back, and side, and safety skills. Individual instruction in sequence as readiness occurs. American Red Cross certification is awarded upon satisfactory testing and completion.

**PEA 131 Intermediate Swimming***1 Cr. Hr. – 2 Contact Hrs. ❶**Prerequisite: PEA 130 or American Red Cross Level 3 certificate or its equivalent.*

This course is designed for intermediate swimmers. Materials covered include: improving the five basic strokes, safety, learning three new strokes and understanding swimming for fitness. Individualized instruction in sequence as readiness occurs. American Red Cross certification is awarded upon satisfactory testing and completion.

**PEA 133 Water Safety Instructor***1 Cr. Hr. – 2 Contact Hrs. ❶**Prerequisites: Must be 16 years of age, take a pre-course skills test, and meet Ready to Succeed Requirement*

The skills test includes: swim 25 yards of front crawl, back crawl, side stroke, breast stroke, and elementary back stroke and 15 yards of butterfly stroke, maintain a position on back for one minute, and tread water for one minute. Course covers review of the styles of swimming, teaching the styles, and observation and teaching. Upon successful completion of the course, water safety instructors are qualified to teach all levels of the American Red Cross Infant and Pre-school Aquatics Program, Levels I-VI in the Learn to Swim Program, Parental and Child Aquatics and the Water Safety Outreach Programs. They will also have Fundamentals of Instructor Training. American Red Cross certification is awarded upon satisfactory testing and completion.

**PEA 134A Lifeguard Training***1 Cr. Hr. – 3 Contact Hrs. ❶**Prerequisites: Meet Ready to Succeed Requirement and be at least 15 years old, swim 300 yards continuously for a pool lifeguard certification, or swim 550 yards continuously for a waterfront lifeguard certification.*

This course focuses on Lifeguarding skills and knowledge needed to prevent and respond to aquatic emergencies. It prepares lifeguard candidates to recognize emergencies, respond quickly and effectively to emergencies and prevent drowning and other incidents. The course also teaches other skills and individual needs to become a professional lifeguard. American Red Cross certificates for Lifeguard Training, First Aid, CPR for Professional Rescuers, Waterfront Lifeguarding, Preventing Disease Transmission, Oxygen Administration, and AED Essentials are awarded upon satisfactory testing and completion.

**PEA 139A Basic Canoeing/Kayaking***1 Cr. Hr. – 2 Contact Hrs. F S**Prerequisite: Meet Ready to Succeed Requirement*

This course is designed for those students who wish to gain additional knowledge and skill in the sports of canoeing and kayaking. The course will cover the history, equipment design, regulations, skills and techniques involved in safe paddling in flat, open and swift water. For admittance into the course, the student must have swimming ability sufficient to enable him/her to maintain himself/herself in the water for ten minutes comfortably and calmly, with relaxation and gentle movements, while clothed in shirts, trousers and tennis shoes or the equivalent.

**PEA 152 Softball***1 Cr. Hr. – 2 Contact Hrs. F W**Prerequisite: Meet Ready to Succeed Requirement*

A course which covers skills, explanation of rules and regulations, demonstration and practice of basic skills. There will be practical and written testing.

**PEA 153 Baseball I***1 Cr. Hr. – 2 Contact Hrs. F**Prerequisite: Meet Ready to Succeed Requirement*

This course is designed to cover the basic fundamental skills, rules and strategies of baseball. There will be practical skill and written tests on rules and basic fundamentals.

**PEA 154A Volleyball I***1 Cr. Hr. – 2 Contact Hrs. F**Prerequisite: Meet Ready to Succeed Requirement*

The fundamental skills, rules, strategies and courtesies of power volleyball are practiced and studied. Written and skill testing are required.

**PEA 155 Basketball I***1 Cr. Hr. – 2 Contact Hrs. F W**Prerequisite: Meet Ready to Succeed Requirement*

This course includes: history, explanation of rules, basic individual fundamentals, offensive and defensive theory and testing of individual skills and knowledge.

**PEA 156 Beach Volleyball***1 Cr. Hr. – 2 Contact Hrs. S**Prerequisite: Meet Ready to Succeed Requirement*

The fundamental skills, rules, strategies and courtesies of beach volleyball are practiced and studied. Opportunity to play, officiate and critique will be offered. Written and skill testing are required.

**PEA 200 Kundalini Yoga***1 Cr. Hr. – 2 Contact Hrs. F W**Prerequisite: Meet Ready to Succeed Requirement*

Basic postures, meditation, nutrition, and psychological and philosophical principles of Kundalini yoga will be studied. Breath control, mantra (aloud and silent), and focusing the mind are practiced throughout the course.

**PEA 201 Aerobic Movement For Fitness***1 Cr. Hr. – 2 Contact Hrs. F W S**Prerequisite: Meet Ready to Succeed Requirement*

An introduction to aerobic fitness programs and routines. Students will learn simple aerobic routines including steps set to music, achieving better cardiovascular endurance, muscular strength, overall flexibility and individual fitness testing.

**PEA 209 Sport Judo and Self Defense II***1 Cr. Hr. – 2 Contact Hrs. F W*

*Prerequisites: PEA 109 and be at least 14 years of age. Students must have basic experience in some Martial art such as Judo, Jujutsu, Karate, Self Defense or other similar art. A Muskegon Community College physical card must be on file in the Physical Education Office prior to the beginning of participation in class.*

Sport Judo and Self Defense II (Jujutsu) will include advanced techniques enabling the student to become more skilled in Martial Arts such as KATA (forms) and SHIAI (competition).

**PEA 210 American Karate System II***1 Cr. Hr. – 2 Contact Hrs. F W*

*Prerequisites: PEA 110 or instructor permission and be at least 14 years of age. Course includes a review of previous requirements.*

The major objectives of the class are to learn advanced karate techniques; tournament rules; develop confidence, coordination and character; prepare the student in officiating and the responsibility of teaching basic karate techniques.

**PEA 211A Tae Kwon Do Dwit Koobi***1 Cr. Hr. – 2 Contact Hrs. W*

*Prerequisites: Must be at least 14 years of age.*

Students will: practice the breathing, balance, rhythm, timing, and focus necessary to perform the basic blocks, punches, strikes, kicks, and turns from the back stance; demonstrate the 3rd Palgwe form; increase power by adding momentia; translate Korean terms of basic moves; discuss symbolism of T'aegukki to life; apply self-defense escapes from garment grabs/body hugs; and begin to develop an awareness of one's habits for safety issues.

**PEA 212 Wrestling II***1 Cr. Hr. – 2 Contact Hrs. W*

*Prerequisite: PEA 112 or instructor permission.*

This course is designed to teach wrestling in theory and practice. Specialized work at different levels to increase the standards of wrestling for coaches or physical educators will be emphasized. Students will have an opportunity to discover their own shortcomings and how to cope with them.

**PEA 214A Golf II***1 Cr. Hr. – 2 Contact Hrs. F S*

*Prerequisite: PEA 114 or instructor permission.*

This course is designed for those students who wish to play, teach or coach the game of golf. Normally considered to be for the intermediate student of golf. (Fee)

**PEA 216 Tennis II***1 Cr. Hr. – 2 Contact Hrs. F*

*Prerequisite: PEA 116 or instructor permission.*

This course is designed for those students who wish to gain additional knowledge and skill for advanced play, teaching or coaching tennis.

**PEA 252 Softball II***1 Cr. Hr. – 2 Contact Hrs.*

*Prerequisite: Instructor permission.*

A softball course which covers the history, explanation of rules and regulations, demonstration and practice of basic skills. There will be practical and written testing covering rules and basic skills.

**PEA 253 Baseball II***1 Cr. Hr. – 2 Contact Hrs. F*

*Prerequisite: PEA 153 or instructor permission.*

The course will specialize in teaching the theory and practice of baseball. Work will be provided at different levels to increase knowledge and understanding of the game for coaches and teachers.

**PEA 254A Volleyball II***1 Cr. Hr. – 2 Contact Hrs. F**Prerequisite: PEA 154A or instructor permission.*

This course includes the study of advanced individual skills and team strategies. Coaching techniques and officiating are emphasized. Outside team competition is offered. Practical skill tests and written exams.

**PEA 255 Basketball II***1 Cr. Hr. – 2 Contact Hrs. F W**Prerequisite: None*

This course is designed for those students who wish to gain additional knowledge and skill which would be of value to those who wish to play, teach, officiate or coach the game of basketball.

**Physical Education - Professional****PEP 100 Foundations of Physical Education***2 Cr. Hrs. – 2 Contact Hrs. F**Prerequisite: None*

An orientation to the profession of physical education, its history, basic principles, relation to growth and mental health and vocational opportunities. This course is intended for all students who wish to major or minor in physical education and/or related fields.

**PEP 203 Fundamentals of Coaching***3 Cr. Hrs. – 3 Contact Hrs. F W S**Prerequisite: None*

This course is designed for both experienced and novice coaches interested in understanding and/or improving their professional coaching skills. Topics to be covered include: philosophy, growth and development, sports safety training, psychology, litigation/liability and sports management. American Red Cross Sports Safety Training, which includes adult CPR, certification is awarded upon successful completion (80% or better).

**Physical Science****PHSC 101A Introductory Physical Science Lecture and Lab***4 Cr. Hrs. – 6 Contact Hrs. F W S**Prerequisite: Meet Ready to Succeed Requirement*

This is a course for non-science majors offering students a broad exposure to the physical sciences. The approach to this course is conceptual and contemporary, and includes topics from various physical sciences. Students will use both empirical and theoretical evidence to gain an understanding of the fundamental laws that govern the universe.

**Physics****PHYS 201 L&L Principles of Physics***4 Cr. Hrs. – 6 Contact Hrs. F**Prerequisites: MATH 112 or instructor permission.*

An integrated lecture and lab course that develops, by means of lecture and laboratory experience, a basis for understanding the physical aspects of phenomenon classified as mechanics, heat, and waves (sound). This course is especially suitable for pre-professional students such as pre-med, pre-law, pre-dental, and life science and liberal arts majors.

**PHYS 202 L&L Principles of Physics***4 Cr. Hrs. – 6 Contact Hrs. W**Prerequisites: PHYS 201 L&L or instructor permission.*

An integrated lecture and lab continuation of PHYS 201 which considers the physical aspects of phenomenon classified as magnetism, electricity, light, and nuclear physics. This course is especially suitable for pre-professional students such as pre-med, pre-law, pre-dental, and life science and liberal arts majors.

**PHYS 203 L&L Engineering Physics**5 Cr. Hrs. – 7 Contact Hrs. **F***Prerequisite: MATH 161**Co-requisite: MATH 162 or instructor permission.*

A course designed for students majoring in engineering, mathematics or the physical sciences. Lectures, labs, demonstrations, discussions and problems on the principles of mechanics, sound, waves, heat and thermodynamics. Computer applications included. Graphing calculators will be utilized.

**PHYS 204 L&L Engineering Physics**5 Cr. Hrs. – 7 Contact Hrs. **W***Prerequisites: MATH 162 and PHYS 203 L&L, or instructor permission.*

A continuation of PHYS 203 L&L. Lectures, labs, demonstrations, discussions, and problems on the principles of electricity, magnetism, circuits, light, and modern physics. Computer applications included. Graphing calculators will be utilized.

**Political Science****PSCI 111 Introduction to American Government**4 Cr. Hrs. – 4 Contact Hrs. **FWS***Prerequisite: Meet Ready to Succeed Requirement*

A study of the structure and function of U.S. national, state, and local government emphasizing the basic rights and responsibilities of citizenship, as well as an introduction to basic forms and philosophies of government.

**PSCI 112A Contemporary Issues in U.S. Public Administration**4 Cr. Hrs. – 4 Contact Hrs. **D***Prerequisite: PSCI 111 or instructor permission.*

A study of the administration of American government and the problems currently confronting it. Emphasis will be placed upon current and controversial problems of

administration. An attempt will be made to include those areas meeting needs and interests of students.

**PSCI 202 International Relations**3 Cr. Hrs. – 3 Contact Hrs. **FW***Prerequisite: Meet Ready to Succeed Requirement*

This course examines political relationships worldwide. It will include the analysis of conflicts in the world, and how nations search for peace through the United Nations. Additional areas to be examined are international law, the World Trade Organization, the International Monetary Fund, the World Bank, currency exchange rates, the integration of trade blocs like the European Union, environmental pollution, and economic development.

**PSCI 203 Readings In the History of Western Political Thought**3 Cr. Hrs. – 3 Contact Hrs. **D***Prerequisite: PSCI 111 or instructor permission.*

An introduction to the history of Western Political Thought from Plato to Nietzsche. The course will concentrate on the original texts which will be subjected to critical analysis. Major themes will be identified and examined in the light of the American democratic experience.

**PSCI 205 Contemporary Political Issues in United States Government**3 Cr. Hrs. – 3 Contact Hrs. **FW***Prerequisite: Meet Ready to Succeed Requirement (Recommended: PSCI 111)*

An intensive study and critical analysis of contemporary political issues in U.S. Government involving issues that deal with some or all of the following: basic concepts of U.S. democracy, state-federal relationships, government finance, political interest groups, legislative powers, executive powers, judicial powers, civil rights, civil liberties, and international relations.

**PSCI 210 International Organizations***1 Cr. Hr. – 1 Contact Hr. F W**Prerequisite: Meet Ready to Succeed***Requirement**

This course concentrates on the objectives, functions and structure of selected international organizations. Potential organizations include but are not limited to: United Nations, Arab League, North Atlantic Treaty Organization, Organization of African Unity. International Organizations study will prepare and provide students an opportunity to participate in an off campus conference featuring simulations of a selected organization.

**PSCI 211 Comparative Government***3 Cr. Hrs. – 3 Contact Hrs. F W**Prerequisite: Meet Ready to Succeed***Requirement**

This course will compare governments in various European, American, Asian, and African states. Students will examine political, cultural, economic, and historical reasons for similarities and differences between nations. The United States will be used as a model for comparison.

**PSCI 220 Labor Studies***3 Cr. Hrs. – 3 Contact Hrs. F**Prerequisite: Meet Ready to Succeed***Requirement**

A survey course studying and critically analyzing the historical, political, and legal frameworks of the labor movement, major labor laws, causes and purposes of the labor movement, union structure and behavior, and labor-management approaches to solving employment disputes in the U.S. and internationally.

**PSCI 290CI Campaign Cooperative Internship***3 Cr. Hrs. – 3 Contact Hrs. D**Prerequisite: None*

The Cooperative Internship Program is a paid or non-paid field work experience in electoral politics within the student's major area of study. Variable credit may be earned

dependent upon the number of work hours available from the sponsoring organization. A student may sign up for no more than two (2) internships as desired; however, the number of credit hours which can be applied toward a degree depends upon the student's course of study and departmental resources. The maximum number of hours of cooperative internship is 6 credit hours depending upon the program. This course is offered on a pass/ no pass basis.

**Psychology****PSYC 102 Applied Psychology***3 Cr. Hrs. – 3 Contact Hrs. F W S**Prerequisite: Meet Ready to Succeed***Requirement**

This course focuses on the practical application of psychological principles in everyday life. A variety of psychological perspectives will be utilized to enhance students' ability to understand and change behavior.

**PSYC 201 General Psychology***4 Cr. Hrs. – 4 Contact Hrs. F W S**Prerequisite: Meet Ready to Succeed***Requirement**

This course provides an academic survey of research methods and statistics, and in-depth study of neuroscience, development, learning/memory, sensation/perception, states of consciousness, motivation/emotion, stress/health, disorders/therapy, and social psychology. It is especially recommended for those who plan to continue their education beyond the associate degree level.

**PSYC 202 Educational Psychology**3 Cr. Hrs. – 3 Contact Hrs. **F****W***Prerequisite: A grade of “C” or better in PSYC 201, or instructor permission.*

This course explores interrelationships between the fields of psychology and education. Research data, learning theories, cultural pluralism and special topics reflective of current educational change are examined. Particular interests in educational psychology at specific age/grade levels may be pursued in depth.

**PSYC 203 Abnormal Psychology**4 Cr. Hrs. —4 Contact Hrs. **F****W***Prerequisite: A grade of “C” or better in PSYC 201, or instructor permission.*

Students will study the etiology, assessment, diagnosis, and treatment of psychological disorders in adults and children. They will learn about the biological, psychological, and sociocultural perspectives on these disorders, along with the related legal and ethical issues.

**PSYC 207 Life Span Development**4 Cr. Hrs. – 4 Contact Hrs. **F***Prerequisite: A grade of “C” or better in PSYC 201, or instructor permission.*

This course will survey the psychological research and theory of patterns of biological, cognitive, emotional, and social development from conception through death.

**PSYC 208 Adolescent Development**3 Cr. Hrs. – 3 Contact Hrs. **W***Prerequisite: A grade of “C” or better in PSYC 201, or instructor permission.*

This course will survey the psychological research and theory of patterns of biological, cognitive, emotional, personality, and social changes experienced as individuals develop from childhood through adolescence and young adulthood. The course follows an ecological systems approach as individuals are situated within social contexts, family, peers, school, community, and the larger culture.

**PSYC 209 Psychological Disorders of Childhood**3 Cr. Hrs. - 3 Contact Hrs. **W***Prerequisites: Prerequisite of a grade of “C” or better in PSYC 201*

This course provides a topical survey of the area of childhood psychological disorders. This course will include an examination of assessment, diagnosis, and treatments of various behavioral, emotional, and developmental /learning disorders commonly found during childhood and adolescence. In addition, child maltreatment and non-accidental trauma will also be discussed.

**PSYC 210 Social Psychology**3 Cr. Hrs. – 3 Contact Hrs. **F****W***Prerequisite: PSYC 201 or SOC 101A or instructor permission.*

Social psychology focuses on how an individual’s thoughts, feelings, and actions are influenced by others. This course will survey the research and theory of patterns of social identity, social influence, social perception, and social cognition. Additional topics include altruism, aggression, attitude change, and interpersonal attraction. There is an ongoing emphasis on how social psychology applies to medicine, the law, and work organizations.

**Reading****RDG 040 Essential Reading Skills  
(formerly RDG 040C)**3 Cr. Hrs. – 3 Contact Hrs. **F****W****S***Prerequisites: None*

This course is for students scoring between 11 and 55 on the COMPASS Reading Test. Topics covered include prefixes, suffixes, vocabulary, reading for the main idea, and identifying supporting details. Course includes weekly assignments, some one-on-one and small group instruction. Additional lab time and/or small group meetings are required.

**RDG 050 Essential Reading Skills***(formerly RDG 040A)**1 Cr. Hr. – 1 Contact Hr. FWS**Prerequisites: None*

This course is designed for students scoring 56-75 on the Compass Reading Placement Test. Course instruction includes word attack, prefixes-suffixes, vocabulary, reading for the main idea, and finding supporting details. Course includes individualized weekly assignments and private instruction. Additional lab time and/or small group meetings are required.

**RDG 060 Reading and Succeeding in College (formerly RDG 040E)***1 Cr. Hr. – 1 Contact Hr. W**Prerequisite: RDG 040 or RDG 050*

RDG 060 is designed for at-risk students who have completed RDG 040 or RDG 050 but have not reached 10th grade reading level on the Nelson-Denny Reading Test and, consequently, are not ready for RDG 130, RDG 140, or RDG 150. Each student will have an individual weekly appointment with an instructor. Course instruction will cover the following: time management, concentration strategies, reading strategies, how to read and study a textbook assignment, how to take lecture notes, and how to study for tests. Additional lab time and/or small group meetings are required. Note: We recommend that students are also enrolled in a class which requires a textbook and has an instructor lecture. It is NOT recommended that students enroll in College Success Seminar (CSS 100) during the same semester.

**RDG 130 Advanced Reading Skills I***1 Cr. Hr. – Variable Contact Hrs. FWS**Prerequisite: COMPASS Reading score of 76 or higher or fulfillment of Ready to Succeed Requirement*

This course will provide individualized weekly assignments and private instruction tailored to meet the student's needs. After the student completes a pretest, the instructor

and student will decide whether the primary focus will be vocabulary development or comprehension. Course work for vocabulary development builds a practical college-level vocabulary by teaching Greek and Latin etymology, dictionary skills, vocabulary memory devices and use of context. Course work for comprehension improves reading speed and develops comprehension of main ideas and details. Additional lab time and/or small group meetings will be required.

**RDG 140 Advanced Reading Skills II***1 Cr. Hr. – Variable Contact Hrs. FWS**Prerequisite: RDG 130*

This course is designed for students who have already completed RDG 130 and wish to further improve their reading skills. It will provide individualized weekly assignments and private instruction tailored to meet the student's needs. After discussing the student's work and test scores from RDG 130, the instructor and student will decide whether the primary focus will be vocabulary development or comprehension. Course work for vocabulary development builds a practical college-level vocabulary by teaching Greek and Latin etymology, dictionary skills, vocabulary memory devices and use of context. Course work for comprehension improves reading speed and develops comprehension of main ideas and details. Additional lab time and/or small group meetings will be required.

**RDG 150 Study Skills/Test Taking***1 Cr. Hr. – Variable Contact Hrs. FWS**Prerequisite: COMPASS score of 76 or higher or fulfillment of Ready to Succeed Requirement*

This course teaches time management, concentration, memory improvement, note taking, test taking, text study, and college library skills. Note: We recommend that students taking RDG 150 also take at least one lecture-type college course during the same semester. It is NOT recommended to take College Success Seminar (CSS 100) during the same semester.

