MESSAGE FROM THE PRESIDENT

If you are looking through this catalog, you must be searching for something.

Perhaps you want to acquire skills that can lead to a high wage, high demand career or that can enhance your current job. Perhaps you need competitively priced classes for transfer to a four-year college or university. Maybe you want education that provides short term, real world benefits, offered conveniently online or close to your home or place of work.

You may need assistance in starting your own business or training your employees. You may want to stay current with the technological changes that impact every facet of life in today's fast paced, rapidly changing society. You may be unsure of what we offer, but you have recognized that continuing your education will enrich your life.

Whatever prompted you to look through this catalog, be assured that we can help. At Mid Michigan Community College, you will find a caring, personalized environment where people listen to you with respect and assist you in getting from where you are to where you want to be. Great careers – and changed lives – start at Mid Michigan Community College. Why not start today?

Carol A. Churchill, MMCC President

LOCATIONS

The 560-acre Harrison Campus of Mid Michigan Community College is located in the rural environment of northern Michigan, situated between the cities of Harrison and Clare on Old U.S. Highway 27. A 20-acre area is used for the current College facilities and the remainder of the property is in its natural state with several nature trails.

MMCC has two locations in Mt. Pleasant, 27 miles south of the Harrison Campus. The Pickard Center in Mt. Pleasant is located on M-20 East near the U.S. 127 freeway. Its suburban environment complements the modern atmosphere of the facility. The Herbert D. Doan Center for Science and Health Technologies is located on 44 acres on the corner of Broadway and Summerton, and this site also houses a bookstore and all of student services for the Mt. Pleasant locations.

The Mid Michigan area is noted for four-season outdoor sports. The area has thousands of acres of public lands, many lakes and rivers, numerous golf courses, two ski hills, and hundreds of miles of snowmobile trails.

The contents of this catalog are subject to change; therefore, it cannot be considered a contract or agreement between an individual and Mid Michigan Community College or its administrators. Published April 1, 2012.

For the most current information go to our website at www.midmich.edu.
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Harrison Campus Switchboard
(989) 386-6622

Mt. Pleasant Campus Switchboard
(989) 773-6622

COLLEGE FAX NUMBERS:

Administration - Harrison (989) 386-9088  LLS - Harrison (989) 317-4632
Bookstore - Doan, Mt. Pleasant (989) 317-4628  Library - Mt. Pleasant (989) 773-8062
Bookstore - Harrison (989) 386-8443  M-TEC/SBTDC - Harrison (989) 386-2411
Center for Student Services - Doan (989) 772-2386  Nursing - Harrison (989) 386-6666
College Advancement - Harrison (989) 802-0994  Shipping & Receiving - Harrison (989) 386-7736
Doan Center - Mt. Pleasant (989) 317-4634  SOAR Center - Harrison (989) 386-6613
HR - Harrison (989) 317-4627  
Mt. Pleasant - Pickard (989) 317-4631

BUSINESS OFFICE

<table>
<thead>
<tr>
<th>Phone Number</th>
<th>Location/Room Number</th>
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<tbody>
<tr>
<td>Accounts Payable 386-6610</td>
<td>HC Administration</td>
</tr>
<tr>
<td>Accounts Receivable/Cashier 386-6611</td>
<td>HC 1st Floor - SOAR</td>
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<tr>
<td>Bookstore - Harrison 386-6640</td>
<td>HC Room 215</td>
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<tr>
<td>Bookstore - Mt. Pleasant 317-4620</td>
<td>Doan - Mt. Pleasant</td>
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<td>Campus Services/Maintenance 386-6697</td>
<td>HC Shipping &amp; Receiving</td>
</tr>
<tr>
<td>Communications &amp; Computer Services - Harrison 386-6652</td>
<td>HC Room 270</td>
</tr>
<tr>
<td>Computer Services - Mt. Pleasant 317-4611</td>
<td>DC Room 132</td>
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<td>Hospitality/Food Services 386-6688</td>
<td>HC Food Service</td>
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<td>Human Resources/Personnel 386-6621</td>
<td>HC Room 120</td>
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<td>Office of the President 386-6601</td>
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ACADEMIC SERVICES