## Real Estate

### RE 101 Real Estate I

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: None*

This course provides background information for the State Real Estate Salesperson's examination. The course is designed for real estate sales people and those interested in entering the real estate profession. Content includes economics, legal aspects, nature of real property, ownership, and property rights. Several certified professional realtors are used as resource persons for key subject areas.

## Recreation

### REC 111 Introduction to Recreation and Leisure

3 Cr. Hrs. – 3 Contact Hrs. **F S**

*Prerequisite: None*

An examination of the history and development of the park and recreation movement; sociological, economical, psychological and political consideration of leisure and recreation in contemporary societies; professional and service organizations and their interrelationships; and orientation to the professional field.

### REC 122 Leadership in Recreation

2 Cr. Hrs. – 2 Contact Hrs. **W**

*Prerequisite: None*

This course is designed to acquaint the student with fundamental knowledge of leadership and group functioning. It presents, among several related aspects, the development of leadership study, characteristics of group functioning, and selected supervision topics such as delegation and evaluation. Some questions to be considered are: What determines leadership effectiveness? What influence does the situational environment have on leader behavior? What contributes to group cohesion and stability? What leadership

roles present difficulty to the recreation and leisure service practitioner? What factors motivate subordinate work behavior?

### REC 123 Recreation and Leisure Programming

2 Cr. Hrs. – 2 Contact Hrs. **W**

*Prerequisite: None*

This course is designed to provide the student with an understanding of recreation programming as it relates to a variety of settings, situations and people. Emphasis will be placed on the concepts and processes of organizing, conducting and evaluating programs.

### REC 211-214 Field Study in Recreation Leadership

1-4 Cr. Hrs. – Variable **D**

*Prerequisites: REC 111, REC 122, and REC 123.*

An in-depth experience in the field(s) of private, agency, or municipal recreation and parks (to include community school programs) primarily for recreation majors and minors. Students will meet several times prior to their field study experience with the college coordinator.

**REC 211**..... 1 credit - 60 hours

**REC 212**..... 2 credits - 120 hours

**REC 213**..... 3 credits - 180 hours

**REC 214**..... 4 credits - 240 hours

### REC 215 Recreation and Special Populations

2 Cr. Hrs. – 2 Contact Hrs. **D**

*Prerequisite: REC 111 or instructor permission.*

This course is specifically designed to acquaint the student with an overview of therapeutic recreation which involves physically, mentally or emotionally challenged; social deviant; the aged and substance abusers within institutions, agencies and in the community. The course is intended for students interested in general recreation as well as those who wish to specialize in working with special groups.

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## Respiratory Therapy

### RT 101 Respiratory Therapy Physics

1 Cr. Hr. – 1 Contact Hr. ⑥

Prerequisite: None

This course introduces the student to the basic concepts of classical physics used in respiratory care.

### RT 110 L&L

#### Equipment and Procedures I

3 Cr. Hrs. – 5 Contact Hrs. ④

Prerequisites: AH 102 and RT 101.

Co-requisite: RT 111 LEC.

This course is designed to cover equipment and procedures in routine oxygen therapy. Topics included are: the physical properties of gases, manufacture and transport of medical gases, oxygen storage systems, pressure regulating systems, flow regulating systems, oxygen delivery equipment, and oxygen analyzers.

### RT 111 LEC

#### Introduction to Respiratory Therapy

3 Cr. Hrs. – 3 Contact Hrs. ④

Prerequisites: AH 102 and RT 101.

Co-requisite: RT 110 L&L.

This course is designed to give an introduction to the field of Respiratory Therapy and to basic medical sciences. Topics included are: the gas laws, physical states and structure of matter, role of energy in chemical and biological systems, acid-base physiology and processes of body metabolism.

### RT 120

#### L&L Equipment and Procedures II

3 Cr. Hrs. – 5 Contact Hrs. ④

Prerequisites: RT 110 L&L and RT 111 LEC.

Co-requisites: RT 121 and RT 122.

This course is designed to familiarize the student with proper techniques and equipment used for the delivery of aerosol/humidity therapy, incentive spirometry, intermittent positive pressure breathing (IPPB) and chest physical therapy.

### RT 121 Pharmacology

2 Cr. Hrs. – 2 Contact Hrs. ④

Prerequisites: RT 110 L&L and RT 111 LEC.

Co-requisites: RT 120 L&L and RT 122.

This course introduces the student to the general principles of pharmacology and gives an in-depth study of cardiopulmonary drugs.

### RT 122 Clinical I

2 Cr. Hrs. – 4 Contact Hrs. ④

Prerequisites: RT 110 L&L and RT 111 LEC.

Co-requisites: RT 120 L&L and RT 121.

This course is designed to introduce the student to patient care. The student will be assigned such responsibilities as general rounds. In addition, students will observe certain respiratory care procedures being performed.

### RT 130 L&L Equipment and Procedures III

3 Cr. Hrs. – 5 Contact Hrs. ⑤

Prerequisites: RT 120 L&L, RT 121, and RT 122.

Co-requisites: RT 131, RT 132, and RT 134.

This course is designed to present procedural tasks including: intubation, airway care and management, pulmonary function testing and arterial blood gas sampling.

### RT 131 Physiology

3 Cr. Hrs. – 3 Contact Hrs. ⑤

Prerequisites: RT 120 L&L, RT 121, and RT 122.

Co-requisites: RT 130 L&L, RT 132, and RT 134.

This course is designed to give the student an in-depth study of cardiopulmonary physiology.

**RT 132 Clinical II**

3 Cr. Hrs. – 8 Contact Hrs. ⑤

*Prerequisites:* RT 120 L&L, RT 121, and RT 122.

*Co-requisites:* RT 130 L&L, RT 131, and RT 134.

This course is designed to allow the student to practice techniques mastered in the previous practicum. During this course, the student will also become proficient in performing all basic respiratory care in the hospital.

**RT 134 Introduction to Mechanical Ventilation**

1 Cr. Hr. – 1 Contact Hr. ⑤

*Prerequisites:* RT 120 L&L, RT 121, and RT 122.

*Co-requisites:* RT 130 L&L, RT 131, and RT 132.

This course is designed to introduce the student to the theories of adult mechanical ventilation. Emphasis will be placed on patient assessment, indications, modes of ventilation, and management of the mechanically ventilated adult patient.

**RT 141 Pulmonary Pathophysiology**

2 Cr. Hrs. – 2 Contact Hrs. ⑥

*Prerequisites:* RT 130 L&L, RT 131, RT 132, and RT 134.

*Co-requisites:* RT 144 and RT 152 CLI.

This course examines the mechanism of pulmonary disease. Emphasis is placed on a detailed study of etiology, clinical manifestations, treatment, complications, and prognosis for most pulmonary disorders.

**RT 144 Adult Mechanical Ventilation**

3 Cr. Hrs. – 3 Contact Hrs. ⑥

*Prerequisites:* RT 130 L&L, RT 131, RT 132, and RT 134.

*Co-requisites:* RT 141 and RT 152 CLI.

This course is a continuation of the Introduction to Mechanical Ventilation course. Emphasis will be placed on the evaluation, care and management of mechanically ventilated adult patients. Additional emphasis will be placed on the application, mechanical functions and operation of specific ventilator systems.

**RT 152 CLI Clinical IV**

5 Cr. Hrs. – 12 Contact Hrs. ⑥

*Prerequisites:* RT 130 L&L, RT 131, RT 132, and RT 134.

*Co-requisites:* RT 141 and RT 144.

This course is designed to allow the student to develop competency in the critical care areas, mastering skills in mechanical ventilation of adult patients.

**RT 162 CLI Clinical V**

7 Cr. Hrs. – 16 Contact Hrs. ⑥

*Prerequisites:* RT 141, RT 144, and RT 152 CLI.

This course is designed to allow the student to further develop skills and competence in the adult critical care areas. Here the student will master ventilator therapy of the adult patient. By the end of the semester, the student should be able to assume a well-rounded position on the Respiratory care team.

**RT 210 Cardiovascular and Renal Physiology**

4 Cr. Hrs. – 4 Contact Hrs. ⑥

*Prerequisite:* RT 162 CLI.

*Co-requisite:* RT 220C.

This course is designed to present the anatomy, physiology and monitoring methods used to examine the heart-lung system and the kidneys. Emphasis will be placed on the electrocardiogram and hemodynamic monitoring, cardiac pharmacology, renal control of electrolytes and applications toward clinical respiratory care.

**RT 212A Advanced Clinical Practicum I**

7 Cr. Hrs. – 16 Contact Hrs. ⑥

*Prerequisite:* None

This clinical rotation is designed to prepare the student for an in-depth analysis of various critical care and diagnostic specialties.

**RT 220C Pediatric/Neonatal Critical Care***4 Cr. Hrs. – 6 Contact Hrs. W**Prerequisite: RT 162 CLI.**Co-requisite: RT 210.*

This course is designed to examine the various methods and procedures used to evaluate and care for the high-risk infant and pediatric patient. Emphasis will be placed on fetal development and monitoring, maternal risk factors, labor and delivery, newborn pathophysiology, mechanical ventilation and cardiopulmonary monitoring.

**RT 222A Clinical Rotation VII***3 Cr. Hrs. – 8 Contact Hrs. F**Prerequisite: RT 212A.**Co-requisites: RT 230B and RT 240.*

This is the second and last clinical rotation taken by the second-year student. It is designed to expose the student to various specialties of respiratory care, including one day each in: home care; rehabilitative care; pulmonary function testing; sleep studies; smoking cessation; asthma education.

**RT 230B Pulmonary Diagnostics and Rehabilitation***2 Cr. Hrs. – 2 Contact Hrs. F**Prerequisite: RT 212A.**Co-requisites: RT 222A and RT 240.*

This course explores the various methods of testing, evaluating and rehabilitating patients with pulmonary disease and disability. Emphasis will be placed on organization of rehabilitation programs, preventive care and home care.

**RT 240 The Health Care Environment***1 Cr. Hr. – 1 Contact Hr. F**Prerequisite: RT 212A.**Co-requisites: RT 222A and RT 230B.*

This course is designed to acquaint the student with the environments and forces that shape health care policy. Emphasis is placed on the social, political, medical and economic forces that influence the provision of health care today.

**RT 250 Asthma Educator Course***3 Cr. Hrs. – 3 Contact Hrs. D**Prerequisite: None*

This is a post-graduate course designed to train health care practitioners to be asthma educators and to prepare them for the national certification exam currently being developed by the American Lung Association. This course is for those health care professionals who have completed formal training in accredited health care programs. This course will cover all aspects of asthma education including pathology, pharmacology, diagnostics, psychosocial training, and asthma management planning.

**Sociology****SOC 101A Principles of Sociology***3 Cr. Hrs. – 3 Contact Hrs. FWS**Prerequisite: Meet Ready to Succeed Requirement*

A course offering the student an opportunity to grasp the basic principles necessary to develop sociological insights. Societal structure, as well as the basic tools of sociological measurement are surveyed. Emphasis is on the United States from a global perspective. The course is designed to equip sociology majors with the necessary foundation to continue in sociology and to provide non-majors with a general understanding of the structure and processes of society.

### SOC 102A Race, Ethnicity, and Immigration

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: Meet Ready to Succeed Requirement*

This course explores the related concepts of race, ethnicity, and immigration and their impact on the social conditions of diverse American communities. Students will learn how race relations shape politics, economics, housing, health, education, law, entertainment, and civil society. Students will learn about the conditions in which different peoples were incorporated into the American polity and how this incorporation affects people's lives on the group and individual level.

### SOC 202A Modern Social Problems

3 Cr. Hrs. – 3 Contact Hrs. **WS**

*Prerequisite: SOC 101.*

This course surveys major obstacles faced by societies from a sociological perspective. Social problems rooted in fundamental inequalities are surveyed including: economic inequality, work, education, race and ethnicity, gender, crime, and the family. Social problems are defined, cause is analyzed, and solutions are critically evaluated.

### SOC 203 Introduction to Social Work

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisite: SOC 101A or SOC 202A or instructor permission.*

Designed to present the objectives, methods and practices of the current field of social work. Where possible and whenever possible field work is included as part of the course offering. Field observation trips, presentations by practicing social workers, research practitioners and members of relevant social institutions and agencies will also be included. This course also assists those students majoring in education, ministry, medicine or law to gain intelligent awareness of the functions of existing social agencies in the Muskegon community.

### SOC 205 Marriage and Family

3 Cr. Hrs. – 3 Contact Hrs. **WS**

*Prerequisite: SOC 101A or equivalent, with an earned grade of "C" or better, or instructor permission.*

Marriage and Family explores the sociological and ecological perspectives of intimate relationships and family dynamics of modern society; including changing traditions and family forms. With an emphasis on current research and demographics, topics studied in the course include: gender, sexuality, love, communication, conflict, singlehood and cohabitation, parenting, divorce, and blended families.

### SOC 206 Introduction to Aging

3 Cr. Hrs. – 3 Contact Hrs. **D**

*Prerequisite: Meet Ready to Succeed Requirement*

An overview of gerontology that emphasizes identifying, describing and explaining challenges, patterns and processes concerning the elderly. This approach enables students and practitioners to acquire basic knowledge critical for careers related to gerontology, and to anticipate problems and promises of their own later lives.

### SOC 210 Social Psychology

3 Cr. Hrs. – 3 Contact Hrs. **FWS**

*Prerequisite: PSYC 201 or SOC 101A or instructor permission.*

While psychology focuses on individual thoughts, feelings, and actions, the concentration for social psychology is how an individual's thoughts, feelings, and actions are influenced by others. This course will survey the research and theory of patterns of social identity, social influence, social perception, and social cognition. Additional topics include altruism, aggression, attitude change, and interpersonal attraction. Applications of social psychology for law, medicine and work organizations are pervasive throughout this course.

## Spanish (See Foreign Languages)

### Sports Officiating

#### OFC 111 Sports Officiating for Baseball, Basketball and Football

3 Cr. Hrs. – 3 Contact Hrs. Ⓜ

*Prerequisite: None*

Sports Officiating will provide the student with the knowledge and expertise necessary to officiate in physical education classes, intramurals, and interscholastically. It includes the basic fundamental skills on officiating as well as the rules and mechanics of baseball, basketball and football.

#### OFC 112 Sports Officiating for Softball, Basketball and Volleyball

3 Cr. Hrs. – 3 Contact Hrs. Ⓜ

*Prerequisite: None*

Sports Officiating will provide the student with the knowledge and expertise necessary to officiate in physical education classes, intramurals, and interscholastically. It includes the basic fundamental skills on officiating as well as the rules and mechanics of softball, basketball and volleyball.

### Student Development

#### PSYC 101 Human Potential Seminar

2 Cr. Hrs. – 3 Contact Hrs. Ⓜ

*Prerequisite: None*

The purpose of the course is to help individuals discover and actualize their unique strengths and potentials. The goals are to assist individuals to increase their self-affirmation, self-motivation, self-determination, and regard for others.

### Technical Apprenticeship Related Instruction

Muskegon Community College, in cooperation with Muskegon Area industrial employers, labor councils, and the U.S. Department of Labor help train skilled workers for the future needs of industry.

Apprenticeship Training programs are divided into two parts: on-the-job training under the supervision of a journeyman in the trade, and a minimum of 576 hours of related classroom instruction at a Federally approved training site. Muskegon Community College provides the related classroom instruction which accompanies apprenticeship training programs.

Muskegon Community College does not select or place students in apprenticeship programs. It does provide the related technical courses which all apprentices must attend. Non-apprentices may also enroll in the courses, to prepare themselves for a subsequent apprenticeship, or to upgrade their qualifications for their present jobs.

Any trade which is recognized as apprenticeable by the U.S. Bureau of Apprenticeship and Training may have a local apprentice training program. Local programs require the cooperation of employers and a joint apprenticeship committee representing management and labor.

For information on class schedules and entrance into specific programs, call the Apprenticeship Coordinator at Muskegon Community College.

Successful completion of an apprenticeship training program may be credited toward an Associate in Applied Science Degree Program.

## Technology-Related Courses

### AMT 129 Introduction to Technology

3 Cr. Hrs. – 6 Contact Hrs. **F****W**

*Prerequisite:* None

This course provides an “integrated” introduction to the current computer-based technologies of manufacturing. Students will develop a foundation of understanding through hands-on experience in: basic microcomputer operations, Computer-Aided-Design (CAD), Computer-Aided-Machining (CAM), Computer Numerical Control (CNC), Robotics, Computer Automated Process Control, spreadsheets and Word-processing. The course also promotes: problem solving, group process, decision making, planning, and communication skills.

### ARE 115 Wind Turbine and Solar Array Installation

3 Cr. Hrs. - 4 Contact Hrs. **W****S**

*Prerequisite:* TMAT 101A, ELTC 101, or instructor permission

The Wind Turbine and Solar Array Installation lab course uses lecture and lab to specify and install solar arrays for rooftop installations as well as taking down and re-installing a wind turbine. The class is focused on safety, structural integrity, wiring to code, performance evaluation, and customer interaction. Students will have hands-on experience with assembly, installation, and commissioning of these systems.

### HP 101 Hydraulics/Pneumatics

3 Cr. Hrs. – 4 Contact Hrs. **F****W**

*Prerequisite:* TMAT 101A or equivalent.

An overview of industrial fluid power technology with emphasis on hydraulic and pneumatic components and circuits. Practical hands-on exercises are provided using pneumatic training equipment. Component recognition and circuit analysis are covered for their applications to maintenance, modifications, and design activities in the field.

### QC 101 Basic Quality Control

3 Cr. Hrs. – 3 Contact Hrs. **F****W**

*Prerequisite:* None

This course presents practical approaches to quality problems. It includes study of basic techniques and laboratory workshop periods in developments of functional quality control. These include charting, sampling, analyzing probability relations, frequency distributions, vendor control, diagnosing the cause of defects, quality improvement and supervisory obligations.

### QC 105 Quality & Productivity Using SPC- Statistical Process Control

3 Cr. Hrs. – 3 Contact Hrs. **W**

*Prerequisite:* QC 101 or instructor permission.

This course instructs students in the methods and techniques of improved quality of productivity in all types of business and industry. Students are taught to understand the impact of foreign and domestic competition on their own organization and/or future employers. Topics covered include: operating a prevention system versus a detection system of quality control, defining and identifying inhibitors to quality and how to overcome them, chart construction, problem-solving using Pareto analysis, process flow charts, and cause and effect diagrams. The course is project-oriented and team-based.

### TECH 200 Applied Alternative and Renewable Energy

3 Cr. Hrs. – 3 Contact Hrs. **F**

*Prerequisites:* MATH 050, CHEM 100, ELTC 101L&L or instructor permission.

This course introduces the student to the power generating technologies. It will cover the operating principles, benefits and challenges in traditional, alternative and renewable energy fields. An emphasis is made on fuel cells, wind power, photovoltaics, energy storage, and distribute power generation. An overview of the associated topics in economics and politics will be provided.

**TECH 290CI Cooperative Internship**

Variable 1-4 Cr. Hrs. ①

*Prerequisite:* The student must have a GPA of 2.5 or better.

The student should have completed a significant portion of the core career requirements in their major field of study with a total of 30 credit hours towards a degree. Additionally, a faculty recommendation from the student's major field of study is required. The Cooperative Internship Program is a paid or non-paid fieldwork experience in business and/or industry within the student's major area of study. Variable credit hours (1-4 Cr. Hrs. per semester) may be earned dependent upon the number of work hours available from the employing organization. A student may sign up for as many internships as desired, however, the number of credit hours which can be applied towards a degree/certificate depends on the student's course of study and departmental requirements. This course is offered as a pass/no pass grade. The internship course starting and ending dates are determined on an individual basis.

*If you are planning to transfer to a four-year institution, consult with a counselor before signing up for a technical math class.*

**TMAT 101A Technical Math I**

3 Cr. Hrs. – 3 Contact Hrs. ①②③

*Prerequisite:* Must have earned a grade of "C" or better in MATH 036 or assignment based on Math Placement Test.

A course for technical students who require a review of the principles of arithmetic as applied to manufacturing and business problems. Also included will be the use of the scientific calculator and basic algebra.

**TMAT 102A Technical Math II**

3 Cr. Hrs. – 3 Contact Hrs. ①②

*Prerequisite:* Must have earned a grade of "C" or better in TMAT 101A or assignment based on Math Placement Test.

A course presenting the fundamentals of algebra, geometry, and statistics as applied to the technical and industrial field. Basic statistics will also be covered.

**TMAT 201 Technical Math III**

3 Cr. Hrs. – 3 Contact Hrs. ①②

*Prerequisite:* Must have earned a grade of "C" or better in TMAT 102A or assignment based on Math Placement Test.

A thorough study of basic trigonometry with applications to technical and industrial problems.

**TMAT 202 Technical Math IV**

3 Cr. Hrs. – 3 Contact Hrs. ①

*Prerequisite:* Must have earned a grade of "C" or better in TMAT 201.

This course familiarizes the technical student with the Machinery Handbook and its uses in the solution of problems. A continuation of the study of algebra, geometry, and trigonometry in addition to logarithms is included.

**Theater****TH 101 Theater Appreciation**

3 Cr. Hrs. – 3 Contact Hrs. ①②③

*Prerequisite:* Meet Ready to Succeed Requirement

Designed for non-majors, this class attempts to prepare students for success as theatergoers. We will study the requirements of being an involved spectator at live theater and be introduced to the many elements of production. This is an experience-oriented course and requires attendance at play performances outside of class.

**TH 102 Introduction to Acting I***3 Cr. Hrs. – 3 Contact Hrs. ①**Prerequisite: Meet Ready to Succeed Requirement*

An introduction to the art and craft of acting for the stage. Focuses on character analysis and performance. Physical, vocal, and mental exercises are utilized to develop the individual's self-awareness and communicative skills.

**TH 108 Theater for Children***3 Cr. Hrs. – 3 Contact Hrs. ①②③**Prerequisite: Meet Ready to Succeed Requirement*

A course exploring the specialized techniques of play production for or with children, creative dramatics, and theater games. The class is designed for persons working with children such as elementary schoolteachers, special education workers, recreation leaders, and religious education staff. The use of theatrical techniques as educational tools to enhance the learning experience in other subjects is explored.

**TH 120 Technical Theater I***1 Cr. Hr. – 1 Contact Hr. ①**Prerequisite: Meet Ready to Succeed Requirement*

A 5-week fundamental course in the technical theater sequence specifically designed as a prerequisite for Applied Theater classes and crew assignments for play productions. Introduces production staff organization and different types of stages and scenery.

**TH 141 Applied Theater Acting***1 Cr. Hr. – Variable Contact Hrs. ①②③**Prerequisite: Meet Ready to Succeed Requirement*

Practicum class earning credit for acting in a Center for Theater production. Scheduling is flexible but will include weekend performances and probably evening rehearsals.

**TH 142 Applied Theater – Dance***1 Cr. Hr. – Variable Contact Hrs. ①**Prerequisite: Meet Ready to Succeed Requirement*

Practicum class for performing in a Center for Theater production. Scheduling is flexible but will include weekend performances and probably evening rehearsals.

**TH 144 Applied Theater – Costuming***1 Cr. Hr. – Variable Contact Hrs. ①②③**Prerequisite: Meet Ready to Succeed Requirement*

Practicum class earning credit for crew work on a Center for Theater play production. Scheduling is flexible but requires forty hours of lab work during available times.

**TH 145 Applied Theater – Scenery Construction***1 Cr. Hr. – Variable Contact Hrs. ①②③**Prerequisite: Meet Ready to Succeed Requirement*

Practicum class earning credit for crew work on a Center for Theater play production. Scheduling is flexible but requires forty hours of lab work during available hours.

**TH 147 Applied Theater – Production Crew***1 Cr. Hr. – Variable Contact Hrs. ①②③**Prerequisite: Meet Ready to Succeed Requirement*

A 4-week practicum class earning credit for crew work on Center for Theater productions. Scheduling is flexible but requires forty hours of lab time in a four-week period. Work assignments are made in terms of student interest and production needs. Includes scenery construction, painting, properties, costume, lighting, and/or sound crews.

**TH 148 Applied Theater – Performance Crew***1 Cr. Hr. – Variable Contact Hrs. (F)(W)(D)**Prerequisite: Meet Ready to Succeed Requirement*

A 2-week practicum class earning credit for crew work on Center for Theater productions. Requires attendance at weekend and evening rehearsals and performances for a two-week period. Work assignments will be made in terms of student interest and production needs. Includes scenery shifting, properties, costume running, and lighting, and/or sound crews.

**TH 160 Acting for TV and Film***3 Cr. Hrs. – 3 Contact Hrs. (F)**Prerequisite: Meet Ready to Succeed Requirement*

This course is designed to prepare the student with the basic skills necessary for TV and/or film acting. Among the topics covered are: acting for the camera, the use of and differences between the television and film camera, the use of the storyboard, shooting out of sequence, developing continuity, and the use of lighting, sound, special effects and editing. Rehearsal outside of class time and shooting on location may be required. The final class project will culminate in each student acting in a prepared film scene.

**TH 201 Introduction to Theater History***3 Cr. Hrs. – 3 Contact Hrs. (F)**Prerequisite: Meet Ready to Succeed Requirement*

An introductory course designed to give the student an awareness of the development of theater from classical Greece through Neo-classical France.

**TH 202 Introduction to Acting II***3 Cr. Hrs. – 3 Contact Hrs. (W)**Prerequisite: Meet Ready to Succeed Requirement*

An acting class emphasizing the analysis of scripted scenes and character interactions. Selected scenes are rehearsed for possible performance at the end of the semester.

**TH 203 Readers Theater***3 Cr. Hrs. – 3 Contact Hrs. (W)**Prerequisite: Meet Ready to Succeed Requirement*

This performance course is designed to give the student knowledge of and experience in oral reading as a theatrical form. Out-of-class rehearsal and performance time may be required.

**TH 212 Summer Theater Workshop***3 Cr. Hrs. – Variable Contact Hrs. (D)**Prerequisite: Meet Ready to Succeed Requirement*

A practicum course allowing advanced students to undertake special projects in conjunction with a summer theater company. Projects are usually creative in nature and are undertaken with the advice and supervision of an approved mentor. Although focusing on the specialized crafts of acting, directing, design, technical production, or arts management, project implementation will emphasize the cooperative nature of theater.

**TH 217 Creative Dramatics***1 Cr. Hr. – 1 Contact Hr. (D)**Prerequisite: Meet Ready to Succeed Requirement*

This course is an introduction to the use of creative dramatics in the classroom, home, and community. The goals and concerns of creative drama will be explored as well as methods for incorporating these techniques into a curriculum. Focus will be centered on the activities that are the basis of every creative dramatics program. A particular interest will be centered on the novice who needs practical advice on how to begin teaching creative thinking and problem solving.

**TH 260 Student Production Practicum***2 Cr. Hrs. – Variable Contact Hrs. ①**Prerequisite: Meet Ready to Succeed Requirement*

An experiential course giving credit for creative involvement in the planning, rehearsal, and performance of a play.

**Welding Technology****W 101 Basic Welding***3 Cr. Hrs. – 5 Contact Hrs. ②④**Prerequisite: None*

Basic Welding is designed for the learner who has no welding experience or limited welding experience. Subject material will focus on the theory of welding processes common to local industries. The welding and cutting processes covered will be: Oxyacetylene Welding and Oxyacetylene Brazing (OAW and OAB), Oxyacetylene Cutting (OAC), Plasma Arc Cutting (PAC), heating and bending with the torch, Gas Tungsten Arc Welding (GTAW), Shielded Metal Arc Welding (SMAW), and Gas Metal Arc Welding (GMAW). Students will learn to set-up and operate welding equipment according to approved standards. Theory of each welding process will be covered in the classroom followed by practical experience in the lab. Lab projects will provide experiences in the fabrication of typical weld joints, and are based on relevant sections of the American Welding Society (A.W.S.) S.E.N.S.E. Level 1 standard.

**W 102 Introduction to Advanced Welding***3 Cr. Hrs. – 6 Contact Hrs. ②④**Prerequisite: W 101 or instructor permission.*

This course will cover the three most common electric arc welding methods: Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), and Gas Metal Arc Welding (GMAW). Lab projects will provide experiences based on relevant sections of the American Welding Society (A.W.S.) S.E.N.S.E. Level I standard.

Additionally, safety, process theory, and equipment setup will be covered. SMAW - This process involves constructing typical welded joints in the horizontal, vertical-up and overhead positions. The electrode used will be the fast fill/ fast freeze group, which is the E6010/E6011 electrode. GTAW - This part of the course will present the theory and application of the TIG welding process. Shielding gases, tungsten selection and preparation, polarity selection and welding machine set-up will be covered. Welds will be constructed in the flat position only. Projects will be done in mild steel, aluminum, and stainless steel. MIG - In the MIG portion of the course both theory and applications of the welding process will be covered. Topics of discussion will include the following: transfer modes, types and application of shielding gases, stick-out distance, wire feed speeds, voltage selection and machine set-up. Wire and gun maintenance will also be covered. Typical welded joints will be constructed in the flat position only.

**W 103 MIG (Gas Metal Arc) Welding/  
TIG (Gas Tungsten Arc)***3 Cr. Hrs. – 6 Contact Hrs. **FW****Prerequisite: W 102 or instructor permission.*

This course is an intensive study of Gas Tungsten Arc Welding (GTAW) and Gas Metal Arc Welding (GMAW) processes. Lab projects for this course are designed to align with relevant sections of A.W.S. S.E.N.S.E. Levels I and II. This course is designed for students who need to improve their welding skills in these processes. Applications of shielding gases, tungsten electrodes, polarity settings and equipment set-up procedures. Students will weld ferrous and non-ferrous materials. Welding joints will be done in all positions. The course material will place emphasis on creating a fabricated joint that has the same metallurgical and physical properties as the base metal. GMAW - Instruction will include the theory of the welding process, transfer modes, types and applications of shielding gases and machine set-up. Welds will be created in the flat, horizontal, vertical-up/down and overhead positions. Both ferrous and non-ferrous materials will be used. Topics of discussion will include: safety precautions, joint preparation, current selection, wire speed and proper selection of inert gas mixtures.

**W 201 Structural Welding***3 Cr. Hrs. – 6 Contact Hrs. **FW****Prerequisite: W 102 or instructor permission.*

A course designed for advanced welders who want to improve their skills in stick welding or who are preparing to certify to AWS D1.1 code standard. This code is used for welding on bridges, buildings, steel structures, road machinery, farm equipment and other structures. Materials presented will be the AWS code book, safety precautions, joint preparation, electrode selection, setting up equipment and welding procedures. Lab projects for this course are designed to align with relevant sections

of A.W.S. S.E.N.S.E. Levels I and II. Lab work will include out-of-position welding using the fast fill/fast freeze (E6010) and fast fill/slow freeze (E7018) category electrodes. Weld testing-- both visually and mechanically will be an integral part of the coursework.

**W 202 Pipe Welding***3 Cr. Hrs. – 6 Contact Hrs. **FW****Prerequisite: W 201 or instructor permission.*

This course is designed for the advanced welders who want to improve their pipe welding skills or are preparing for pipe welding certification to the AWS D1.1 welding code standard. Lab projects for this course are designed to align with relevant sections of A.W.S. S.E.N.S.E. Levels I and II. Topics covered will include: safety practices, tack welds, positioning and pipe welding using methods most frequently found in industrial processes and fieldwork. All common welding positions will be covered. Students are required to perform root pass, filler pass and cover pass on each specimen. Welding processes which will be covered are Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), and Gas Metal Arc Welding (GMAW). Destructive and visual testing will be part of the coursework.

**W 203 Maintenance Welding***3 Cr. Hrs. – 6 Contact Hrs. **FW****Prerequisite: W202 or instructor permission.*

A course with emphasis on safety and the combined skills obtained from previous welding and related courses. Students fabricate assembly parts according to print specifications. A degree of creative and technical talent will be needed to translate theory to productivity. The student will be presented with a problem, be expected to find the solution and deliver an oral or written report. Lab projects for this course are designed to align with relevant sections of A.W.S. S.E.N.S.E. Levels I and II.

## W 204 Welding Supervision

3 Cr. Hrs. – 6 Contact Hrs. **F** **W**

Prerequisite: MET 201.

Co-requisites: W 203 and BCOM 102.

A course that requires the welding student to combine hands-on skills and intellectual knowledge of welding processes and use this ability to help beginning welders. The student will assist the instructor in demonstrations of welding processes and techniques used required to produce weld specimens in all positions and perform destructive tests for weld soundness. This course provides skills that help you stand out among other candidates in the welding industry. Lab projects for this course are designed to align with relevant sections of A.W.S. S.E.N.S.E. Levels I and II.

## Women's Studies

### WS 101/ENG 130 Introduction to Women's Studies

3 Cr. Hrs. – 3 Contact Hrs. **F** **W** **S**

Prerequisites: English 091 and Meet Ready to Succeed Requirement

This is a fundamentals course in which students study women's diverse experiences, perspectives, and contributions by examining cultural beliefs and stereotyped images of women and their roles in different times and places. Interdisciplinary in its range of course content, WS130/ENG 101 explores representations of women and their efforts to define new identities through work, creative activity, and feminism, both historically and at present. The course covers socialization, sexuality, the history of the women's liberation movement, and different perspectives in feminism. Course goals: raise awareness, make connections, read, think, and write critically, and apply course knowledge and issues to personal experiences.

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# Resources

## Your Educational Success

The goal in higher education is not only what you learn, but how you learn it – to go beyond rote memorization and into a full understanding of the subject at hand. To help in this process, MCC has a multitude of resources including academic, career, and personal counseling; tutoring; College Success Center; services for students with special needs; career assessments and many others. Take advantage of any or all of these services to make sure your education is well-rounded and successful.

There are many ways to maximize your learning potential as you start your college education. MCC recommends the “College Success Seminar (CSS 100)” as a start-up course to help you develop the necessary skills, abilities, attitudes and behaviors that provide academic and personal success.

## College Success Center

The College Success (CS) Center was established to help students realize their full educational potential at MCC. It includes three labs which offer credit courses in writing, math, and reading/study skills. The CS Center works closely with the Testing Center.

CS Center courses are taught either in a classroom setting or on a one-to-one basis; in the latter, assignments are designed to meet the academic needs of the individual. CS Center courses range from basic skills to more sophisticated college-level activities such as skim reading or the writing of research papers.

For the one-on-one courses, weekly scheduled conferences with instructors and paraprofessionals provide constant monitoring of skill development, and assignments are adjusted accordingly. The CS Center is open at least 60 hours a week so that students may use it during their free time.

## Counseling and Advising Center

Counseling is available in the Counseling and Advising Center, Room 101. Muskegon Community College’s counseling staff offers a wide variety of educational, vocational, and personal counseling services. Academic advising provided by MCC counselors is especially important as you work through various degree and program requirements to reach your educational and vocational goals. Career counseling, using a variety of assessment tools, is available as well. Educational and personal counseling can help you adjust to a new academic environment and resolve problems that may interfere with classes, jobs, and personal relationships.

Counselors are available, by appointment, Monday through Friday, days and evenings. Appointments may be made in Room 101 or by calling (231) 777-0362.

Walk-in counseling is available Monday through Friday: contact the Counseling and Advising Center for hours. Walk-in counseling is intended for immediate concerns rather than academic advising. If you need to see a counselor for academic advising and course planning, you must make a counseling appointment.

# Hendrik Meijer Library Information Technology Center

Formerly the Allen G. Umbreit Library, the Hendrik Meijer LIT Center continues to provide instructional materials and information services to support the curricula offered by the College and to meet the informational needs of students, faculty, staff and administration. The library extends these services to the community and serves as a catalyst in the lifelong learning goals of the citizens of Muskegon County and the greater West Michigan area.

Internet-accessible computers are available on the main floor of the library and on the second floor Information Commons for student research and assignments. To use the computers, students use their MCC network logins and agree to follow the *MCC Acceptable Use Policy*.

The book collection, arranged according to Library of Congress Classification, is approximately 60,000 volumes. Other materials include magazines, newspapers, videocassettes, DVDs, CDs and Instructors' Reserves. The majority of our newspaper, periodical, and journal subscriptions are available in electronic format via our numerous online databases. The library also subscribes to other online databases that support faculty and student's research needs. Most of these databases are available to students and staff from off-campus using their MCC network login.

Professional librarians are on duty to assist students and the general public. Special services include interlibrary loan, photocopy machine, group study rooms, a quiet reading room and both group and individual orientations.

Library hours are updated and available on the library webpage. They are also posted in the library and a recording of hours is available by phone.

The My MCC OneCard is used as a library card. To activate the OneCard to be used as a library card, students must bring their My MCC OneCard to the library along with a valid State of Michigan driver's license or identification card. Muskegon area residents may apply for a free library card. Applications are available at the Public Services Desk and also require a valid State of Michigan driver's license or identification card.

## Office of Information Technology

MCC students should call the Student Technology Helpdesk at (866) 718-5170 for all technology-related issues. The technicians at the Student Helpdesk are specially trained to work with students' technology needs and are available 24/7/365.

# Employment Resource Center

Do you need help creating a resume, or finding a job? The Employment Resource Center at Muskegon Community College is here to assist you with your employment needs. Employers from Muskegon County and surrounding areas keep the Employment Resource Center up-to-date with their job openings, and we pass this information on to you!

We have eliminated our job board and switched to CollegeMatrix, a web-based job posting system. Employers can post and maintain job postings, and students can post their resume and search for jobs. To access CollegeMatrix, start at MCC's homepage, [www.muskegoncc.edu](http://www.muskegoncc.edu), then click on "Current Students" and "Employment Resource Center."

Employer's steps to accessing CollegeMatrix: select "Employer" on the site, sign up and create a new account for MCC, fill out the information on the page and submit. Once your application is approved, your job will be posted.

Student's steps to accessing CollegeMatrix: select "Job Seeker" on the site, sign up and create a new account for MCC, fill out the information on the page and submit. Once you are approved, post your resume (required) and start your job search.

## Testing Center

Provides testing services for students, faculty and guests. This office coordinates and administers placement tests, COMPASS, make-up, online tests, and independent study examinations. We provide a proctoring service for distance learning programs. The Testing Center is located in Room 134 or you may call (231) 777-0394.

### External Testing Fees:

Any student who does not have an MCC Student ID number will be charged \$25.00 to take the COMPASS Placement Test. (Students testing in their high school are exempt from this charge.) A student wishing to waive the \$25.00 charge must complete the MCC Application for Admission first and have their MCC Student ID number.

### Placement Guidelines Using COMPASS, ACT and MME

Placement tests are required to facilitate placement in classes and/or programs. Such tests are intended not to prevent participation but to help students make appropriate choices. The College also offers a basic computer competency test which may exempt you from the computer skills requirement. The Chemistry placement test is also available for students who wish to test out of basic chemistry. Students interested in the Nursing Program will need to take the MATH-035F-Metrics test. Please note that ACT scores are based on individual sub-scores and not the ACT composite score.

## Ready to Succeed

Before enrolling in many courses, you must meet the READY TO SUCCEED (*Reading Competency*) requirement by test scores or course completion.

COMPASS	Reading score of 76 or higher
ACT	Reading score of 19 or higher
MME	1 or 2 on both Reading and Writing
College Credits	15 College credits (100 level or higher) with cumulative 2.0 or higher GPA
Reading Course	Earning a “C” grade or better in Reading 040 or Reading 050

### READING

COMPASS Reading	ACT Reading	MME	Placement
76-100	19 or higher	Level 1 or 2 on Reading & Writing	No Reading course required. “Ready to Succeed” requirement met.
56-75	18	****	RDG 050
11-55	12-17	****	RDG 040
0-10	****	****	See a Counselor

\*\*\*\*COMPASS Placement Testing Required

### WRITING

COMPASS Writing	ACT Writing	MME	Placement
80-100	19 or higher <i>(You must still meet Reading Requirement)</i>	Level 1 or 2 on Reading & Writing	ENG 101 or BCOM 101
69-79	18 <i>(You must still meet Reading Requirement)</i>	****	ENG 101 or BCOM 101 and ENG 114
31-68	****	****	ENG 091
11-30	****	****	ENG 085 or ENG 089
0-10	****	****	See a Counselor

\*\*\*\*COMPASS Placement Testing Required

Before enrolling in math courses numbered MATH 050 or higher, you must meet the Ready to Succeed requirement

ACT Math scores will not be accepted if taken over 3 years ago and students should take the COMPASS Math Placement Test.

COMPASS Pre-Algebra	ACT Math	Placement
0-39	****	MATH 036A or MATH 036FT and MATH 038FT
40-49	****	MATH 038 or TMAT 101A
50-100	****	MATH 040 or TMAT 102A

COMPASS Algebra	ACT Math	Placement
0-24	****	MATH 038 or TMAT 101A
25-45	****	MATH 040 or TMAT 102A
46-65	20-21	MATH 050 or MATH 107 or TMAT 201
66-100	22-24	MATH 105 or MATH 109 or MATH 111 or MATH 115

\*\*\*\*COMPASS Placement Testing Required

COMPASS College Algebra	ACT Math	Placement
0-45	22-24	MATH 105 or MATH 109 or MATH 111 or MATH 115
46-100	25-27	MATH 112 or MATH 151

COMPASS Trigonometry	ACT Math	Placement
0-45	25-27	MATH 112 or MATH 151
46-100	28 or above	MATH 161

*Note: This placement schedule is intended for students entering degree or transfer programs where courses in algebra or higher mathematics are required. If you are planning to enroll in a Business or Technical program and will be taking Business Math or Technical Math, please see a counselor for advice.*

## Placement Tests Are Very Important

Students with low scores are required to complete refresher courses before enrolling in College-level courses. Many courses have skill level prerequisites; refer to the current Schedule of Classes and meet with a counselor to be sure you are enrolling in the appropriate class.

# Tutoring Services

**Peer Tutoring** - If assistance is needed in a specific course, you may apply to the Tutoring Center, located in Room 204. Student tutors recommended by instructors are available to any student on campus. The number of hours per week of free tutoring available to you varies with the number of credits being taken.

Students who wish to become tutors should contact an instructor for a written recommendation, and then report to the Tutoring Center.

**Walk-in Tutoring** - Walk-in Tutoring is a set schedule of times when a tutor will be available to assist with problems without an appointment.

**Supplemental Instruction (SI)** - Supplemental Instruction is a small group academic assistance program which has shown an increase in student performance. It is offered only in specific introductory classes. Check with your counselor or the tutoring center and SI supervisor for more information.

**Referral Tutoring** – If peer tutoring is not appropriate or available, any student, parent or concerned adult may contact the College Tutoring Center to request help in finding a tutor. The Tutoring Center does not pay for such tutoring, however. Those who prefer referral tutoring must pay the tutor themselves after each session, unless other arrangements are made.

**Online Tutoring** – Do you need help from home or work? Online Tutoring is available to all students. Students can receive one-on-one help directly from a tutor in any subject. In addition, students may post questions on the Online Tutoring Shell to be answered within 24 hours by a qualified tutor. Please call 231-777-0393 for access to the Online Tutoring Shell.