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<tr>
<td>Associate Dean of Health Sciences 386-6645</td>
<td>HC Room 268</td>
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<tr>
<td>Associate Dean of Liberal Arts 386-6658</td>
<td>HC Room 268</td>
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<tr>
<td>Associate Dean of Math &amp; Science 317-4629</td>
<td>DC Room 115</td>
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<td>Business &amp; Industry Development Center (BIDC) 386-6629</td>
<td>M-TEC - Harrison</td>
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<tr>
<td>Computer Labs Office - Harrison 386-6653</td>
<td>HC Room 290</td>
</tr>
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<td>Computer Labs Office - Mt. Pleasant 773-6622</td>
<td>MPC</td>
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<td>Dean of Instruction 317-4607</td>
<td>MPC Room 122</td>
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<td>Faculty 386-6667</td>
<td>HC Room 252</td>
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<tr>
<td>Health Science Programs 386-6643</td>
<td>HC Room E-243</td>
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<tr>
<td>Off Campus Programs 386-6631</td>
<td>HC Room 252A</td>
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<td>Vice President of Academic Services 386-6607</td>
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STUDENT SERVICES

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<tr>
<td>Admissions 386-6661</td>
<td>HC Room 104</td>
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<td>Advising 773-6622, ext. 100</td>
<td>HC/CSS</td>
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<td>Assessment 386-6638</td>
<td>HC Room 219</td>
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<tr>
<td>Associate Dean/Registrar 773-6622, ext. 230</td>
<td>MPC</td>
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<td>Diploma/Transcript Evaluations 386-6622, ext. 395</td>
<td>HC Room 104</td>
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<tr>
<td>Executive Dean of Student and Academic Support Services 773-6622, ext. 236</td>
<td>HC Room 111</td>
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<tr>
<td>Enrollment/Registration/Records 386-6659</td>
<td>HC Room 104</td>
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<tr>
<td>Financial Aid/Veterans' Services 386-6664</td>
<td>HC Room 114</td>
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<tr>
<td>Library Learning Services (LLS) - Harrison 386-6638</td>
<td>HC Room 219</td>
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<tr>
<td>Library Learning Services (LLS) - Mt. Pleasant 773-6622, ext. 287</td>
<td>MPC Room 135</td>
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<tr>
<td>Library/Media Center 386-6617</td>
<td>HC Library</td>
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<tr>
<td>Placement 386-6622, ext. 629</td>
<td>M-TEC - Harrison</td>
</tr>
<tr>
<td>Student Government Office (MC) 386-6634</td>
<td>HC Room 152C</td>
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(Schedule Subject to Change)

Fall Semester 2012
Classes Begin................................................................. August 25
Labor Day/No Classes ................................................. September 3
College In-Service/No Classes ..................................... November 21
Thanksgiving Break/No Classes............................... November 22-25
Classes End ..................................................................... December 14

Winter Semester 2013
Classes Begin................................................................. January 5
College In-Service/No Classes ...................................... March 27
Good Friday/No Classes ................................................ March 29
Classes End ..................................................................... May 3
Commencement............................................................. May 4

Spring Session 2013
Classes Begin................................................................. May 13
Memorial Day/No Classes ............................................. May 27
College Closed/No Classes .......................................... July 4
Classes End ...................................................................... August 3

ADMISSIONS

“OPEN DOOR” ADMISSIONS POLICY
Mid Michigan Community College has an “open door” admissions policy which encourages admissions of all persons who have a sincere desire to study and apply themselves to gain full advantage of the benefits that the College has to offer. Persons planning to transfer to four-year colleges or universities should be aware that a high school diploma or GED may be required by the transfer institution. Persons applying for financial aid must have a high school diploma, a GED, or documented proof of their ability to benefit from their education program.

HOW TO APPLY
Applicants who have never attended another college or university:

1. Complete and return an Application for Admission. This may be obtained from high school counselors, the Admissions Office on the Harrison Campus or Mt. Pleasant Campus or online at www.midmich.edu. This form should be completed and returned to the Admissions Office well in advance of the semester for which the student is applying in order to allow time for assessment, academic advising, and class registration.

2. Have forwarded to the Admissions Office a copy of your high school transcript or GED completion for scholarship and grant consideration. A high school diploma is not required for general admission.

GUEST APPLICANTS
Complete and return a Guest Application. This may be obtained from the Admissions Office on either campus or online at www.midmich.edu. This form should be completed and returned to the Admissions Office well in advance of the semester for which the student is applying to allow time for assessment, academic advising, and class registration. Guest students are not eligible for Title IV Federal Student Aid.