**MCC Tutoring Center Website** – [www.muskegoncc.edu/tutoring](http://www.muskegoncc.edu/tutoring)

# Special Services Office

## Special Populations

Additional support services are available if you meet one of the following eligibility requirements: physically challenged, specific learning disability, economically disadvantaged, non-traditional training participants, single parents, displaced homemakers, or limited English proficiency. Special support services include the provision of attendance costs, unlimited peer tutoring, professional instructor assistance, note takers, interpreter services for the hearing impaired, and readers for tests. Other services include: instructional aides, specialized instructional equipment, learning station modification, bilingual implementers, language support for limited English proficiency and other referral services.

Documentation supporting your inability to succeed without special support services must be presented. A Special Services handbook describing these services in more detail can be obtained in the Special Services Office located in Room 206, or by visiting the Students section of the MCC website at [www.muskegoncc.edu](http://www.muskegoncc.edu).

## Beyond MCC (4 Year Degrees)

Once you achieve a solid foundation for success at MCC, you can work on your Bachelor's Degree and beyond right on the MCC campus. Our higher education partners (Ferris State University, Grand Valley State University, and Western Michigan University) offer advanced degrees at the Stevenson Center for Higher Education. We have transfer guides and articulation agreements with many four-year colleges and universities. Although it is up to receiving institutions to determine how they accept credits from MCC, we know our classes and credits are widely accepted at most four-year schools. Our graduates are very successful when they transfer to four-year institutions.

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## General Information

Muskegon Community College wants to make your enrollment and class registration go as smoothly as possible; as an “open door” institution, we welcome applications from all who wish to attend.

## Planning Your Classes, Your Curriculum, Your Career

“What courses should I take first? How soon do I need to choose a major? What sort of degree do I want?” All students ask these questions, and the following pages will help you start finding answers.

### HERE’S WHAT YOU SHOULD DO:

#### Aim Toward Earning a Degree

Muskegon Community College offers two degree options, as well as several diploma and certificate programs and professional development credit programs. If you are undecided, you may want to take advantage of our free career testing and counseling. Depending on your goals and the advice you receive from a counselor, you may want to pursue one of the following:

#### Associate in Science and Arts

This degree is for students intending to transfer to a four-year college or university. Graduates are generally admitted to the bachelor degree granting institutions with junior year standing. It is vitally important that you follow a transfer guide, available to you online at [www.muskegoncc.edu](http://www.muskegoncc.edu). Details about the Associate in Science and Arts Degree requirements are available in the program section of this catalog. This degree automatically fulfills the MACRAO Agreement.

#### MACRAO Agreement

##### (Michigan Association of Collegiate Registrars and Admissions Officers)

If you complete the General Education requirements for the Associate in Science and Arts Degree, you will receive the MACRAO Agreement and it will be posted on your transcript, which makes transferring to many Michigan colleges and universities easier. Colleges and universities who are part of this agreement will exempt you from most or all of their general education requirements if you have met the general education requirements at Muskegon Community College. You can also talk to your counselor about taking courses that fulfill the MACRAO Agreement but do not meet the requirements for a degree.

#### Associate in Applied Science

This degree is for students preparing for immediate employment, although the degree may transfer to a limited number of bachelor degree programs. The Business, Applied Technology, Criminal Justice, Allied Health, and Educational programs under this degree (shorter certificate and diploma programs are available) were designed in conjunction with active advisory committees so that you may reasonably expect employment upon successful completion.

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## Diplomas, Certificates and Professional Development Credits

Certificates are offered in many of the same occupationally-oriented programs as the Associate in Applied Science Degrees but are not as comprehensive in nature. These certificate programs were developed with the assistance of advisory committees, and you may reasonably expect employment upon completion of these programs. New certificate and professional development programs are continually being developed at Muskegon Community College. Check with counselors in the Counseling and Advising Center for information on other certificate and professional development programs which may be available.

It is strongly recommended that you see a counselor to develop a course plan for purposes of transferring to a four-year institution or obtaining a two-year degree or certificate.

If you are returning to Muskegon Community College after an absence of FIVE YEARS OR LONGER you will be under the requirements of the CURRENT CATALOG.

## Transfer Guides

Transfer guides tell you what courses to take at Muskegon Community College before transferring to a senior college. There are transfer guides available for the most popular majors and transfer schools. For example, if you want to study education and transfer to Grand Valley State University, there is a transfer guide which tells you which courses Grand Valley State University wants you to take at MCC before transferring. The guides are prepared jointly by our counselors and the admissions offices at the transfer colleges, and are available in the Counseling and Advising Center in Room 101, or online at [www.muskegoncc.edu/counseling](http://www.muskegoncc.edu/counseling).

## What is General Education and why do I have to take those Classes?

If you are going to major in business, for example, you may feel you should just take business courses. But employers, and all colleges and universities, disagree. An educated person knows (and can do) many things. General Education courses develop abilities important for everybody, regardless of their major. A complete description of the purposes of general education for the Associate in Science and Arts Degree at Muskegon Community College follows.

## The Purposes of General Education

**For the Associate in Science and Arts Degree at Muskegon Community College**

### Introduction

The College shares the view held by many that an education should prepare you not only for a career, but also for life. It is primarily through the curriculum of the general education program for the Associate in Science and Arts Degree that the College seeks to help you acquire the knowledge and skills necessary to understand both yourself and the world you live in. General education encourages community by providing access to the knowledge common to all educated men and women, regardless of their vocation. General education is designed to cultivate in each student four general abilities of an educated person:

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### **Communication**

Knowledge and application of written and verbal communication competencies using college level information literacy skills

### **Problem Solving and Technology**

Knowledge and problem solving skills using logical, mathematical, and scientific reasoning as well as technological resources

### **Ethical Reasoning and Creativity**

Knowledge and application of creativity in the arts as well as knowledge of, and the ability to critically examine ethical values, principles, and issues.

### **Personal, Social, and Cultural Awareness**

Knowledge and life skills required of an effective member of a diverse and global community

## **Assessing Student Academic Achievement**

Muskegon Community College is fully accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. Accreditation helps ensure students that they are receiving a quality education and can transfer to other colleges and universities with ease and confidence. MCC is committed to an essential part of the accreditation process: assessing student learning.

## **Credit Hours**

A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement. Academic credit for each course is approved and assigned by the Instructional Affairs Council and the Coordinating Council. This information is published in the MCC catalog, the class schedule, and the Web Advisor online student registration system.

The standard of class time shall be one hour of class and two hours of out-of-class (homework) student work per week over a semester.

Most colleges require a semester credit hour to be not less than 800 instructional minutes. At Muskegon Community College, each credit hour equates to 825 instructional minutes (55 minutes x 15 weeks = 825).

Muskegon Community College follows a semester schedule for its academic programs. In addition to a fall and winter semester of fifteen weeks, the College offers a twelve-week summer term.

Program length is determined by the number of credits required for each degree. All Associate in Science and Arts (ASA) and Associate in Applied Science (AAS) degrees require at least 62 credits. A full-time student could complete an ASA or AAS degree in two years, provided the classes are available in the correct sequence for the student. The College also offers a variety of certificate programs, which range from the 12-credit Customer Service Specialist Certificate to the 39-credit Electronics Technology Certificate.

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## Contact Hours

Tuition is assessed by the number of weekly contact hours. The contact hours for a course are the number of hours per week in which a course meets. The definition of a contact hour is a total of 55 minutes of student instruction in which the student comes into contact with an instructor or with tutorial or laboratory equipment.

## Laboratory

For laboratory experiences where the contact hours exceed the number of credit hours for a course, the academic department will decide, based on past experience, how much of the designated contact time will be devoted to lecture or classroom activities, and how much contact time will be devoted to laboratory experiences. This information will be spelled out in the class syllabus. For every one hour of laboratory time per week, the students will be responsible to complete two hours of outside student learning activities or homework for the length of the semester.

## Distance Education

For online or hybrid classes, the same 55 minute credit and contact requirement for regular classes will be followed. The standard of class time shall be one hour of class and two hours of out-of-class student work per week over a semester for a semester. For distance education, academic engagement is defined as, but not limited to, submitting an academic assignment; taking an exam, an interactive tutorial, or computer-assisted instruction; attending a study group that was assigned by the institution; contributing to an academic online discussion; and initiating contact with a faculty member to ask a question about the academic subject studied in the course. Merely logging into an online class does not constitute academic engagement or attendance. Each faculty member shall maintain an accurate record of attendance of each student enrolled in each of the faculty member's classes, while also defining "online attendance" in their distance learning courses.

<http://www.muskegoncc.edu/pages/1524.asp>

## Internships

For internship experiences, one credit is equal to 60 hours of supervised training or work experience. Students can earn 1-5 credits through a documented and approved internship experience.

<http://www.muskegoncc.edu/internships>

## Transferring Credit to MCC

Muskegon Community College welcomes transfer students. We may award transfer credit for coursework from accredited institutions of higher education and the United States Military Service. Transfer credits may also be awarded for some Advanced Placement (AP), College Level Examination Program (CLEP) examinations and Defense Activity for Non-Traditional Education Support (DANTES).

Muskegon Community College will award equivalent course credit when applicable, and when direct equivalencies are not available, elective credit in appropriate academic subjects may be awarded. MCC's policies on Transferring Credit can be found in the MCC Catalog and the College website.

<http://www.muskegoncc.edu/pages/2663.asp>

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# How to Get Started

## Checklist of Items to Complete

1. Apply for admission to MCC. Applications are available online at [www.muskegoncc.edu](http://www.muskegoncc.edu). Call (231) 777-0366 for information.
2. Contact your high school or G.E.D. center and have an official transcript sent to the Enrollment Services Office.
3. See a representative of the Student Services Center. Hours are 8:00 a.m. – 6:00 p.m. Monday – Thursday, and 8:00 a.m. – 4:30 p.m. Friday. Telephone (231) 777-0366.
4. Take the COMPASS placement test. Appointments can be made in person or by calling (231) 777-0394. The Testing Services Office is in Room 134.
5. Complete New Student Orientation. Call (231) 777-0454 for details.
6. See a counselor for help in course selection. Appointments can be made in the Counseling and Advising Center, Room 101, or by calling (231) 777-0362.
7. Register for classes and pay your tuition online at [www.muskegoncc.edu](http://www.muskegoncc.edu). See the current Schedule of Classes for registration and payment dates or visit [www.muskegoncc.edu](http://www.muskegoncc.edu).

## Admissions

As an “open door” institution, Muskegon Community College welcomes applications from all who wish to attend. The information requested on the application is used solely to help us serve your educational needs more effectively.

Admission to the College does not guarantee admission to all courses and programs within the College. The special admission requirements to certain courses and programs may be obtained from appropriate sections of this catalog or by inquiring at the departmental office in question.

Students wishing to enter the Nursing or Respiratory Therapy programs must submit additional applications. Applications for these programs may be obtained through meeting with an MCC counselor.

## Change of Name or Address

You should promptly notify the Student Welcome Center of any change in name or address that occurs while you are enrolled at the College. Name changes must be made in person. Legal proof of name change is required (drivers license, marriage license, social security card, voter registration card).

## Student ID/My MCC OneCard

After a student registers for the first time, they should have their picture taken in the Information Commons, located on the second floor of the Hendrik Meijer Library/Information Technology Center. This photo will be on their My MCC OneCard which they should receive in the mail.

The My MCC OneCard serves as the student’s official student ID, library card and method for receiving an electronic disbursement of financial aid and tuition refunds. The student has the option of having their refund deposited in an existing account at a bank of their own

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choosing or the student can have their refund deposited in a OneAccount with Higher One, the company that we have partnered with to process our refunds. If the student chooses to have their refund deposited into their own bank account, then the card only acts as a student ID and library card. If the student chooses to open a OneAccount then the My MCC OneCard will act as a debit card (*it is NOT a credit card*). For more information on the “My MCC OneCard” visit [www.mymcconecard.com](http://www.mymcconecard.com).

### **Full-time Student**

If you are enrolled for 12 or more credit hours per semester, you are considered a full-time student. Note, however, earning the associate degree (62 credits) in four semesters will mean carrying an average of 15 ½ credit hours per semester. If you wish to graduate in two years you must carry more than the 12 credit hours each semester or plan on attending Summer semesters.

### **Part-time Student**

If you are carrying fewer than 12 credit hours per semester you will be a part-time student. If you are enrolled for 9-11 credit hours per semester, you are classified as “three-quarter” time, and six–eight credit hours per semester you are a “half-time” student. If you are applying for financial aid as a part-time student, you should consult the Financial Aid Office for details on just how much help is available to you each semester.

### **Regular Admission**

If you are seeking admission to Muskegon Community College, applications are available online at [www.muskegoncc.edu](http://www.muskegoncc.edu) Submit official high school or GED transcript. Include ACT and/or MME scores. Please call the Testing Services office at (231) 777-0394 for more information. There is no charge to file the admissions application.

### **Apprentice Students**

Will also use the regular application form. Regulation of the number of apprentices in any trade is a negotiated item in labor contracts or is set by the Bureau of Apprenticeship and Training; it is not a decision of the College.

### **High School Guests/Dual Enrollment Admission**

High school students may be permitted to enroll as guests while still enrolled in high school. They must first submit an MCC online application identifying themselves as a high school guest, send a high school transcript with ACT and/or MME scores to MCC’s Enrollment Services Office, and then complete an Early Admission/Dual Enrollment form ([www.muskegoncc.edu/dualenrollment](http://www.muskegoncc.edu/dualenrollment)). A dual-enrolled student may have to complete COMPASS placement testing. Please call the Testing Services office at (231) 777-0394 to see if this applies to you.

Local school districts can use funds from State School Audit Act 148, Section 216 to pay the tuition and fees of a high school student attending a public or private degree-granting post-secondary institution when certain conditions are met. Interested students should contact their high school principal or counselor for further information.

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## College Guest Admission

If you are a student enrolled in other colleges within the state, you may be admitted as a guest by filing a Michigan Uniform Guest Application, which can be obtained from your home institution. You should develop a program of study with an advisor at your home institution to insure proper course selection and credit transfer.

## Community Guest Admission

If you have not completed high school or the G.E.D., or wish to take selected courses without the intent of earning a degree, diploma, or certificate, you may be admitted as a Guest (non-degree) applicant. As a Guest student you will be eligible to change to regular admission status upon submitting your high school transcript, G.E.D. test scores or appropriate test results to the Enrollment Services Office. It is your responsibility to initiate the change to regular admission status.

## Re-Admission

Regular admission to the College is a one-time activity once you have registered for a class. You may register for additional classes without repeating the admission process. If you have not attended within the past five years, please submit a Readmit Form to update your records. You are also encouraged to consult with a counselor to discuss course selection.

## Residency Policy

Determination of residency status is governed by the following:

To qualify as an in-district resident, you must have lived within the confines of Muskegon County for six consecutive months prior to the first day of classes for any semester.

To qualify as an out-of-district resident, you must have lived within the confines of the State of Michigan for six consecutive months prior to the first day of classes for any semester. If you have previously registered as a non-resident you may change to in-district resident status upon satisfying the requirements above. When recently married you shall be deemed an in-district or Michigan resident if your spouse satisfies the requirements above. Initial residency status shall be determined by the Enrollment Services Office.

It is your responsibility to notify the Student Welcome Center in the Student Services Center, prior to the first day of classes for any semester, of any change in residence that would affect your residency classification. **THE BURDEN OF PROOF LIES WITH YOU, THE STUDENT.** The above applies only to American citizens, permanent residents and refugees. Required documentation is listed below.

Michigan Driver's License or State-issued I.D. and one of the following:

- Voter's registration
- Vehicle registration
- Vehicle insurance
- Property tax receipt
- Property lease
- Utility bill
- Notarized verification from an in-district or Michigan resident stating that you have resided with him/her/them for at least six months prior to the start of the semester.

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**Residency Status for Military Personnel and Dependents** -- Residency is based on the location of the present domicile of the applicant with the six-month requirement waived if the applicant can provide any of the following documents. This waiver is extended to the dependents (spouse and children) of the person named on the Department of Defense 214 or 899 who reside at the same address.

Department of Defense 214, Separation from Active Duty Form, showing separation date within 120 days from the first day of the semester;

Department of Defense 899, Change of Station Form, showing the Muskegon area as the duty station;

Department of Defense 899, Change of Station Form, showing a change of duty station for the head-of-household to an overseas destination or as the result of an emergency mobilization.

## **International Student Admission**

International student applicants (F-1) must file a separate International Student Application, which may be obtained at [www.muskegoncc.edu](http://www.muskegoncc.edu) or from the Special Services Office, Room 206. Official translated high school transcripts, financial statements, and T.O.E.F.L. scores must be submitted with an International Student Application before an admission decision can be rendered. Additional information can be obtained from the Special Services Office or by calling (231) 777-0404.

## **S.A.M. Tuition Waiver**

### **(Study Opportunities for Adults and Mature Citizens)**

Any legal resident of Muskegon County, 60 years of age or older before the first day of the semester in which admission is sought, is eligible to receive a S.A.M. tuition waiver. If you qualify, you may register for college credit or continuing education classes which are eligible for state reimbursement. You may be degree or non-degree seeking.

The S.A.M. waiver does not cover registration fees or any special class fees which are charged in addition to, or in place of the tuition charge, nor does it cover the cost of books, supplies, or other instructional materials not included in the tuition charge. The S.A.M. waiver is not retroactive. Presentation of proof of age and residency to the Student Welcome Center prior to registration will establish your eligibility for the program. Additional information and validation of residency/age can be obtained at the Student Services Center. S.A.M. students must meet the prerequisite requirements which may include placement testing.

# **Transferring Credits to MCC**

## **Transfer Guidelines**

Muskegon Community College welcomes transfer students. We may award transfer credit for coursework from accredited institutions of higher education and the United States Military Service. Transfer credits may also be awarded for some Advanced Placement (AP), College Level Examination Program (CLEP) examinations and Life Experiential Learning (LEAP).

Muskegon Community College will award equivalent course credit when applicable, and when direct equivalencies are not available, elective credit in appropriate academic subjects may be awarded.

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**Transfer credit to MCC is determined on an individual basis using these guidelines:**

- Apply online for admission to Muskegon Community College.
- Official transcripts and official score reports must be sent directly from each college or national testing service to:

Transfer Evaluation, Room 100-J  
Muskegon Community College  
221 S. Quarterline Road  
Muskegon, MI 49442

**We will only accept Official College transcripts and score reports by mail.**

- **Regionally accredited college or university** - Transfer credit must be from a regionally accredited college or university.
- **Grades** - Only courses in which a student received a “C” or better will be considered for transfer credit.
- Credits only, not grades are accepted in transfer. Grades are not entered on the official MCC transcript or calculated in the cumulative grade point average.
- **Residency Requirement** - A student may transfer any number of credits to MCC; however, a student must complete at least 30 credit hours, or the last 15 credit hours of a degree, at MCC in order to receive the Muskegon Community College degree.
- **Course Descriptions/Syllabi** - If a determination cannot be made on the credit a student should receive, the student may have to obtain a copy of course descriptions and/or course syllabi with objectives. The Office of the Registrar will contact the appropriate academic department for determination.
- The total amount of transfer credit accepted from another institution will appear on the student’s MCC transcript, but not the specific credit accepted.
- Students who transfer a course which has a higher number of credit hours than the Muskegon Community College equivalent course will be awarded the “excess” credit.
- **Evaluation Time** - Transcripts will be evaluated within approximately four to six weeks. Transcripts older than five years or from out of state institutions may take an extended amount of time to be evaluated due to obtaining course descriptions and course syllabi.

**Time Limits on Transfer Credits**

In most cases, credits will be accepted without a time limit from any regionally accredited institution. In certain courses, where a program or the academic department requires that current knowledge is essential, a time limit may be imposed on the applicability of earned credit toward satisfying a degree requirement; such a time limit must be approved by the department. The following courses must have been taken within the time limits specified:

**Accounting Courses** – Must have been earned within ten years prior to the evaluation.

**Information Technology/Computer Science Courses** – Must have been earned within five years prior to the time of the evaluation.

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**Nursing Courses** -- All Nursing courses, as well as non-nursing courses required for nursing degrees, must be earned within eight years prior to the time of evaluation. If testing/coursework is over eight years old, competency must be validated on established examinations or by repeating the course.

**Liberal Arts** – Liberal Arts courses generally don't have a time limit on the courses used toward an Associate in Science and Arts Degree at Muskegon Community College.

**Technology and Technology Related Courses** - Technology courses such as Automotive, Electronics, Graphic Design, Machining, Materials Technology and Welding must have been earned within 10 years prior to the time of the evaluation.

## **Advanced Placement Credit (AP)**

AP has enabled millions of students to take college-level courses and national standardized exams, and earn college credit or placement while still in high school.

- We only accept official score reports sent directly from College Board to MCC. Please contact AP Score Reporting Services at [www.collegeboard.com](http://www.collegeboard.com).
- Only scores of 3 or higher will be considered for credit.

## **College Level Examination Program (CLEP)**

CLEP is a national standardized testing program, which offers tests in various academic areas. Passing scores may be accepted for college credit.

- The acceptance and determination of minimum scores for the CLEP exams will be determined by the department authorizing credit for that subject.
- Students may earn a maximum of 30 semester hours of credit through the CLEP/DANTES examinations.
- For more information regarding CLEP, check their website at [www.collegeboard.com](http://www.collegeboard.com).

## **Defense Activity for Non-Traditional Education Support (DANTES)**

DANTES is a national standardized test in selected areas and is accepted for college credit.