TRANSFER APPLICANTS

1. Complete and return an Application for Admission. This may be obtained from the Admissions Office on either campus or online at www.midmich.edu. This form should be completed and returned to the Admissions Office well in advance of the semester for which the student is applying in order to allow time for assessment if needed, academic advising, and class registration.

2. If you wish to have transfer credits posted on your MMCC transcript, have official copies of transcripts from all other college and universities forwarded to Enrollment Services.
INTERNATIONAL STUDENT ADMISSIONS

If you are an International Student who wishes to attend MMCC, we must receive the following documents before we can issue an I-20 Certificate of Eligibility:

1. An International Admissions Application. Please take care to supply your name exactly as it is printed on your passport.

2. If you plan to transfer credits from other colleges you must provide English translations of all college diplomas/ transcripts. English translations can be obtained through World Education Services (WES) at your expense.

3. An appropriate TOEFL score (a minimum of 500 on paper-based tests, 173 on computer-based tests, or 61 for internet-based tests) or an ELS score of 109 or IELTS of 5.0.

4. A financial statement verifying financial resources sufficient to cover $22,733 USD for tuition and living expenses. Bank statements, affidavits of sponsorship, etcetera should be supplied to support the financial statement. If an applicant has made arrangements to reside with a friend or relative while attending the college, and can provide a signed Affidavit of Sponsorship from this sponsor, financial verification limits may be reduced to $17,541. It’s very important for students & sponsors to fully evaluate financial resources before pursuing admission. MMCC has no grants, loans, or student employment available for international students. Based on F-1 visa requirements, international students are not eligible to work off-campus.

5. International Students must provide proof of health insurance coverage. For more information, contact Jim Kridler at jkridler@midmich.edu, call 989-773-6622, ext. 258 or visit our website at www.midmich.edu, click on Future Students, then International Students.

SPECIAL ADMISSIONS

The student must be enrolled in the tenth grade or higher and must have written approval for the application (or course enrollment) by the student’s principal, or his/her designee or the superintendent of the pupil’s home district. If home schooled, the student must demonstrate college level basic skills (reading and writing) on the Accuplacer test. Subject matter testing may be required for specific classes such as math, science, language and technology, to assure that the student has the basic skills appropriate for the level of the course. Requests for an exception to this policy must be in writing to the Dean of Student and Academic Support Services at least eight weeks in advance of the start of the enrollment period for which the exception is being requested.

APPLICATIONS FOR HEALTH SCIENCE PROGRAMS

Students interested in Health Science Programs must complete a Health Careers Application in addition to completing a regular MMCC admission application. Students are considered for admissions to the program after their prerequisites are completed. In addition all health career applicants are required to have a criminal background check including fingerprinting. By State law, students who have committed a felony and/or certain misdemeanors are NOT eligible for health career programs.

Students who are admitted to the program need to be aware random drug screening may be done at any time during the program at the student’s expense.

The following programs have a limited enrollment: Medical Assistant, Medical Coder and Biller, Nursing, Pharmacy Technician, Physical Therapist Assistant, and Radiography.

A Health Career Application is required for all the health science programs except Nursing, Physical Therapist Assistant and Radiography. These three programs now have selective criteria admission. Information regarding the process can be found on our web site www.midmich.edu under programs.

For further information about any health program, contact the Health Sciences Department.

DUAL ENROLLMENT PROGRAM

This program is designed for high school students whose personal and intellectual maturity suggests that they are ready for college-level work. The students may enroll in Mid Michigan Community College courses while still attending high school or they may attend College during the spring session.

Students wishing to enroll in this program should complete and return a Dual Enrollment Application that may be obtained from a high school counselor, the Admissions Office, or online at www.midmich.edu.

Students who would like to qualify for the State of Michigan dual enrollment tuition reimbursement should first check with their high school to determine eligibility and then contact the MMCC Admissions Office. Dual enrolled students are not eligible for Title IV Federal Student Aid.

READMISSION

Former Mid Michigan Community College students who have withdrawn from classes or who have not returned for one or more semesters may be readmitted. A break in attendance of three years or more requires a new application to be completed. Official copies of transcripts from other colleges or universities attended during the interim should be forwarded to the Registrar’s Office.

If you are an International Student who wishes to attend MMCC, we must receive the following documents before we can issue an I-20 Certificate of Eligibility:
The MMCC financial aid office encourages all students to apply for federal financial aid by completing the Free Application for Federal Student Aid (FAFSA). You may apply online at www.fafsa.gov. Approximately 71% of all MMCC students carrying 6 credits or more receive some form of financial assistance. Financial aid programs offer all students the opportunity to pursue their educational goals. MMCC along with federal and state programs and private and civic organizations, offers a variety of scholarships, grants, loans, and employment opportunities to assist students in financing their education.

**HOW TO APPLY FOR FINANCIAL AID**

The Free Application for Federal Student Aid (FAFSA) is the first step in the financial aid process. This application can be submitted on the web at www.fafsa.gov or by mailing a paper FAFSA directly to the federal processor. The paper FAFSA may be obtained online at www.federalstudentaid.ed.gov.

Once a student’s financial aid has been completely processed they may charge their tuition, fees and books against eligible financial aid awards. Some types of federal and state financial aid funds are limited. MMCC students who apply by April 1st will be given priority when those funds are awarded by MMCC.

Students selected for verification may be required to submit documents to the MMCC Financial Aid Office. For those students, MMCC must compare the information from the FAFSA to the applicable tax forms and other required documents. Financial aid will not be awarded until all required documents are provided. If it is determined that additional documents are required, financial aid previously awarded may be cancelled. Falsification of income information submitted for the purpose of receiving financial assistance will result in cancellation of all future assistance and repayment of all previously awarded financial aid. If federal and/or state funds are involved, the appropriate government agencies will be notified including the U.S. Department of Education, Michigan Higher Education Assistance Authority, and/or the Office of Inspector General.

Students that are transferring to MMCC must add MMCC’s school code, 006768, to their FAFSA at www.fafsa.gov. Students must renew their FAFSA each year. Contact the financial aid office for spring and summer semester eligibility.

**ELIGIBILITY FOR FEDERAL & STATE FINANCIAL AID PROGRAMS**

To be eligible for federal and state financial aid, employment and student loan programs, students must meet all of the following requirements:

- Be admitted to or enrolled in a qualified academic program leading to a degree or certificate.
- Be a U.S. citizen or an eligible noncitizen.
- Most males must be registered with Selective Service. Go to www.sss.gov to determine if you are or were required to register between age 18 and 25.
- Students cannot be in default on a federal student loan or owe money back on a federal student grant.
- Student who are enrolling in higher education for the first time on or after July 1, 2012, must have either a high school diploma or recognized equivalent (such as a General Educational Development certificate (GED) or have been home schooled).
- Meet the MMCC Financial Aid requirements.
- Make satisfactory academic progress.
- Meet any additional requirements for specific federal and state financial aid programs.
- Have financial need, except for some loan programs.
- Have a valid social security number.
- Complete and sign a Free Application for Federal Student Aid (FAFSA) stating that student financial aid will be used only to pay the cost of attending an institution of higher education.
- Cannot have a conviction for drug possession or sale while receiving financial aid.

**HOW FINANCIAL NEED IS DETERMINED**

Financial need is determined by subtracting a student’s Expected Family Contribution (EFC) from their MMCC cost of attendance budget. Additional information regarding MMCC’s cost of attendance and need based aid can be found on the Financial Aid page of college’s website at www.midmich.edu/financialaid. MMCC must consider all sources of financial assistance and subtract the estimated amount of all assistance from the student’s estimated total financial need.

To determine a student’s eligibility for need-based assistance, MMCC must consider the student’s EFC. The EFC is calculated by the U.S. Department of Education from the information submitted in the student’s FAFSA. The EFC measures your family’s financial strength and determines your eligibility for federal student aid. The MMCC financial aid office must use the EFC calculated by the U.S. Department of Education. However, when appropriate the MMCC financial aid office may make adjustments. Contact the MMCC financial aid office for more information.