- The acceptance and determination of minimum scores for DANTES examinations will be determined by the department authorizing credit for that subject.
- Students may earn a maximum of 30 semester hours of credit through the CLEP/DANTES examinations.

## **Military Credit**

- All veterans submitting a certified DD214 will be granted one credit of Physical Education Activity and one credit of Health elective credit.
- Veterans may receive additional credit by submitting a copy of their AARTS and SMART transcripts to:

Records Auditor, Room 100-H  
Muskegon Community College  
221 S. Quarterline Road  
Muskegon, MI 49442

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The American Council on Education recommendations will be sent to the appropriate academic department for their review and possible approval.

- Military transcripts will be evaluated within approximately six to eight weeks and may take an extended amount of time to be evaluated due to sending recommendations to departments for approval.
- Muskegon Community College will try to award direct course equivalencies. When direct equivalencies are not available, an elective in an appropriate academic subject may be awarded. MCC is unable to grant credit for military specific credit.

## Articulated Credit

1. Apply to Muskegon Community College online at [www.muskegoncc.edu](http://www.muskegoncc.edu).
2. To receive articulated credit, the students should apply through their high school's counseling office. Students should list the course(s) they want to articulate on the Articulated Credit Application Form.
3. Submit Official final high school transcripts to:

Enrollment Services  
Muskegon Community College  
221 S. Quarterline Road  
Muskegon, MI 49442

4. Submit completed Articulated Credit Application form with signed competency checklists to:

Records Auditor, Room 100-H  
Muskegon Community College  
221 S. Quarterline Road  
Muskegon, MI 49442

5. Enroll within 24 months following high school graduation
6. To finalize your articulation credit, please contact the Records Auditor at (231) 777-0204 or email [chris.nowak@muskegoncc.edu](mailto:chris.nowak@muskegoncc.edu) when at least six credit hours of 100 level courses or above have been completed with a cumulative 2.0 G.P.A. at Muskegon Community College.
7. Students may earn a maximum of 15 credit hours toward a certificate program and 30 credit hours for an Associate degree program.

## Michigan Transfer Network

The Michigan Transfer Network [www.michigantransfERNETWORK.org](http://www.michigantransfERNETWORK.org) is a valuable “single source” website that students, counselors and the public may use to check transfer equivalencies for courses among colleges and universities in Michigan. It is sponsored by the Michigan Association of Collegiate Registrars and Admissions Officers in partnership with Michigan State University.

## Non-Conventional Credit

Some course requirements may be met by methods other than completing courses. Students may wish to explore with a counselor the following options:

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## Life Experiential Learning

Credit may also be granted to students who are unusually well prepared in a particular discipline if they can demonstrate that preparation through a process called the Life Experience Assessment Program (LEAP). Consult a counselor for information. Applications are available on MCC's website at [www.muskegoncc.edu/pages/2671.asp](http://www.muskegoncc.edu/pages/2671.asp) There is a \$100 fee for every eight credits attempted.

## Proficiency Examination

Credit may be granted for students seeking credit by departmental examination. Applications are available from department chairpersons and the Academic Affairs Office. The \$10 test fee is applicable toward credit tuition.

## Individual Study Courses

Students may work with a faculty member in designing special courses to meet their individual needs. A form is available from the Academic Affairs Office to apply for such an individual study course. The criteria for approval are also available in that office. A student should not begin work on such a course until all approvals are completed and tuition has been paid.

A student may take, as part of his or her regular program, a maximum of ten (10) credit hours in "individual study." The application of these credits towards a given major or minor will be judged by the institution accepting these credits. Each Individual Study Course will carry variable credit (1/2 – 5) as contracted between the faculty member and the student. INDIVIDUAL STUDY COURSE OPTIONS ARE AVAILABLE: To replace existing coursework for the purpose of meeting graduation requirements, to provide additional opportunities within a discipline to a student who has taken all available courses or their equivalent in a subject area, or to supplement transfer credit to meet program requirements.

## Internship Program

Muskegon Community College recognizes that there are important elements of business and industry which cannot adequately be taught in the laboratory or classroom. Therefore, the College has established the Internship Program. The goal of the Internship Program is to provide the student with on-the-job experiences supervised by successful, experienced professionals. This experience shall directly support the development of a student's technical skills, knowledge and career path. The employer shall gain a reliable, flexible and enthusiastic potential employee while assisting in the student's career preparation goals.

Students wishing to participate in the Internship Program should contact the Internship Office at (231) 777-0216 to schedule an appointment. Your future can be much brighter with the right work experiences.

# Special Programs and Agreements

## Honors

Muskegon Community College offers honors options to eligible students in an attempt to add an extra dimension to the education of academically motivated students.

Honors options will permit you, if eligible, to earn an additional credit in certain MCC courses. To earn this additional credit, you must complete the requirements outlined by the instructor.

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You may earn this additional credit hour in the same semester in which the regular course is taken or in the subsequent semester. You will receive separate grades on your transcript for the regular course and for the one-credit honors option.

The basic purpose of honors options is to enable instructors to make challenging and enriching assignments which will enable capable students to gain a more sophisticated knowledge of the discipline, and which will also be academically beneficial to the student. The additional work required on the student's part should typically require an average of two to three hours per week during the semester.

Honors options are designated on the student's transcript as "HON" after the course number. To be eligible to take an honors option the student must have (a) 12 credits of 100-level or higher coursework at MCC and 3.25 cumulative GPA, (b) a composite score of 24 on the ACT, or (c) COMPASS scores of 93 on Reading, 93 on Writing, and 49 on Algebra. Students register for honors options in the same manner as they register for a regular course; however, it is recommended that students meet with the instructor to discuss the requirements before registering. Some sections may require an instructor signature.

For additional information about honors options please contact the program coordinator through the Academic Affairs Office.

### **Phi Theta Kappa**

Phi Theta Kappa is the international honor society for community college students. Students are eligible to join after completing twelve credits of 100-level classes, with a cumulative grade point average of 3.5 or above. Members are formally recognized for their academic achievements and are given opportunities to develop leadership skills, participate in service projects, work and have fun with their fellow students, and pursue scholarly excellence. Information is available in the Counseling and Advising Center, Room 101.

### **International Study Programs**

For information on the international programs at MCC, visit [www.muskegoncc.edu](http://www.muskegoncc.edu). The MCC website offers information on the German Exchange program to Stuttgart, Germany exploring International Business and German Culture, Belize Field Studies program in Ancient Mayan Civilization and Rainforest Ecology, Spanish Study Abroad in Mexico, International Education Week, Global Awareness Festival, travelogues, International Newsletter, and much more. For further information, call the International Coordinator at (231) 777-0376.

### **Veterans' Office**

Muskegon Community College maintains a full-time Veterans' Office. The office provides veterans, Reserve/National Guard personnel, eligible dependents, and survivors with current V.A. benefit information, and provides assistance in completing and processing V.A. forms for college enrollment, tutorial assistance, and other benefits. All veterans are encouraged to use these services which are located in at the Student Welcome Center. For further information, call (231) 777-0236 or (231) 777-0342.

## Veterans' Responsibilities

1. Complete a "request for V.A. certification" online through the Veterans' webpage for every semester you wish to draw V.A. educational benefits. It is recommended that this be done in February for the following Summer Semester, in May for the following Fall Semester, and in October for the following Winter Semester.
2. Register only for classes required to satisfy the program stated on your V.A. application.
3. Contact the Veterans' Office before repeating classes.
4. If you withdraw officially or unofficially from any class(es), report the last date of attendance in writing to the Veterans' Office. If this is not done, MCC will report the last date of attendance of that class as the first date of that class. Overpayment conditions could be created.
5. Maintain a cumulative 2.0 grade-point average.
6. Request that copies of transcripts from all previous institutions attended be sent to the Records Auditor for evaluation.
7. Report changes of program to the Veterans' Office. Overpayment conditions could be created.
8. Notify the Records Auditor, during the final semester of enrollment that you plan to graduate. Also, contact the Veterans' Office before enrolling for additional (post-graduate) courses.

## College Affordability

Costs to attend MCC include registration fees, tuition, special class fees, and books/supplies. Please refer to MyMCC for current tuition and fee information. Books and supplies may be purchased in the Bookstore located on campus.

### To Determine Your Tuition and Fees

Locate the total number of contact hours you have selected to determine your tuition and technology fee. Add the contact hour tuition, technology fee, course fee (if applicable) and the registration fee.

#### Example: Nine (9) Contact hours as an in-district resident

Tuition.....	\$805.50
Technology Fee.....	\$153.00
Registration Fee.....	\$ 35.00
Lab/Course Fee (if applicable).....	n/a
<b>Total Payment Due .....</b>	<b>\$993.50</b>

**Technology Fee:** \$17.00 per contact hour

**Registration Fee:** A \$35 refundable registration fee will be assessed each semester to all students when registering for classes.

\* *Some Courses Require Additional Fees*

## Tuition and Contact Hour Charge Rates

Tuition rates are subject to change; please refer to MyMCC for current rates.

The rates in the following table were effective for Fall Semester 2013:

Contact Hours	In-District	Out-of-District	Out-of-State	Technology Fee
0.5	\$44.75	\$80.00	\$110.00	\$8.50
1.0	\$89.50	\$160.00	\$220.00	\$17.00
2.0	\$179.00	\$320.00	\$440.00	\$34.00
3.0	\$268.50	\$480.00	\$660.00	\$51.00
4.0	\$358.00	\$640.00	\$880.00	\$68.00
5.0	\$447.50	\$800.00	\$1,100.00	\$85.00
6.0	\$537.00	\$960.00	\$1,320.00	\$102.00
7.0	\$626.50	\$1,120.00	\$1,540.00	\$119.00
8.0	\$716.00	\$1,280.00	\$1,760.00	\$136.00
9.0	\$805.50	\$1,440.00	\$1,980.00	\$153.00
10.0	\$895.00	\$1,600.00	\$2,200.00	\$170.00
11.0	\$984.50	\$1,760.00	\$2,420.00	\$187.00
12.0	\$1,074.00	\$1,920.00	\$2,640.00	\$204.00
13.0	\$1,163.50	\$2,080.00	\$2,860.00	\$221.00
14.0	\$1,253.00	\$2,240.00	\$3,080.00	\$238.00
15.0	\$1,342.50	\$2,400.00	\$3,300.00	\$255.00
16.0	\$1,432.00	\$2,560.00	\$3,520.00	\$272.00
17.0	\$1,521.50	\$2,720.00	\$3,740.00	\$289.00
18.0	\$1,611.00	\$2,880.00	\$3,960.00	\$306.00
19.0	\$1,700.50	\$3,040.00	\$4,180.00	\$323.00
20.0	\$1,790.00	\$3,200.00	\$4,400.00	\$340.00

## Refund Policy

**(Subject to change—refer to current Schedule of Classes.)**

Muskegon Community College believes that students should be allowed to attend at least one class meeting without penalty. During that class meeting you can review the detailed requirements of the course syllabus and estimate the workload required. This should enable you to make an informed judgment about the course and increase your probability of success.

Refunds will first be applied to any outstanding debts owed to the College by student; the balance will be sent in an electronic dispersment through the student's "My MCC OneCard" after the 12th day during the Fall and Winter semesters and after the 9th day during the Summer semester. For more information on the "My MCC OneCard" visit [www.mymcconecard.com](http://www.mymcconecard.com).

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## Schedule of Refund Days

Refund days for official withdrawal from college classes for any semester will be granted for tuition as follows:

WEEKS of CLASS	NUMBER of Days for DROPS	PERCENT of REFUNDS
15 Week Classes	1 <sup>st</sup> – 8 <sup>th</sup> day of Semester/Session	100% Refund
	9 <sup>th</sup> – 12 <sup>th</sup> day “ “	50%
	After 12 <sup>th</sup> day “ “	0%
14 - 13 Week Classes	1 <sup>st</sup> – 7 <sup>th</sup> day from the start of the section	100% Refund
	8 <sup>th</sup> – 11 <sup>th</sup> day “ “	50%
	After 11 <sup>th</sup> day “ “	0%
12 – 11 Week Classes	1 <sup>st</sup> – 6 <sup>th</sup> day from the start of the section	100% Refund
	7 <sup>th</sup> – 9 <sup>th</sup> day “ “	50%
	After 9 <sup>th</sup> day “ “	0%
10 - 9 Week Classes	1 <sup>st</sup> – 5 <sup>th</sup> day from the start of the section	100% Refund
	6 <sup>th</sup> – 8 <sup>th</sup> “ “	50%
	After 8 <sup>th</sup> day “ “	0%
8 – 7 Week Classes	1 <sup>st</sup> – 4 <sup>th</sup> day from the start of the section	100% Refund
	5 <sup>th</sup> – 6 <sup>th</sup> day “ “	50%
	After 6 <sup>th</sup> day “ “	0%
6 – 5 Week Classes	1 <sup>st</sup> – 3 <sup>rd</sup> day from the start of the section	100% Refund
	4 <sup>th</sup> – 5 <sup>th</sup> day “ “	50%
	After 5 <sup>th</sup> day “ “	0%
4 – 3 Week Classes	1 <sup>st</sup> – 2 <sup>nd</sup> day from the start of the section	100% Refund
	3 <sup>rd</sup> – 4 <sup>th</sup> day “ “	50%
	After 4 <sup>th</sup> day “ “	0%
2 – 1 Week Classes	1 <sup>st</sup> day from the start of the section	100% Refund
	2 <sup>nd</sup> day “ “	50%
	After 2 <sup>nd</sup> day “ “	0%

Refunds for cancelled courses – In the event of a cancelled course, refunds are automatic.

## Financial Aid

Muskegon Community College, through its financial aid programs, attempts to assist students who would not otherwise be able to pursue their educational goals. Numerous federal and state programs, as well as College-sponsored and privately funded programs are available to assist qualified students. Most of these programs are described in the following paragraphs.

Students must meet the criteria for particular programs, be in good academic standing, and make normal progress toward a degree in order for funds to be awarded or renewed.

Federal regulations require that, in order for an award to be renewed under a federal program, the student must not owe a repayment on a previous loan or grant. The College also reserves the right to withhold all services—including the issuing of academic transcripts—from any students who have not met their financial obligations to the College.

**Applications, Procedures and Deadlines**

In order to be considered for financial assistance, students must do the following:

- 1. Be accepted for admission to the College as a regular student (new students must submit a completed Application for Admission online at [www.muskegoncc.edu](http://www.muskegoncc.edu)).
- 2. Complete and submit a FAFSA (Free Application For Federal Student Aid). Request that a copy be sent to Muskegon Community College (College Code #002297). This is required for all aid programs based on financial need. See [www.fafsa.ed.gov](http://www.fafsa.ed.gov) for more information.
- 3. Immediately respond to any requests. Additional documentation, including signed copies of Federal tax returns, may be needed to complete your financial aid file.

In order to receive full consideration for financial assistance, completed applications must be on file at the College by the following dates:

- for FALL SEMESTER ..... May 1
- for WINTER SEMESTER ..... October 1
- for SUMMER SEMESTER ..... March 1

Applications received after these dates will be considered on a first-come, first-served basis, if funds are available.

Most financial aid is awarded for only one academic year at a time. Students must submit new applications in order to receive consideration in a subsequent year.

**Federal Programs**

**Pell Grant**

PELL Program grants are available to students in financial need. Grants range from \$555 to \$5,635. The actual amount of each grant depends upon the student’s eligibility number and the number of credit hours being carried each semester. A PELL award may be used during the Summer Semester as well as during the Fall and Winter Semesters. Awards are prorated according to the number of credit hours carried:

- 1-5 credits ..... fewer than 1/2 time award
- 6-8 credits ..... 1/2 time award
- 9-11 credits ..... 3/4 time award
- 12+ credits ..... full-time award

Students apply for a PELL Grant by completing the Free Application for Federal Student Aid (FAFSA).

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## Supplemental Education Opportunity Grant (SEOG)

The SEOG Program funds are available to students with exceptional financial need which has not been met through other financial aid programs. Grants may range from \$100-\$4,000. Preference is given to full-time students who show exceptional financial need.

## College Work-Study Program

The College Work Study Program provides part-time employment of up to 20 hours per week to students in financial need. Preference is given to full-time students who have no other source of employment, either on or off campus.

## Stafford Loan

The Stafford Loan Program provides long-term, low interest loans to students. Before applying for a Stafford Loan, the student must first apply for the Federal Pell Grant Program. A student who demonstrates financial need based on federal guidelines may qualify for an interest-subsidized loan (i.e. the Federal Government pays the interest while the borrower is in school).

Students who do not show need may qualify for an unsubsidized loan, and pay the in-school interest themselves. Repayment of the principal of subsidized and unsubsidized loans does not begin until six months after the borrower ceases half-time attendance.

## Parent Loan for Undergraduate Students (PLUS)

Parents of students under the age of 24 may borrow under this program. The PLUS Loan is not based on financial need, and neither the parent nor the student has to apply for any federal aid program before applying for a PLUS Loan.

# State Programs

## Michigan Competitive Scholarship Program

The Michigan Competitive Scholarship Program provides tuition grants of up to \$575 per academic year. Eligibility is based on both financial need and academic achievement. Students must take the ACT test no later than December of their senior year in high school, and complete their Free Application For Federal Student Aid (FAFSA) by the first of March. Students may receive up to ten full semesters of assistance, provided they renew their application each academic year. Further information may be obtained from the high school guidance office or the State of Michigan website ([www.Michigan.gov](http://www.Michigan.gov)).

## Michigan Tuition Incentive Program (TIP)

The TIP Program provides grants to cover tuition and some fees for eligible low-income students who graduate from high school or complete a GED before their 20th birthday. The TIP Program may cover up to 24 credit hours per year, with a maximum of 80 credit hours. TIP students who complete an associate's degree or at least 56 credits at the community college level may be eligible for additional funding if they transfer to a four-year Michigan college or university.

Students apply for the TIP Program by submitting the "TIP Program Application" before graduating from high school. The application is sent to the student by the TIP office.

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## Other Federal and State Programs

### Veterans' Programs

Veterans, veteran dependents/survivors, and Reserve/National Guard personnel may be eligible to receive aid under one or more of the programs listed below. Applications for federal programs may be obtained from any regional Veterans Administration Office. Applications for the state program may be obtained by contacting the Michigan Veterans Trust Fund. Information and forms are also available from the College's Veterans' Affairs Office. The Veterans' Affairs Office will also assist students in completing forms for other veteran benefits.

### Different Chapters and Eligibility Requirements

CHAPTER 30 — This federal program provides educational benefits for veterans who entered military service after July 1, 1985. Veterans who entered military service before January 1, 1977 and served actively for at least two years after July 1, 1985 may also be eligible (Montgomery G.I. Bill).

CHAPTER 31 — This federal program provides educational benefits to eligible disabled veterans (Veterans Vocational Rehabilitation) with at least a 10% service connected disability to be considered for Vocational Rehabilitation and Employment. To get more information regarding this program, please go to [www.vetsuccess.gov](http://www.vetsuccess.gov).

CHAPTER 32 — This federal program provides educational benefits on a matching fund basis to eligible veterans who contributed while in the service (V.E.A.P.).

CHAPTER 33 — The Post-9/11 GI Bill is for individuals with at least 90 days of aggregate service on or after September 11, 2001, or individuals discharged with a service-connected disability after 30 days. You must have received an honorable discharge to be eligible for the Post-9/11 GI Bill. The Post-9/11 GI Bill will become effective for training on or after August 1, 2009.

CHAPTER 35 (DEA) — This federal program provides educational benefits to children (between the ages of 18 and 26), spouses, and widows/widowers of totally disabled or certain deceased veterans.

CHAPTER 1606 — This federal program provides educational benefits to persons who entered a six year Reserve or National Guard obligation after July 1, 1985 (Selected Reserve/National Guard G.I. Bill).

CHAPTER 1607 — This is a new federal education program that provides up to 36 months of education benefits to members of the Selected Reserves, Individual Ready Reserve (IRR), and National Guard, who are called or ordered to active service in response to a war or national emergency, as declared by the President or Congress.

For more information regarding veteran benefits go to [www.gibill.va.gov](http://www.gibill.va.gov).

**Michigan Veterans Trust Fund** (MI PUBLIC ACT 248) — This state program provides benefits for children (between the ages of 16 - 26 years) of certain totally disabled or deceased Michigan veterans. Eligible students must enroll full-time, and may receive up to \$2,800 per year for tuition and class fees. (*Formerly, Children of Veterans Tuition Grant*)

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**Reinstated Entitlement Program**—This federal program provides benefits for some veteran dependents, while in school, who are no longer eligible for Social Security benefits (R.E.P.S.).

**Death Indemnity Compensation**—This federal program provides benefits, while in school, for certain children (under the age of 26) of certain deceased veterans (D.I.C.).

### **Vocational Rehabilitation Service Program**

This state program provides assistance to students who have physical, mental, or emotional disabilities. Information may be obtained by contacting any Michigan Department of Career Development Rehabilitation Services District Office.

### **Native American Tribal Scholarships**

This federal program provides financial assistance for needy Native Americans. Applications may be obtained by contacting your tribal chairman. Students must also apply for financial aid through the College by submitting the FAFSA (Free Application for Federal Student Aid).

### **Michigan Indian Tuition Waiver**

Contact your tribe or the Michigan Department of Civil Rights to determine if you qualify for the tuition waiver.

## **College Programs**

### **MCC Board of Trustees Scholarship**

This program provides tuition scholarships to high school graduates who have achieved a cumulative high school grade-point average of at least a 3.35. In addition, the student must meet the following criteria:

1. Be a legal resident of Muskegon County at the time of high school completion; OR, be a non-resident of Muskegon County at the time of high school graduation, but a legal resident of the State of Michigan, AND graduate from a Muskegon County high school.
2. Submit the “Board of Trustees Scholarship” application by the stated deadline.
3. Enroll as a full-time student (at least 12 credits per semester) no later than the Fall Semester following high school completion.

A student whose high school grade-point average is at least 3.35, or a Home-Schooled student whose ACT composite score is at least 24, is eligible for an award of \$500 per year. This award is renewable for a second year, provided the student maintains a cumulative GPA of at least 3.35 at MCC.

Financial need is not a criterion for this award. Applications may be obtained from county high school counselors applications are due March 1st of their senior year.

### **S.A.M. Tuition Waiver**

Muskegon County Residents who are 60 years of age or older may enroll under the “Study Opportunities for Adult and Mature Citizens” (S.A.M.) program. This program waives tuition for both credit and audited courses. Financial need is not a criterion for this program. You must provide proof of eligibility at the main counter of the Student Welcome Center. You may still be eligible for Financial Aid.

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## Performance-Based Scholarships In Academic And Performance Areas

This program provides tuition grants to students who demonstrate a particular creative talent (for example: in art, music, drama, dance, creative writing, etc.) or a high level of achievement in a certain academic area. Students are nominated by the faculty of each academic department and each department sets its own guidelines for selection of students. Recipients are normally expected to participate in the activities of the department and/or maintain a specified level of academic achievement within their program of studies.

This program is not based on financial need. Grants may range up to full tuition, and may be renewed upon the recommendation of the department. Information may be obtained by contacting the Chairperson of the academic department in which the student is interested, or on MCC's website under scholarships.

### Athletic Grants

These grants, ranging up to full tuition, are available to students who demonstrate collegiate-level athletic ability, carry a minimum of 12 credits per semester, and participate in one of the intercollegiate sports offered at MCC. Students must maintain academic eligibility in order to participate in intercollegiate athletics as well as to receive a grant. See the Athletics department to apply.

### Local Community Programs

Many local clubs, businesses, and agencies sponsor scholarship programs. High school students should contact their guidance counselor for information on these sources of financial aid.

Many companies sponsor scholarships for their employees and/or children; students should check with the personnel offices of their own or their parents' employers.

## Satisfactory Academic Progress (SAP) Policy for Financial Aid Recipients (updated 8/17/2011)

To qualify for financial aid, a student must make satisfactory academic progress toward the completion of an eligible certificate or associate degree program. This policy applies to all students who apply for help from any federal or state financial aid program. It also applies to any other program administered by the College which requires satisfactory academic progress as a criterion for eligibility.

### Standards For Eligibility

Students are making "Satisfactory Academic Progress" if they meet the following conditions:

1. QUALITATIVE COMPONENT - Maintain a cumulative grade point average (GPA) of not less than the following:

Credit Hours Completed	Minimum GPA Required
1 – 11	1.50 cumulative
12 and above	2.00 cumulative

*Continued on next page*

2. PACE OF PROGRESSION - Complete with a passing grade (that is, an A, B, C, D, or P, including a grade with a “+” or “-”) two-thirds of the cumulative hours attempted. All withdrawal grades, incompletes, no-credit grades, transfer credits and repeat classes are considered as hours attempted.
3. MAXIMUM TIME FRAME - Complete their declared major within the maximum limit: For FEDERAL aid programs, once you have attempted 150% of the number of credits normally required to complete a degree, you will not be eligible for any additional federal aid at M.C.C. Transfer credits classes do not count in the calculation of the GPA, but are included in the calculation of the maximum limit.

	<b>Credits Required</b>	<b>150% limit</b>
Regular ASA/AAS degree	62	93
Nursing	84	126
Respiratory Therapy	103	155

### **Additional Standards And Definitions**

- Transfer credits, incompletes and withdrawal grades do not count in the calculation of the GPA.
- Repeating a class – a student may receive financial aid for a previously passed course only one additional time. You are allowed to repeat a failed or withdrawal course until it is passed, if otherwise maintaining SAP.
- Up to 30 remedial credits may be eligible for financial aid if they are required by the student’s academic degree program provided the total doesn’t exceed the maximum number of credits allowed by the maximum time frame standard.
- SAP calculations include all cumulative attempted credits (regardless who paid for them) registered for at the semester’s or course’s census date.
- Financial aid eligibility status - students are evaluated for SAP at the end of each semester enrolled. Eligibility status is categorized as Satisfactory, Warning or Suspension.
- The Pace of Progression is calculated by dividing the cumulative hours successfully completed by the cumulative hours attempted. Monitoring the pace of progression will ensure completion of the degree program within the maximum time frame.
- Only courses that apply to a student’s declared degree program are eligible for financial aid.
- The financial aid SAP Policy is separate from the College’s general probation/dismissal policy (see “Dismissal, Academic” in the index of the college catalog).

### **Explanation Of Eligibility Status**

1. Satisfactory Status: The student is in good standing and meets all conditions of the SAP policy standards.
2. Warning Status: The student has failed to meet one or more conditions of the SAP policy standards at the end of a semester. A student placed on warning will be allowed to receive aid for one additional semester.
3. Suspension Status: The student has failed to meet one or more conditions of the SAP policy standards after two consecutive semesters. A student placed on suspension is not eligible for additional aid until they 1) raise the cumulative GPA up to the minimum required, and/or 2) earn enough credits to meet the minimum cumulative completion rate required. The student would be responsible to pay for any additional classes needed to bring them back into good standing.

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4. **Financial Aid Probation Status:** A student placed on probation has successfully appealed their suspension status by demonstrating that they have the ability to earn a cumulative 2.00 GPA and 67% completion rate by the end of their next semester. If after one semester on probation the student is not back to satisfactory status, they would not be eligible for future aid unless they were successfully following a Financial Aid Academic Plan.
  5. **Financial Aid Academic Plan:** A student on suspension that cannot return to a satisfactory status within one additional semester must meet with an MCC Counselor and develop a Financial Aid Academic Plan. The Plan must be strictly followed and the conditions set-forth must be met. The student will remain on the Plan until returning to a satisfactory status. If the conditions are not met, all future aid will be cancelled. The student would be responsible to pay for any additional classes needed to bring them back into good standing.

## **Loss Of Eligibility, Appeal, And Reinstatement**

If you are denied aid under this Policy, you have the right to appeal. If you feel there are mitigating circumstances in your case, you must complete the “Appeal Form for Satisfactory Academic Progress.” The appeal form must be submitted to the Student Welcome Center before the beginning of the semester you wish to attend. You must address the problem(s) of why you have been unsuccessful in the past and what has changed that will allow you to be successful in the future. The Committee will normally consider such things as illness, a change in job schedule, or other extenuating circumstances (which were beyond your reasonable control) as grounds for a successful appeal. Be sure to include documentation (for example, a doctor’s statement) and a Financial Aid Academic Plan, if appropriate. To complete a Financial Aid Academic Plan, contact the Counseling and Advising Center at 231-777-0362.

Students that successfully appeal are placed on either Financial Aid Probation OR placed on a Financial Aid Academic Plan that ensures they will meet SAP standards by a specific point in time.

If you want federal aid to earn a second degree, you must appeal in writing, stating your academic goal, and provide a Financial Aid Academic Plan including documentation (such as a “graduation audit”) of the classes needed to accomplish your goal.

This policy states the minimum required for most financial aid programs. However, some scholarship and loan programs require a higher standard (usually a higher GPA). Therefore, you may qualify for most aid programs by meeting the above conditions, but be denied a specific scholarship or loan unless you raise your GPA or pass additional credit hours.

## **Financial Aid Refunds**

Financial Aid recipients who withdraw from classes will have their tuition accounts adjusted according to the College’s regular tuition refund policy (see “Refund Policy”). Each semester’s refund dates are printed in the Schedule of Classes. If you find it necessary to withdraw during a semester, you should notify the Student Welcome Center in person or by fax as soon as you can.

Federal aid recipients who withdraw from ALL classes before they complete 60% of the semester may have to repay a prorated portion of the federal aid they received.

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# Registration Information

Registration at Muskegon Community College takes place three times a year, starting in April for Fall Semester, starting in early November for Winter Semester, and starting in March for Summer Semester. Fall and Winter Semesters are 15 weeks in length. Summer Semester generally begins in May and courses are offered with a variety of start and end dates. Register as soon as you are eligible to ensure your place in the classes you desire.

Before Registering for Classes:

- **Testing**—Before registering for classes you must take placement tests which will help you choose the right courses. See “TESTING” on page 234.
- **Counseling**—Schedule an appointment to see a counselor early, but preferably after taking the placement tests. The counselor can assist you in curricular planning and with other concerns you may have. See “COUNSELING” on page 232.
- **Career Resource Center**—Visit the Testing Center to explore career options by utilizing our assessment tools.

## Priority Online Registration Process

Priority Registration is available exclusively to currently enrolled students. Using MyMCC, current students have the first opportunity to select courses before registration is open to other individuals. Registration is based on a priority system that allows you to begin registration according to the number of total MCC credit hours completed. Priority begins with students who have earned the most MCC credit hours and ends with the students with the least MCC credit hours. For a detailed schedule of priority registration, go to [www.muskegoncc.edu/priority](http://www.muskegoncc.edu/priority). You may register at your assigned time or after, but not before.

## Online Registration Process

How do I access MCC WebAdvisor for the first time?

1. Go to the MCC Homepage at [www.muskegoncc.edu](http://www.muskegoncc.edu).
2. [Click on MyMCC.](#)
3. [Login using your MCC username and password.](#)
4. Click on WebAdvisor for Students.

In-Person Registration and open web registration is available after priority registration ends. Please refer to [www.muskegoncc.edu/register](http://www.muskegoncc.edu/register) for dates and times.

**Adding Courses**—Prior to the beginning of the semester, you may add courses during the time designated in the Schedule of Classes for that semester. A student must have written permission of instructor to add a class once it has met. Regarding online classes, a student must have written permission of instructor to add a class on or after its published start date. Refer to WebAdvisor in MyMCC for class information.

**Dropping Courses**—(Other than complete withdrawal from the College)—You may process drops online or by submitting a signed drop form, in-person or by fax, to the Student Welcome Center during the time specified in the Schedule of Classes. If changing courses/sections after the drop period, students may only transfer from one section of a course to another section of the same course. Students attempting to drop and add courses of different names outside of the 100% refund period will be billed for tuition accordingly.

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**Credit Hour**—As a rule of thumb, each credit hour equals one hour of class or two hours of laboratory work per week. Exceptions are noted in course descriptions.

**Employment and Classload**—Many students find it necessary or even desirable to be employed while attending college. While enrollment on a full-time basis is very demanding, you may find that you can maintain satisfactory grades even while working part-time. The following table provides general guidelines for those students who plan to work:

CLASSLOAD.....	WORKLOAD
(Semester hours) .....	(Hours per week)
13 or more .....	15 or less
10 - 12 .....	24 or less
7 - 9.....	32 or less
3 - 6.....	40 or less

## General Academic Policies

### Audit Policy

If you wish to attend a class, but do not desire credit or a grade, you may elect to audit a class. If you audit a class, you are required to pay the same tuition and fees as those taking courses for credit.

MCC permits students to register for college credit courses on a non-credit (audit) basis. Those who wish to do so should consult with a member of the counseling staff regarding College policies and procedures for audit status enrollment.

These policies include the following:

1. Students may audit courses so long as they (a) register specifically for audit status; (b) pay regular tuition and fees as listed in the official publications of the College; and (c) comply with all assignments, projects, tests, and learning experiences required of credit-status (regular status) students unless they explicitly make another arrangement that is mutually agreeable to both instructor and student.
2. Audit status students should realize that unless they complete all regular course requirements it will probably not be possible to convert from audit status to credit status at a later date. Audit status students who have completed all regular course requirements to date and wish to change from audit status to credit status must complete a Request to Change from Audit to Credit Form and submit it to Room 100-J or the Student Welcome Center. Such petitions must include a note from the instructor stating the student has completed all regular course requirements to date. This request must be processed prior to the final examination.
3. Students who register for a credit class cannot change to audit status.
4. For students who complete all requirements, instructors will record the progress of audit students in the same manner as credit students. A grade of “AU” will be recorded on the audit status student’s transcript at the end of the semester, and will not be used to compute grade point averages.

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## Drop/Withdrawal Policy

### Dropping A Course During The Refund Period

You may drop courses during the refund period using WebAdvisor or by submitting a Drop/Add form at the Student Welcome Center and no grades will be recorded on your transcript.

### Withdrawing From A Course After The Refund Period Is Over

You may process withdrawals on WebAdvisor or by submitting a Drop/Add form to the Student Welcome Center. **You are strongly encouraged to consult with your instructor and a counselor prior to processing a withdrawal. If you have financial aid or scholarships, it is especially important for you to contact the Financial Aid Office prior to withdrawing.**

You may withdraw from a course after the drop/refund period until the Friday before final exams begin. For early-ending courses, you may withdraw from a course after the refund period until one day prior to the end date of the course (prior to the final examination). Withdrawal from a course will generate a grade of “W” on your academic record and tuition/fees are not refunded.

Weeks of Classes	Drops Allowed	Withdrawals Allowed
15 Week Classes	1st-12th day	13th day- the 14th week
Early ending sections	Through the Refund Period	After the refund period until one day prior to the end date of the section.

*If you stop attending a course and do not formally withdraw, the instructor has the option of initiating a grade of “W” or a grade of “E.”*

**Withdrawal from College**—Withdrawal from college is defined as the student’s formal withdrawal from all courses currently in progress.

**Military Withdrawal**—Any currently enrolled student who is called for military duty shall be dropped from all uncompleted courses with a grade of “WM”-Withdrawal Military and will be granted a refund of all tuition and fees paid upon receipt of a copy of military orders, a completed Tuition Refund Appeal Form to the Student Welcome Center and after deliberations of the Petitions Committee.

**Withdrawal-Illness**—The Petitions Committee may allow a “WI” if a qualified professional (doctor, psychologist, etc.) provides written evidence of physical or mental illness. The initiative for such action rests with you, the student, and should be initiated in the semester in which it occurs, except under extenuating circumstances. A completed Tuition Refund Appeal Form with proper documentation must be turned in to the Student Welcome Center for review by the Petitions Committee. Appeals are accepted up to one year after the occurrence.

**Attendance**—You are expected to attend all sessions of the classes in which you enrolled. You may be withdrawn from the class at the discretion of the instructor if you have excessive absences. Instructors who do not take attendance into account when determining your status in the course must maintain other consistent means of showing participation.

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**Repeated Courses**—The Muskegon Community College Course Repeat Rule was developed to provide fair access to classes. It allows you to repeat the course once. Permission of instructor is required to take a course more than twice.

To repeat a course, you must register and pay all necessary fees. Each grade received will appear on your record, but only the last grade awarded is used in computing a GPA. Keep in mind that if you retake a class and receive a lower grade, the last grade is still the one that counts. When transferring to another college or university, you may be held accountable for all attempts and grades associated with a course taken at Muskegon Community College. *Please note: Financial Aid is only available for one additional attempt of a previously passed course.*

**Academic Forgiveness (Re-evaluation of Grades For An Entire Semester)**—The College permits students within specific and defined guidelines to petition for Academic Forgiveness for an entire semester by submitting a “Performance Agreement” form. You must see a counselor to discuss and initiate the agreement.

Students granted Academic Forgiveness will have their cumulative grade point averages recalculated. While the forgiven grades will continue to appear on the official transcript, they will be marked as forgiven.

**Academic Probation**—Any student who receives a cumulative grade point average of less than 2.0 (“C”) for 12 or more semester hours of credit will be placed on academic probation.

**Academic Dismissal**—Students placed on academic probation for two consecutive semesters may be dismissed from the College for one semester. Normally, such dismissal occurs during the Summer Semester, and the student is prohibited from enrolling for the Fall Semester. However, students who have been dismissed may enroll in classes for the Summer Semester in order to correct their academic deficiencies. Those who earn a 2.0 grade point average or better for a minimum of three credit hours during the Summer Semester will be permitted to enroll on a probationary status for the Fall Semester.

If the dismissed student enrolls for the Fall Semester and then fails to achieve a grade point average of 2.0 (“C”) during the Summer Semester, he/she will be dropped from all classes. Refunds will be handled through Financial Services.

Any student who is dismissed from the College may appeal to the Petitions Committee for reinstatement. The Petitions Committee will review the student’s progress and permit re-entry if they think the student has a reasonable chance for success in a subsequent semester. Students who do not appeal will not be allowed to enroll for the dismissal semester.

**Student Computer Use Guidelines**—MCC has established guidelines for student use of college computers and programs, which includes access to the Internet. The guidelines are posted in computer labs and are also listed in the Student Handbook. Everyone who uses computers on campus is expected to adhere to these guidelines.

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# Confidentiality of Records

## Notification to Students of Rights Under FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their educational records. They are:

The **right** to inspect and review the student's educational records within 45 days of the day the College receives a request for access. Students should submit to the Dean of Academic Services and Registrar a written request that identifies the record(s) they wish to inspect. The College will make arrangements for access and notify the student of the time and place where the records may be inspected.

The **right** to request the amendment of the student's educational records that the student believes is inaccurate or misleading. Students may ask the College to amend a record that they believe is inaccurate or misleading. Students should submit to the Dean of Academic Services and Registrar a written request, clearly identifying the part of the record(s) they want changed, and specify why it is inaccurate or misleading. If the College decides not to amend the record as requested, the College will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

The **right** to consent to disclosures of personally identifiable information contained in the student's educational records except to the extent that FERPA authorizes disclosure without consent. One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic, research, or support staff position; a person or company with whom the College has contracted (such as an attorney, auditor, or collection agency); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an educational records in order to fulfill his or her professional responsibility.

The **right** to file a complaint with the U.S. Department of Education concerning alleged failures by Muskegon Community College to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue SW  
Washington, DC 20202-4605

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## Directory Information

The College designates certain information as “directory information.” This may be disclosed without violating FERPA. It includes:

1. Student’s name
2. Major field of study
3. Weight and height of athletes
4. Participation in officially recognized activities and sports
5. Dates of attendance, degrees, date of graduation and awards
6. Photographs

Directory information does not include student identification numbers, Social Security numbers, or other personally identifiable information.

## Non-Disclosure Form

Students wishing the College to withhold directory information on them may do so during the first week of classes by submitting the Non-Disclosure Form to the Dean of Academic Services and Registrar. Forms are available online or at the counter in the Student Welcome Center.

## Disclosure of Educational Records

Muskegon Community College will not disclose student records to anyone other than the student (including the student’s parents), without the student’s written permission. However, FERPA does establish several exceptions that allow the institution to disclose student records without the student’s prior written consent. Some of those exceptions are:

1. To other school officials with a legitimate educational interest.
2. To officials of other schools in which the student seeks to enroll.
3. In connection with a student’s application for, or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid.
4. If disclosure is necessary to protect the health or safety of the student or other persons in a health or safety issue.
5. To comply with a judicial order or to respond to a lawfully issued subpoena, provided the College first make a reasonable attempt to notify the student.
6. Directory information as defined by Muskegon Community College. You should always contact the Dean of Academic Services and Registrar before releasing student records to a third party, even if you think one of these exceptions applies.
7. To certain officials of the U.S. Department of Education, the Controller General, and the state or federally supported education programs.
8. To organizations conducting certain studies for or on behalf of the College.
9. To accrediting organizations to carry out their accrediting functions.
10. To parents of an eligible student who claim the student as a dependent for income tax purposes- IRS Code of 1986, Section 152.
11. To an alleged victim of any crime of violence of the results of any institutional disciplinary proceeding against the alleged perpetrator of that crime with respect to that crime.
12. Veterans Administration Officials in response to requests related to VA programs.

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13. Representative of the Immigration and Naturalization Services (INS) for purposes of the coordinated interagency partnership regulating international students (SEVIS).
  14. As of January 3, 2012, the U.S. Department of Education’s FERPA regulations expand the circumstances under which your education records and personally identifiable information (PII) contained in such records —including your Social Security Number, grades, or other private information — may be accessed without your consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities (“Federal and State Authorities”) may allow access to your records and PII without your consent to any third party designated by a Federal or State Authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is “principally engaged in the provision of education,” such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to your education records and PII without your consent to researchers performing certain types of studies, in certain cases even when we object to or do not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they authorize to receive your PII, but the Authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State Authorities may collect, compile, permanently retain, and share without your consent PII from your education records, and they may track your participation in education and other programs by linking such PII to other personal information about you that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

## **Class Standing**

For the purposes of records and reporting, students are classified as freshmen if they have completed 25 credit hours or less, as sophomores if they have completed 26 credit hours or more.

## **Transcripts**

There is no charge for transcripts. Transcript requests are normally processed within one week, but may require more time to process at the end of a semester. Your signature is required before we can release your transcript. Transcripts may be requested in person, by mail, or by fax. Transcripts that are released to the student are unofficial. Official transcripts must be sent directly to a college/university or business. “Sealed transcripts” are available but are “issued to student.” Transcript copies will not be furnished if you have delinquent accounts at the College.

Unofficial transcripts/grades may also be requested/viewed/printed through WebAdvisor. WebAdvisor is part of the MyMCC web portal and allows students to register, access their grades, and much more.