**FINANCIAL AID AWARDS AND PACKAGE**

A student’s financial aid package includes all awards; scholarships, grants, work-study, and student loans. The awards are determined annually. The MMCC Financial Aid Office notifies
students of the estimated financial aid that they are eligible for by mail or email. Financial aid awards are subject to change due to changes in the student’s enrollment, finances, or satisfactory academic progress. Changes in enrollment status, including a reduction of credit hours or withdrawing from all classes before the end of the semester, may result in a reduction or cancellation of all financial aid. Students should check with the MMCC Financial Aid office before dropping classes. If a student or student’s family experience a change in financial circumstances, the student may contact the MMCC financial aid office to determine if an adjustment may be made to the student’s FAFSA.

DISBURSEMENT OF FINANCIAL AID AWARDS
All financial aid funds, scholarships, grants, and student loans are credited to the student’s account. If the student has any remaining funds, a check will be issued to the student for the balance. It is the student’s responsibility to verify the accuracy of the billing charges and credits and remaining financial aid balance. Refund checks for remaining financial aid are available approximately six to eight weeks after the semester starts. Students should plan their personal finances with this time frame in mind. Checks are mailed by the MMCC Business Office and cannot be picked up on campus.

MMCC FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS POLICY (SAP)
To receive financial aid, students must maintain satisfactory academic progress (SAP) toward their degree or certificate. The Mid Michigan Community College (MMCC) Financial Aid Standards of Satisfactory Academic Progress govern all federal and many state financial aid, grant, loan, and work-study programs. Students who have attempted 14 or more credits will have their academic records reviewed yearly for satisfactory academic progress. Students who are enrolled in certificate programs or have a Financial Aid Approval Appeal may be reviewed at the end of each semester.

STANDARDS OF PROGRESS
There are three elements in the MMCC Standards of Satisfactory Academic Progress:
• The grade point average (GPA) students must maintain,
• The number of credit hours students must complete, and
• The maximum credit hours for which students may receive financial aid.

Requirement 1
Students must maintain a cumulative grade point average of not less than the following:

<table>
<thead>
<tr>
<th>Credit Hours Attempted</th>
<th>Minimum Cumulative GPA Required</th>
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<tbody>
<tr>
<td>14-29</td>
<td>1.50</td>
</tr>
<tr>
<td>30 and above</td>
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Requirement 2
Students, who have attempted 14 or more credits at MMCC, must satisfactorily complete 67% of those credits, whether or not financial aid was received. Any student attempting 6 or more credits in a semester that fails and/or withdraws from all credits will be immediately suspended.
2. Grades of W, I, and F are not considered passing, and must be considered attempted credits.
3. The highest grade of a repeated class is used when calculating a cumulative GPA.
4. Remedial course work is included in the number of attempted credits.

Requirement 3
Federal Regulations state that a student cannot receive Title IV funds for more than one and one-half times the required credit hours needed to complete a specific degree or program. In other words, if an Associates Degree normally takes 62 credit hours to complete, a student cannot attempt more than 93 credit hours toward that degree and still receive aid (62 x 150% = 93). Attempted credit hours include incomplete, withdrawals, repeated and remedial courses and transfer credits. Students who reach the upper limit of attempted credit hours for their program of study will have their aid eligibility suspended.

SUSPENSION
Students not meeting Requirements 1, 2, or 3 will be suspended and not eligible to receive Financial Aid until they attain the requirements or successfully file an appeal. See the Reinstatement and Appeal Progress below.

REINSTATEMENT
Students will regain eligibility for financial aid when they meet all of the overall Standards of Progress (see Requirement 1, 2, 3). If the student became ineligible for dropping all classes but still meets the overall Standards of Progress, the student is ineligible for financial aid for the semester (Fall, Winter, or Spring) immediately following the semester of the total drop. Students seeking reinstatement must then advise the Financial Aid Office when they meet the requirements.

APPEALS - FINANCIAL AID INELIGIBILITY
Students who have mitigating circumstances have the right to appeal. Mitigating circumstances beyond the control of students, such as injury, illness, death of an immediate family member, or other special circumstances may be grounds for successful appeals. Documentation supporting the reasons for the appeal may be required. Students submitting appeals should prepare a written statement that includes the reasons
why satisfactory progress was not made and discuss actions that have been or will be taken to meet satisfactory progress requirements in the future. Appeals are generally limited to one per student, and appeal appointments are made through the Financial Aid Office. Students will be required to meet with both an Academic Counselor and a Financial Aid Officer before their appeal is submitted to the Financial Aid Committee for consideration. In addition, students who have borrowed funds from the Federal Direct Student Loan Program must complete Federal Exit Counseling at www.studentloans.gov.