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## Graduation Credential Requirements

To receive an associate degree, diploma, certificate or professional development credit at Muskegon Community College, a student must meet the following requirements:

- A. All candidates must maintain a 2.0 grade point average. Health programs may have a different GPA requirement.
  - B. A minimum Muskegon Community College credit requirement (Residency Requirement).
    1. Associate Degrees - A student must complete not less than 30 credit hours or the last 15 credit hours at Muskegon Community College in order to receive an associate degree.
    2. Diplomas - A student must complete 26 credit hours at Muskegon Community College in order to receive a diploma.
    3. Certificates - A student must complete 6 credit hours at Muskegon Community College in order to receive a certificate.
    4. Professional Development - A student must complete 3 credit hours at Muskegon Community College in order to receive professional developmental credit.
  - C. Students returning to Muskegon Community College after a five (5) year absence or longer will be under the requirements of the current catalog.
- Any exceptions to these graduation requirements must be brought before the Petitions Committee with the full concurrence of the department(s) involved.

## Associate in Science and Arts Degree Requirements

The Associate in Science and Arts (ASA) Degree is primarily a transfer-oriented degree. In order to receive the degree, each student must complete a minimum of 62 credit hours of course work and the program requirements as listed in the Muskegon Community College catalog.

## Associate in Applied Science Degree Requirements

The Associate in Applied Science (AAS) Degree is awarded for successful completion of an occupationally oriented curriculum. It may also be used as a transfer degree to certain baccalaureate programs.

Candidates for this degree must complete a minimum of 62 credit hours of course work and all course requirements for a specific associate in applied science program as outlined in the Muskegon Community College catalog.

Graduation requirements for the associate degree may include two credits in physical education. Refer to program pages for specific courses which will fulfill graduation requirements.

The maximum number of cooperative internship credit hours that may be applied toward an associate degree is 12 and many programs permit even fewer.

## Professional Development Credit

The Professional Development Credit is designed to help students update their skills. Once a student has completed one of the programs, he/she may apply the credits towards a certificate or an associate degree. Students will have 18 months to complete courses with a minimum grade of a "C- "to receive the Professional Development Credit.

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## Application for Graduation

To graduate from Muskegon Community College with a degree or a certificate, you begin the process by completing an Application for Graduation. You must have completed at least 47 credit hours if you are applying for an associates degree. This form is available online and at the Student Welcome Center. The application deadline dates are as follows:

Fall Semester Graduation.....	November 1
Winter Semester Graduation .....	March 1
Summer Semester Graduation .....	June 1

The graduation audit will be based on the requirements in effect in the printed catalog at the time of the student's initial enrollment, unless updated catalog requirements are specifically requested. (Students may not apply for graduation under requirements that were printed for a year they were not in attendance at the College.) Students returning to Muskegon Community College after an absence of FIVE YEARS OR LONGER will be under the requirements of the current catalog.

When your Application for Graduation is complete, a review of your academic record will be conducted by the Records Auditor to determine if graduation requirements have been met. You will be notified in writing of the results.

Students are not eligible for graduation until all delinquent tuition, fees, and fines have been paid. The student is responsible for meeting all graduation requirements.

## Multiple Degrees

You may earn and be awarded two or more degrees (and/or certificates), provided that all academic requirements for the degrees have been met. A graduation audit will be conducted for each degree requested on the Application for Graduation. Multiple diplomas or certificates will be awarded where appropriate.

## Graduation with Honors

Students who have fulfilled the requirements for an associate degree and have earned a cumulative grade point average of 3.40 or higher will graduate with honors as follows:

Summa Cum Laude: .....	3.80-4.00
Magna Cum Laude:.....	3.60-3.79
Cum Laude:.....	3.40-3.59

## Substitution Waiver

A substitution waiver is the substitution of a required course in a degree or certificate with an alternate course. Substitution waivers do not reduce the total number of credit hours required in a degree or certificate or in general education requirements. Course substitution waivers are granted for a specific degree or certificate and a specific catalog year. The granted substitution waiver will not automatically apply toward other degrees and certificates you are pursuing.

You may request a substitution waiver by contacting the department chairperson.

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## Grading System

Final grades are posted on your academic record and can be found through the MyMCC web portal under your Academic Profile in WebAdvisor by selecting Grades or Transcripts.

### Quantitative Grade Values

<b>A 4.0</b>	<b>B- 2.7</b>	<b>D+ 1.3</b>
<b>A- 3.7</b>	<b>C+ 2.3</b>	<b>D 1.0</b>
<b>B+ 3.3</b>	<b>C 2.0</b>	<b>D- .7</b>
<b>B 3.0</b>	<b>C- 1.7</b>	<b>E 0</b>

### Non-quantitative Grades (not computed)

P Pass	WM Withdrawal—Military Activated
NP No Pass	CS Community Service
W Withdrawal	AU Audit
WI Withdrawal—Illness	I Incomplete

**Pass/No Pass**—These grades are not optional but a standard grading system for particular courses.

**“Incomplete” Policy**—When you are unable to complete all of the required work for a course because of illness or other unpredictable circumstances, you may request an Incomplete (I) grade. When requested by the student, the instructor’s judgment will determine whether the incomplete grade will be assigned. If the instructor does not deem the circumstances to be appropriate for an Incomplete (I), you may elect to withdraw from the course according to the withdrawal policy.

Although shorter time periods may be assigned on a case-by-case basis, “I” grades must be completed within one year of the official occurrence of the grade.

Once you complete the necessary requirements for the class, a Change of Grade Form must be submitted for you by the instructor to receive a grade greater than an “E.” Any “I” (incomplete) grades that are not changed within one year of the official occurrence of the grade will default to an “E.”

**Grade Point Average (GPA)**—Each letter grade has a point value as indicated above. The number of grade points earned for each course is found by multiplying the credit value of the course by the point value of the final grade. For example, a student with a final grade of “B” in Political Science (PSCI) 111 would earn 12 grade points, since a “B” has a point value of 3, and Political Science 111 is a 4-credit course.

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The semester grade point average is calculated by adding the total points for all courses and dividing by the total number of credit hours taken during the semester.

**Example:**

English 101 .....	3 credits, grade of A = 12
Political Science 111 .....	4 credits, grade of C = 8
Physical Science 101.....	4 credits, grade of B = 12
Art 198 .....	3 credits, grade of D = 3
Total: 14 credit hours with a total of 35 points; 35 divided by 14 = 2.50	

The cumulative grade point average is found by dividing the total of all points earned in all semesters by all credits taken to date.

**Final Grade Appeal**—Grades may be challenged retroactive one year from the date the grade was officially recorded. If you choose to challenge a grade you must complete a Final Grade Appeal Form and must follow the steps outlined on the form to attempt to resolve the complaint:

1. You should consult with the instructor to see if an understanding can be reached. You are entitled to an explanation as to how the grade was determined. If a solution is not found, the instructor must provide a written response to the student’s appeal, providing documentation as to how the grade was determined. The instructor’s response should include a copy of the course outline or syllabus provided to the student’s class at the beginning of the semester.
2. If you are dissatisfied with the instructor’s written response to the appeal, you must submit the form to the Department Chairperson in which the course was offered. Following a review of your appeal and the instructor’s response, the Department Chairperson must provide his or her written opinion of the appeal along with any additional, pertinent information.
3. If you are dissatisfied with the opinion of the Department Chairperson, you must then submit an appeal to the Vice President for Academic Affairs or the Associate Vice President for Academic Affairs. If you are not satisfied with the decision of the VP, you may submit a written appeal with signatures to the Student Welcome Center.

Your Final Grade Appeal will be reviewed by the Petitions Committee at the next scheduled meeting. You will be notified of the Committee’s decision in writing. The decision of the Petitions Committee will be final.

**Academic Load**—Students are not permitted to enroll for more than 18 credit hours without the approval of a counselor, Vice President, or Associate Vice President.

**President’s List**—The names of those students who have completed 12 credit hours with a 4.0 grade point average in any semester are published by the College, subject to permission of the student. Those so recognized are designated as President’s List Students.

**Dean’s List**—The names of those students who have completed 12 credit hours with a 3.5 grade point average or higher in any semester are published by the College, subject to permission of the student. Those so recognized are designated as Dean’s List Students.

**Academic Honors List**—The names of those students who have completed at least 6 credit hours and fewer than 12 credit hours with a 3.5 grade point average or higher in any semester are published by the College, subject to permission of the student. Those so recognized are designated as Academic Honors List Students.

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## Institutional Governance for Internal Communication

The board has established permanent advisory councils, representatives of the major service functions of the College:

- Student Services Council
- Instructional Affairs Council
- Business Administration Council
- Information Technology Council
- Coordinating Council

These councils, in conjunction with the Faculty Association, Student Government, Maintenance/Custodial Association, MCC Educational Support Staff Unit, and Administrative/Professional Support Staff provide the structure for seeking opinions, expressing ideas, and developing recommendations. Individuals who have proposals for consideration should forward such items to the appropriate council through the Council Chairperson. These councils may identify, investigate, review, and recommend policy and procedural matters to the Coordinating Council. The Coordinating Council will review and expedite the recommendations of the other councils by forwarding advisory recommendations, when appropriate, to the President. All action taken by the Coordinating Council will be published and distributed to the College Community.

### Procedural Guidelines for All Councils

1. Each Council will act to adopt its agenda as the first order of business.
2. Minutes of Council meetings will be published as soon as possible following the meeting, including agenda and date of next meeting, if possible. Minutes will be posted on the MCC website.
3. Councils will take action by consensus rule or vote, as determined by individual councils.
4. Council meetings will be scheduled at least monthly.
5. Representatives are expected to attend all meetings.
6. A quorum will consist of a simple majority of voting membership.
7. Term of membership will be one (1) academic year and is renewable. Vacancies will be filled through appointments by the respective group.
8. Chairperson is to be elected by the membership at the first meeting each September.
9. Chairperson's Duties:
  - A. Presiding Officer
  - B. Appoint Chairperson and members of sub-committees
  - C. Ex-officio member of all sub-committees
  - D. Council representative to Coordinating Council
10. All Council meetings will be announced at least three (3) days in advance, including the agenda. Meetings will be open to the public and comments will be taken from the floor, with the discussion from the floor pertinent to the subject at hand, with the right to limit such discussion reserved to the Chairperson of that Council.
11. Members of Ad-hoc committees or sub-committees need not be members of any Council.
12. Each Council shall decide their own voting membership.

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## Petitions Committee

The Petitions Committee, a standing committee of the Student Services Council, is composed of faculty members, staff, and students. The committee meets on the third Tuesday of each month to consider requests submitted. The Petitions Committee exists to consider the petitions of students with respect to any MCC rule or regulation. Board policy has empowered the Petitions Committee to take direct action in the following areas:

- A. Changes of Withdrawal-Illness(WI) grades due to physical or mental illness
- B. Final grade appeals
- C. General Student Complaint appeals
- D. Graduation requirements appeals
- E. Instructor initiated drops appeals
- F. Tuition refund appeals

In considering all other types of petitions, the Committee reviews requests and refers students to the appropriate campus office for action. These referrals may be accompanied by the recommendation of the Committee.

Students may present questions regarding any regulation or policy of MCC. Tuition Refund Appeal (withdrawal illness included) forms and Final Grade Appeal forms are available online or in the Student Welcome Center. Completed forms and required documentation should be sent to:

Petitions Committee, Student Welcome Center  
Muskegon Community College,  
221 S. Quarterline Rd,  
Muskegon, MI 49442.

Note: No request will be considered without adequate documentation. All petitions must be submitted at least one week prior to the scheduled meeting to be reviewed. All petitions must be received no later than one semester after the end of the semester in which the course(s) were taken. If you choose to bring someone with you to the Student Services Council Committee, that person may not speak on your behalf. The decision of the Petition Committee is final.

## Complaints/Grievances

The Lead Human Resources Administrator has been designated to handle inquiries regarding the non-discrimination policies of the College. To schedule an appointment, call (231) 777-0350 or go to Room 400

## Services for the Community

The College offers courses, workshops, seminars, and special events to meet the lifelong learning needs of the community. These non-credit educational offerings emphasize career development, personal growth, cultural enrichment, and the solution of community problems.

### Career Resource Center

The Career Resource Center serves the career development needs of students and members of the community. Our main purpose is to educate and assist you in effectively developing,

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evaluating and implementing career and educational plans. A variety of services are offered in the Career Resource Center, and are designed to help you discover the career that is just right for you. Understanding who you are, what you like and don't like, and what you value are all important questions you will need to answer if you are going to make quality career choices. The Career Resource Center has several different assessment instruments available to help you with this process, learn about your interests, abilities and skills, values, personality, and preferred job characteristics. These assessments are computerized and can be taken fairly quickly, either on our website at [www.muskegoncc.edu/careers](http://www.muskegoncc.edu/careers), or in the Testing Center, Room 134.

## **Continuing Education**

The Continuing Education Office provides lifelong short-term learning opportunities to meet the needs of the community. These non-credit educational classes emphasize career development, personal growth and cultural enrichment.

**Continuing Education Courses:** Selected courses developed, offered on campus, as well as online to enrich your skills, learn new information, or earn a certificate of completion in a high-demand career program.

**Continuing Education Unit credits (CEUs)** may be offered for professions that require regular upgrading for certification. Special seminars to meet the training needs of specific organizations can be arranged by calling the Continuing Education Office at (231) 777-0348.

**Contact Us:** Information about courses, workshops, seminars, and special events is published twice each year in the OPTIONS Continuing Education Schedule of Classes. Copies are distributed to the public and are available at the college. You can also view the listing on the website at [www.muskegoncc.edu/ce](http://www.muskegoncc.edu/ce).

## **Lakeshore Business and Industrial Service Center**

The Lakeshore Business and Industrial Service Center provides customized instruction in virtually every area for local business and industry through workshops, seminars, college classes and consulting services. Training may be held on campus or at the workplace, depending on the particular needs of the company. Instructors and trainers are selected from the College faculty, area working professionals and specialty consultants. Training may be for either college credit or non-credit. Staff members from the Lakeshore Business and Industrial Service Center is available to help design specialized courses and provide resources and materials for your business needs. For more information call 231.777.0569 or visit the website at [www.muskegoncc.edu/business](http://www.muskegoncc.edu/business).

## **Student Life and Community Outreach**

The Office of Student Life (Room 103) brings you services, resources, activities, and events from the non-academic side of college life. We are committed to constantly evolving. We strive to be open-minded and flexible by responding to the needs of the campus and our community. Our staff and our programs aim to encourage the development of leadership skills, values, friendships, and the opportunity to make a difference. Student Life oversees the Career Resource Center, Clubs and Organizations, Community Outreach, Employment Resource Center, Internship Programs, Leadership Muskegon, and student activities.

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Several daylong events are planned annually with the help of community advisory committees. Some of these events are: The Hispanic Youth Career Conference held in May; Mayfest, the third Saturday in May; and Senior Day in August. Conferences for middle school students, and seminars addressing community issues are held periodically during the year.

## **Student Support Center**

Students helping students reach their full educational, individual and career potential. Our mission is to encourage and support student success! Our goals are to:

- Maintain a visible, accessible, supportive environment, where students are encouraged to engage in dialogue, exchange ideas, and connect with other students.
- Provide information for on campus resources and off campus services that may assist students with various issues (i.e. economic hardship, healthcare, family counseling, continuing education).
- Encourage those who are considering returning to school because of life's circumstances. We understand that many students have family responsibilities and jobs that make college a difficult undertaking.
- Ease your transition into college. For more information stop by Room 103 or call (231) 777-0216 or (231) 777-0298.

## **Registered Student Organizations**

The College provides opportunities for students to participate in a variety of clubs and organizations which encourage intellectual, social, cultural and leadership development. In many cases these organizations enable students to work on projects related to the classroom experience. Current information on such activities is publicized on campus each semester. If you have a common interest with other students and would like to form a club, check the MCC website, or stop by Room 103 for details.

## **Annual Programs, Academies, and Conferences**

Each year the College provides training in academies and institutes that meet several weeks and address the training needs of business, industrial or community leaders. Included in this category of programs are Leadership Muskegon. The West Michigan Police Training Council, in conjunction with the College, conducts an on-going training program for police officers. The Project Intercept program is a joint program between the College and the District Court Probation; 18-20 classes are held annually for first time offenders. Larger conferences include the West Michigan Township Officials Conference, Administrative Professionals Day, Senior Day and several youth conferences.

## **Student Government Association (SGA)**

SGA serves as the official representative body for MCC students. It provides a forum for expression on matters of concern to the student body, and presents opportunities for the development of student leadership.

Goals of SGA:

1. To ensure the conveyance of the student voice to the administration and Board of Trustees.
2. To provide for discussion, investigation and resolution of student problems, concerns and ideas.
3. To retain sole authority to appoint and remove student representatives to the College's Council System and designated committees.

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4. To promote the interests of the College's student community.
  5. To protect and uphold student's rights.
  6. To plan, encourage and promote participation in College events and community service activities.

## Athletics

MCC has maintained a program of intercollegiate athletics for both men and women for many years, while attempting to maintain teams in a wide variety of competitive fields. MCC is a member of the Michigan Community College Athletic Association, Region 12, and the National Junior College Athletic Association.

Questions about eligibility should be directed to the Director of Athletics. Transfer students should secure a transcript from any college previously attended and have it placed on file in the Office of the Registrar to aid in the determination of eligibility. Athletic grants-in-aid are available for tuition only in all sports sponsored by the College.

## The Foundation for Muskegon Community College

The Foundation for Muskegon Community College helps Muskegon Community College (MCC) achieve its mission by devoting financial resources to strengthen the high quality education that benefits every MCC student. Contributions allow us to build and renovate facilities, expand academic programs, purchase instructional equipment, provide scholarships, and overall advance the mission of Muskegon Community College. For more information about the Foundation, joining the Foundation Board, or supporting our fundraising efforts, please contact Tina Dee, MS, CFRM, Director of Community Relations at (231) 777-0660, email [tina.dee@muskegoncc.edu](mailto:tina.dee@muskegoncc.edu), or visit [www.muskegoncc.edu/foundation](http://www.muskegoncc.edu/foundation).

## Alumni Relations

MCC is very interested in maintaining life-long relationships with Alumni. Former students are encouraged to keep Alumni Relations informed as they earn additional degrees, move, accept new jobs, get married, or reach other milestones. Updates can be sent to Alumni Relations in the Office of Community Relations at (231) 777-0461 or [alumnirelations@muskegoncc.edu](mailto:alumnirelations@muskegoncc.edu). Alumni and other community members are invited to receive a free subscription to *Reflections* Magazine; simply contact the Office of Community Relations to be included in the mailing list.

Each year the MCC Alumni Association Board of Directors selects a Distinguished Alumni Award recipient, which is the highest honor that Muskegon Community College bestows upon an alum. The award salutes the achievements of outstanding alumni whose personal lives, professional achievements, and community service exemplify the objectives of their alma mater.

Award recipients are selected based on the following criteria:

- **MCC College Career** - The nominee must have completed a minimum of 24 credit hours at Muskegon Community College and demonstrate a record of excellence in academics and extracurricular participation.
- **Professional Achievement** - Such distinction may be evidenced by achievement or advancement in career, earned degrees or professional training, professional recognition and/or outstanding contributions to the field.

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- **Service to the Community** - Nominee shall have demonstrated a record of community participation and involvement.
  - **Advocacy of Education and/or Support of MCC.**
  - **Availability** - Recipients must be available to participate in the commencement ceremony and the Distinguished Alumni Award dinner.

For more information about the Distinguished Alumni Award, *Reflections*, or other aspects of Alumni Relations, call (231) 777-0461 or visit [www.muskegoncc.edu/alumni](http://www.muskegoncc.edu/alumni).

## **Institutional Research and Grants**

The Office of Institutional Research and Grants' primary purpose is to facilitate the collection, analysis, and interpretation of institutional data and provide information to support planning and decisionmaking. IRG provides a variety of research services to the college, including submitting official enrollment, graduation, and employment reports to external agencies; responding to research requests from college staff; and administering surveys to current and former students. IRG staff members also work with faculty and staff to seek external grant funding for the college.

## **About Us**

### **History of Muskegon Community College**

Muskegon Junior College was established by the Muskegon Board of Education in 1926 and was housed on the third floor of what was then the new Muskegon Senior High School. It was a pioneering effort, since only four other two-year institutions existed in Michigan at the time.

By 1934, enrollment of both the College and the high school had grown beyond the capacity of a single building. The Junior College, therefore, moved into the former Hackley School in downtown Muskegon across from Hackley Park (now the Board of Education Building).

It was appropriate that the College should occupy the old Hackley building, which had been presented to the public schools of Muskegon by Charles H. Hackley after fire had destroyed the original Central School. The city's First Citizen believed that a community was obliged to offer its youth the kind of training which would enable them to earn a good livelihood and at the same time contribute to the well-being of the community.

At the time of its move into this facility and for 17 years after, Muskegon Junior College was primarily geared to those students intending to complete at least four years of college. Muskegon's reputation in this field of the "college transfer" program was an enviable one, and continues to be so today.

Then in June of 1951, after an enabling act by the Michigan Legislature, the name and educational scope of the College was changed. "Muskegon Junior College" became "Muskegon Community College," thereby reflecting the expanded nature of the College's programs.

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They were broadened to serve a larger number of students with a wider variety of interests. Courses were added in retailing, the vocations, the technical fields, public health, and the trades. These courses enabled young men and women to prepare themselves for a specific field of employment in two years of training beyond high school. There was no shrinking of the transfer program, only an expanded curriculum to serve a larger segment of the community.

In the post World War II years, enrollment climbed quickly and the Community College “campus” had to grow accordingly. The Muskegon Board of Education, which still operated the College, utilized available space in many of its buildings, and rented other community facilities when enrollment exceeded the capacities of those buildings.

By the early 1960s, enrollment had topped 2,000 and the College was operating full-time at Hackley, Vanderlaan, and Wilson schools and part-time at eight other locations. The time had come for another step in the development of the College.

The Board of Education formed a Special Citizens Committee to study the entire program and make recommendations. The Committee proposed that the College be separated from the public school system, that a county-wide community college district be created, that a board of trustees be elected to plan, build, and operate the school, and that millage be voted in sufficient amount and for enough years to build and operate the College.

In April of 1963, the county overwhelmingly approved the recommendations of the committee and elected the first Board of Trustees. The elected board went to work immediately and by September of that year had purchased the 111-acre campus on which the College exists today.

Alden B. Dow and Associates was named architect and by the summer of 1965 drawings were completed and construction begun. The Vocational-Technical Wing was completed and occupied in the fall of 1966 and the following September the entire complex was placed in service. Formal dedication ceremonies were held October 22, 1967, with Dr. Ashley Montagu, one of the world’s foremost anthropologists, delivering the dedicatory address.

The first addition to the new campus was the Frauenthal Foundation Fine Arts Center, completed in 1968 and named for the Muskegon industrialist whose gift had made the Center possible – A. Harold Frauenthal.

When the new district was created, the name of the College was changed to Muskegon County Community College; but in the spring of 1969, at the request of the Board of Trustees, the State Board of Education approved changing the name once again to Muskegon Community College. With an enrollment of nearly 5,000 students, the College exists today in its eighth decade of service to area citizens.

January 1995 opened a new era of educational opportunity with the completion of the Muskegon Center for Higher Education on the campus of Muskegon Community College. The Center houses upper-level courses and programs offered by Ferris State, Grand Valley State, and Western Michigan universities. These institutions, along with Muskegon Community College, have formed a “consortium” to coordinate offerings to meet the needs of West Michigan residents.

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The 90,000 square foot facility represents about one-third the size of the main building and was constructed to complement existing architecture. Attached to the main building near the Technology Building, the James L. Stevenson Center for Higher Education contains the latest in communication technology with all of its 35 rooms connected via fiber optics for voice, video and data transmission. In addition to housing the educational programs of the consortium member institutions, the Center is also the new home for MCC's Media Center and Graphic Design program.

Opened in January 2006, the Hendrik Meijer Library Information Technology Center offers students and the community the latest in communication capabilities, including wireless internet access, state-of-the-art library facilities/technologies and classrooms, and an internet café. The 40,000 square foot facility has three levels overlooking the woods and creek, and offers special services including both group and individual orientations, interlibrary loan, a photocopy machine, group study rooms, and a quiet reading room.

## Campus Facilities

**Parking**—Two large parking lots serve the campus. The main lot is located south of the Main Building, and may be entered from Marquette Avenue or from Quarterline Road. The back lot is located north of the James L. Stevenson Center for Higher Education, and may be entered from Quarterline Road or Stebbins Road.

**Handicapped parking spaces**—Handicapped parking spaces are available in the parking lot near the main entrance and also near the Technology Building in the back parking lot. Students needing special parking are urged to apply for a reserved space in this area through the Physical Plant Office, Room 1107.

**Room Numbers**—Entering the main building, the rooms are numbered in the 100s, with even numbered rooms on the right side of the building and odd numbered rooms on the left. Stairs or elevators will take you DOWN one level to rooms numbered in the 200s. The bottom level is below this with rooms numbered in the 300s. Rooms in the College Success Center are numbered in the 400s. The rooms in the Technology Building are numbered in the 500s.

Any room with a four-digit number is located in the Stevenson Center for Higher Education. The numbering strategy is similar to the main complex with rooms on the top level numbered in the 1100s, second floor rooms in the 1200s, and third floor (bottom) rooms numbered in the 1300s. The main entrance to the Center for Higher Education can best be accessed by utilizing the back parking lot (second entrance off of Quarterline Road).

**Housing**—Responsibility for housing rests with the student. Muskegon Community College does not own or operate housing units for students, nor does it assume responsibility for supervising or administering off-campus housing.

**Classrooms**—More than 70 classrooms and laboratories are available on campus, completely furnished to meet the needs of their particular disciplines. Additional classrooms, labs and conference facilities are located in the Stevenson Center for Higher Education which is attached to the main academic complex on the east side of the building.

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**Technology Building**—This building houses classrooms and laboratories for automotive mechanics, electronics, welding, and metallurgy, as well as machining and foundry facilities, also equipped for their separate disciplines. Three drafting (CAD) classrooms are located in the Academic Complex, and Graphic Design facilities are located in the Stevenson Center for Higher Education complex.

**Campus Bookstore**—The bookstore is located near the main entrance of the Main Building. The store is open weekdays during all semester.

**Fall/Winter Hours**

Mon-Thurs: 8:00am - 7:00pm  
Fri: 8:00am - 4:00pm

**Summer Hours**

Mon-Thurs: 8:00am - 5:00pm  
Fri: 8:00am - 12:00pm

**Food Service**—Meals and snacks are available at the Bookside Bistro next to the Campus Bookstore (near the main entrance of the Academic Complex), and at The Jayhawk Grill in the Student Union. Fall and Winter semester hours are listed below. During the Summer Semester, Bistro hours will be shortened and The Jayhawk Grill will be closed. Vending machine services are available in the Student Union.

**Bookside Bistro**

*(Fall/Winter Hrs)*

Mon-Thurs: 7:45am - 6:30pm  
Fri: 7:45am - 1:00pm

**The Jayhawk Grill**

*(Fall/Winter Hrs)*

Mon-Thurs: 10:00am - 2:00pm  
Fri: Closed

**Frauenthal Foundation Fine Arts Center**—At the heart of the Fine Arts Center is the 344-seat Overbrook Theater and adjacent art gallery, where works by students, faculty, and guest artists are exhibited. The Center also includes a large rehearsal room for band, orchestra, and chorus, practice rooms, and a listening library where students may enjoy recordings. The Center also has 12 electronic pianos for instruction and practice.

**Bartels-Rode Gymnasium**—The Bartels-Rode Gymnasium is a separate building, south of the main parking lot. In addition to housing a large, multipurpose gymnasium, this building also houses the physical education and athletic offices, a fitness center and several teaching stations. Outdoor tennis courts are west of the building. Outdoor volleyball courts are east of the gymnasium. The baseball diamond and softball field are located south of the gymnasium.

**Media Services**—Instructional support services including procurement and scheduling of audio, video, photographic, and graphics reproduction equipment are available to students and faculty. Professional assistance in the selection, production, and use of all types of media materials is also available from the Media Services facility located in the James L. Stevenson Center for Higher Education complex.

**Carr-Fles Planetarium**—The Planetarium features four shows a year in its domed theater. Its free public showings are held Tuesday and Thursday evenings at 7:00 p.m. Reservations are encouraged. Special showings for organized groups and schools are also available. The planetarium is closed during July and August.

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**Kasey Hartz Natural Area**—The diversity of the wooded tract immediately north of the Muskegon Community College campus provides an ideal setting for an educational Natural Area. The Natural Area and associated nature trail are suitable for use by college, high school and elementary school classes, scout and church groups, Head Start groups and other interested people. Reservations for group tours with guides need to be at least two weeks in advance, and can be made by calling the Life Science Department at (231)777-0273. Spring tours are available starting mid-April thru June, and Fall tours September through October, depending on the weather. Individuals are free to explore on their own.

**Observatory**—The Muskegon Community College Observatory is located at the Muskegon County Wastewater Management System, 8301 White Road. The Observatory facility, which was dedicated in the fall of 2001, was created to complement the College's astronomy program, as well as serve as an additional resource for area recreational stargazers. Public viewings will be scheduled for clear evenings during the months of April through October.

### **Center for Theater**

The Center for Theater operates within the Arts and Humanities Department. It provides theater classes for MCC students as well as a diversified schedule of performances. These include a season of plays produced by the College, an annual concert by the Overbrook Dance Theater, as well as touring productions of various kinds. All MCC students are encouraged to participate in the activities of the Center.

The Center for Theater offers something for every MCC student, whether it be the development of artistic talents, investigation of a career in professional theater, or simply the enjoyment and excitement of a live performance.

### **Stevenson Center for Higher Education**

Named for MCC's 8th president James L. Stevenson this 93,500 square foot building, constructed contiguous to the main academic facility on campus, houses a unique academic consortium comprised of Muskegon Community College, Ferris State University, Grand Valley State University, and Western Michigan University. The Center contains 40 classrooms/conference rooms including a computer classroom and laboratory, a large conference room, a large lecture hall, and a science room. The Stevenson Center is also the home of MCC TV.

A catering kitchen on the second level accommodates food service needs for banquets, meetings, conferences, and receptions. Communication technology advancements allow for a variety of instructional delivery systems. Each room in the facility is wired for voice, video and data transmission. Teleconferencing and integrated distance learning technology is available as well.

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## Governance

MCC is governed by a seven-member Board of Trustees who are elected for six-year terms on an “at large” basis from throughout the district (Muskegon County). The College’s chief executive is the President, appointed by the Board of Trustees. Serving the institution at the 2013 printing of this catalog are the following persons:

### Board of Trustees



**Donald Crandall, M.D.**  
Chair



**Diana Osborn**  
Vice-Chair



**Dorothy M. Lester**  
Treasurer



**Nancy Frye**  
Secretary



**Sean Mullally**  
Trustee



**Ann D. Oakes**  
Trustee



**Roy Portenga**  
Trustee

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# Faculty

- Alexander, Janice** Counselor, (LPC). B.A. Spring Arbor University; M.A. Western Michigan University
- Alexander, Richard S.** Psychology, B.A. State University of New York at Stony Brook; M.A. Wayne State University
- Al-Saji, Amer K.** Economics, B.S. Bagdad University, M.A. Central Michigan University, Ph.D. Northern Illinois University
- Barreto, Adolfo** Criminal Justice, B.S. Bemidji State University; M.S. Trinity College and University
- Bates, Kathleen** Nursing, RN, B.S.N. Grand Valley State University; M.S.N. Michigan State University
- Bellrichard, Suzanne K.** English, B.A. Illinois Wesleyan University; A.B.D. McGill University
- Benson, Hollie** College Success Center Reading, B.A., B.A. University of Michigan; M.Ed. Grand Valley State University
- Bialas, Daniel J.** Marketing, Customer Service, B.A. Michigan State University; M.B.A. Western Michigan University
- Briggs-Erickson, Carol A.** Librarian and Coordinator for Library Services, A.A. Muskegon Community College; B.S. Grand Valley State University; M.I.L.S. University of Michigan
- Brown, Pamela K.** Director of Nursing, APRN, CNE, FNP, Diploma in Nursing, RN, Bronson Methodist School of Nursing; B.S.N. University of Michigan; M.S.N. Michigan State University.
- Budimir, Nicholas** Sociology, B.A. University of Michigan; M.A. Wayne State University
- Burrell, Karin** Mathematics, B.S., M.A. Western Michigan University
- Casey, Diana L.** Geography, B.A. Western Michigan University, M.S. Eastern Michigan University.
- Cengiz, Pamela J.** Nursing, RN, CNE, A.D.N. Southwestern Michigan College; B.S. Utah State University; M.S.N. Michigan State University
- Chandler, Sherri A. Deboef** Psychology/Sociology, B.S. Central Michigan University, M.A. Western Michigan University, Ph.D. Capella University
- Church, Irene** Business Communication, B.A., M.A. Central Michigan University
- Cline, Gretchen S.** English, B.A. Kenyon College; M.A. Ohio State; Ph.D. Ohio State University
- Conrad, Kelley L.** Counselor (LPC), B.A. Alma College; M.A. Western Michigan University
- Cooper-Kuiper, Jeanne** English, B.A., M.A. Michigan State University
- Datta, Arun K.** Chemistry, B.S. University of Utah; M.S. Auburn University; Ph.D. University of Utah
- DeVries, Dale M.** Respiratory Therapy, B.S. University of Michigan; M.A. University of Michigan

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- Donley, Christina L.** Nursing, APRN, FNP; A.D.N. Muskegon Community College; B.S.N. Ferris State University; M.S.N. Michigan State University
- Dyke, Mary E.** Nursing, R.N., C.N.E., A.D.N. North Dakota State University; B.S.N. Moorhead State University; M.S.N. University of Kentucky
- Enriquez, Ismael** Spanish, B.A. Grand Valley State University; M.A. University of Toledo
- Evans, Rebecca L.** English, B.A., M.A. Western Michigan University
- Frazier, Susan** Nursing, R.N., Diploma Harper-Grace School of Nursing, B.S.N. Ferris State University, M.S.N. Ferris State University
- Goudie, Barbara** Nursing, R.N., C.N.E., Nursing; R.N. Queen Elizabeth School of Nursing; B.A. Open University Great Britain; M.S.N. Grand Valley University, C.N.E. Certified Nurse Educator
- Graf, Jessica** Physical Education/Recreation, B.S., M.S. Indiana University of Pennsylvania
- Griffith, Charlotte L.** Librarian and Faculty Liaison; B.A. University of Texas at Austin; M.L.I.S. Wayne State University
- Groner, Thomas W.** Machine Technology, B.S. Ferris State University; M.A. Central Michigan University
- Grube, Debra** Respirator Therapy, B.S.R.T. University of South Alabama; M.S.M. Cornerstone University
- Harryman, Thomas A.** Theater, B.Ph. Grand Valley State University; M.A. Antioch University McGregor
- Hayes, Sylvia M.** Counseling, B.A. Western Michigan University; M.A. Michigan State University
- Hoffman, Erin E.** Art, B.F.A. University of Northern Iowa; M.F.A. University of Georgia
- Howell, Debra S.** Biology, B.S. Ferris State University, M.S. Grand Valley State University
- Jewell, Ronnie D., Jr.** English, B.A. High Point University; M.A. Western Michigan University
- Johnson, John J.** Computer Information Systems, B.S. Ferris State College; M.Ed. Ferris State University
- Johnson, Michael C.** English, B.A. Michigan State University; M.A. Western Michigan University
- Johnston, Jeffery** Computer Aided Design, B.S., M.S. Michigan State University
- Klingenberg, Jennifer L.** English, B.A. Lake Superior State University; M.A. Northern Michigan University
- Knue, Daniel** Respiratory Therapy, CRTT, RTT, A.S. Washtenaw Community College; B.S. Western Michigan University; M.M. Aquinas College
- Kroll, Elizabeth** Nursing, B.S.N. Wayne State University; M.S.N. Michigan State University
- Kumpf, Amber** Geology, B.S. Michigan Technological University; M.S. University of Rhode Island
- Landes, James C.** Computer Information Systems (Game Design), B.S. Southern Oregon University

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- Lans, Tonia J.** Counseling, B.A. Michigan State University; M.A. Western Michigan University
- Liefer, Kathleen** Advanced Technology, B.S. Michigan State University; M.S. Western Michigan University
- Lorey, Harold (Mike)** Welding, B.S. Bowling Green State University; M.A. Western Michigan University
- Macauley, Shawn P.** Biology, B.S., M.S., Ph.D University of Florida
- Maniates, George** History, B.A. University of Wisconsin - Madison; M.A. DePaul University
- Marczak, Gregory** Chemistry, B.A. University of Michigan; M.A. Western Michigan University
- Martin, Thomas L.** Manufacturing, B.S., M.A. Western Michigan University
- Mattone, Darren C.** Biology, B.S., M.Ed. Aquinas College
- Meeuwenberg, Jon B.** College Success Center Math, A.S. Muskegon Community College; B.S., M.Ed Grand Valley State University
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- Miller, Gregory S.** Computer Information Systems, B.B.A. Grand Valley State University
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- Moleski, Tobias B.** Physics, B.S. Grand Valley State University; M.S. Oregon State University
- N’Jai, Papa** Anthropology/Geography, B.A. University of Sierra Leone; Dual M.A. Western Michigan University
- Nonnemacher, Gary S.** Mathematics, B.A. Cedarville University, M.S. Miami University, M.Ed Ohio State University
- Norris, Timothy** Art, B.A. Northern Illinois University; M.A. Northern Illinois University; M.F.A. Northern Illinois University
- Osborne, Sandra L.** Nursing, R.N., B.S.N. Northern Michigan University; M.S.N. Grand Valley State University
- Parker, Charlyne V.** Computer Information Systems, B.S. Aquinas College; M.A. Western Michigan University
- Passage, Denise S.** Business Technology, B.S., M.Ed. Grand Valley State University
- Patterson, Chris** Nursing, R.N., C.N.E., A.D.N. and B.S.N. Angelo State University; M.S.N. University of Phoenix
- Pollock, Kathy R.** Biology, B.S. Oakland University; M.S. Michigan State University, M.A. Michigan State University
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- Roddy, Conor** Philosophy, B.A. Trinity College, M.A. University of Hawaii at Manoa; PhD University of Texas at Austin
- Rusco, Catherine A.** College Success Center Writing, B.A. Alma College; M.A. Central Michigan University

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- Rypma, Dan E.** Physical Education/Recreation, B.S., M.S. Grand Valley State University
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- Swisher, Larry D.** Accounting, B.S. Michigan State University; M.S. Western Michigan University
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- Tokarz, William P.** Electronics, A.A. Muskegon Community College; B.S. Western Michigan University
- Tosa, Katherine M.** History/German, B.A. Southern Illinois University; M.A. Southern Illinois University
- Troutman, Kurt** Political Science, B.A. Saginaw Valley State University; M.A. University of Colorado, M.A. American Military University
- Truax, Jonathan C.** Astronomy/Mathematics, B.S. Grand Valley State University; M.S. Michigan State University
- Tyler, Mary E.** English, B.A. University of Michigan; M.A. Western Michigan University
- Vanderlaan, Robert** Cataloger/Librarian, B.A. Western Michigan University
- VanDerZanden, Heather** Nursing, R.N., A.D.N. Westshore Community College; B.S.N. University of Phoenix; M.S.N. Michigan State University
- VanOosterhout, Christopher T.** Computer Information Systems, B.S.B.A. Cornerstone University; M.B.A. Cornerstone University
- VanVeelen, Theresa E.** Biology, B.S. Grand Valley State University, M.S. Michigan State University
- Visconti, Laurence** Counselor (LPC), B.S. Grand Valley State University; M.A. Western Michigan University
- Volkers, Jennifer** B.B.L. Baker College; M.Ed. Grand Valley State University
- Wahamaki, Sheila Kulp** Theater, B.F.A. West Virginia University; M.A. Indiana State University
- Wible, Andrew D.** Philosophy, B.A. Hanover College; M.A. Ohio University; Ph.D. Wayne State University
- Wiggins, David L.** Physics, Engineering, Math, B.S. Michigan Tech University, M.S. Michigan State University
- Wilson, Karen S.** Chemistry/Mathematics, B.S. Ohio State University; M.S. Ohio State University
- Wolters, Thomas L.** Mathematics, B.S. Grand Valley State University; M.A. Western Michigan University

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**Young, Clifton** English/Communications, B.A., M.A. Grand Valley State University  
**Zarowitz, Jay N.** Political Science, A.A. Long Beach City College; B.A. Washington State University; M.A. Washington State University  
**Zemke, Susan J.** Nursing, R.N., C.N.E.; Diploma St. Luke's Hospital School of Nursing; B.S.N. Ferris State University; M.S.N. Michigan State University

## **Administration - President's Cabinet**

**President—Nesbary, Dale K.** B.A. Michigan State University; M.P.A. Western Michigan University; Ph.D. Northeastern University

**Vice President for Academic Affairs and Finance—Sturuss, Teresa A.** B.A. Olivet College; M.I.L.S. University of Michigan

**Vice President for Student Services and Administration—Selmon, John** B.S. University of Nebraska at Lincoln; M.A., Ed.D. Eastern Michigan University

**Administrative Director of Human Resources—Hilliard, Aaron** B.S. Central Michigan University; M.S.A. Central Michigan University

**Director of Community Relations/Foundation Director—Dee, Tina** B.A., M.S. Grand Valley State University; C.F.R.M.

**Director of Institutional Research and Grants—Bedoya, Eduardo** B.A. Grand Valley State University

**Director of Athletics—McDermott, Marty** B.A. University of North Dakota; M.S.E. Wayne State College

**Chief Information Officer (Ellucian Higher Education Managed Services)—Alstrom, Mike**

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## Education Planning Worksheet

Degree or certificate I am working toward \_\_\_\_\_

Catalog year I am following \_\_\_\_\_

Page number my program is on \_\_\_\_\_

MCC Counselor I am working with \_\_\_\_\_

**Things I need to be aware of:**

A minimum of 62 credits are required for most associate degrees. The following courses do **not** count toward a degree:

RDG 040, RDG 050, RDG 060, ENG 085, ENG 089, ENG 091, MATH 036A, MATH 036FT, MATH 038, MATH 038FT, MATH 040, MATH 041

Prerequisites needed to go on to the next class (course sequences):


Classes offered only in specific semesters: \_\_\_\_\_

1 <sup>st</sup> Semester				2 <sup>nd</sup> Semester				3 <sup>rd</sup> Semester			
Semester: Fall Winter Summer				Semester: Fall Winter Summer				Semester: Fall Winter Summer			
Year:				Year:				Year:			
Class:		Credits:		Class:		Credits:		Class:		Credits:	
Total Credits:				Total Credits:				Total Credits:			

4 <sup>th</sup> Semester				5 <sup>th</sup> Semester				6 <sup>th</sup> Semester			
Semester: Fall Winter Summer				Semester: Fall Winter Summer				Semester: Fall Winter Summer			
Year:				Year:				Year:			
Class:		Credits:		Class:		Credits:		Class:		Credits:	
Total Credits:				Total Credits:				Total Credits:			



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