If the Financial Aid Committee approves the appeal and places the student on Financial Aid Approved Appeal status, the student will be following a defined Academic Plan. Conditions of the Approved Appeal may include limiting the number of credits or classes the student can attempt or other conditions that may be appropriate. Transfer credits and program changes will be considered when approving an appeal and will be used in determining the amount of credits eligible for financial aid. If an extension is granted, the student will be allowed to receive aid for the additional number of approved credits. It will be the students' responsibility to meet with their Academic Advisor each semester to register for only the classes required to obtain their degree.

Satisfactory academic progress for students on Approved Appeal will be reviewed at the end of each semester. To regain satisfactory status, the student must meet all the overall Standards of Progress (see Requirements 1, 2, 3). If the student fails to meet the overall standards, but completes 100% of their semester attempted credits and obtains a minimum semester GPA of 2.0, they will continue on Approved Appeal status. Students who fail to meet these requirements will return to an ineligible status and lose their eligibility for Financial Aid. Exceptions to this policy will only be made if the student has valid mitigating circumstances and recommendations from their Academic Advisor.

Appeal Committee

All appeals are reviewed by the Financial Aid Committee. Notification of the decision will be sent to the students’ midmich.edu e-mail address.

If the first appeal is denied and the student feels there are circumstances that were not considered in the first appeal, a second appeal may be made. Second appeals must be made in writing to the Director of Financial Aid, who will convene the Financial Aid Advisory Committee to review the appeal. The Director will inform the student of the Advisory Committee's decision within ten business days. The Committee's Decision will be final. The Financial Aid Advisory Committee is made up of the following membership: Dean of Student Services, Financial Aid Director, one Financial Aid Officer, one Admissions Office Representative, and one Faculty Member. A minimum of three members is required to review a student appeal.

STATEMENT OF STUDENT FINANCIAL AID RIGHTS AND RESPONSIBILITIES

Rights of Financial Aid Applicants

1. You have the right to know what financial aid programs are available.
2. You have the right to know the deadlines for submitting applications for each of the financial aid programs available.
3. You have the right to know how financial aid will be distributed, how decisions on that distribution are made, and the basis for these decisions.
4. You have the right to know how your financial need was determined and what resources (such as parental contribution, other financial aid, your assets, etc.) were considered in the calculation of your need.
5. You have the right to know how much of your financial need as determined by the institution has been met.
6. You have the right to request an explanation of the various programs in your student aid package.
7. You have the right to know the MMCC refund policy.
8. You have the right to know what portion of the financial aid you received must be repaid, the payback procedures, the length of time you have to repay, and when repayment is to begin.
9. You have the right to know how MMCC determines whether you are making satisfactory academic progress and what happens if you are not.

For an explanation of any of the above rights, please review the information in this catalog or come in to the Financial Aid Office and meet with a Financial Aid Representative.

RESPONSIBILITIES OF FINANCIAL AID APPLICANTS

1. You must complete all application forms accurately and submit them on time to the right place.
2. You must provide correct information. If you purposely give false or misleading information, you may be fined up to $20,000, sent to prison, or both.
3. You must return all additional documentation, verification, corrections, and/or new information requested by either the Financial Aid Office or the agency to which you submitted your application.
4. You are responsible for reading and understanding all forms that you are asked to sign and for keeping copies of them.
5. You must accept responsibility for all agreements that you sign.
6. You must perform the work that is agreed upon in accepting a Work Study job.


8. You are responsible for reporting the type and amount of any assistance you have received from any source outside of your MMCC aid.

9. You must be attending your classes in order to be eligible for Federal Aid funding.

MID MICHIGAN COMMUNITY COLLEGE  FINANCIAL AID PROGRAMS

Eugene W. Gillaspy Honors Scholarships: Students who are returning for their second consecutive year of college and received either the Admissions, Trustee's or Technical Education scholarship will be awarded this $800 ($400 fall/winter semesters) scholarship if they have attained a 3.0 to 4.0 GPA and are a full-time student. This scholarship is good for one year (fall and winter semesters) and will automatically be assigned to the student's financial aid account.

President's Scholarship: This scholarship for $2,000 ($1,000 fall/winter semesters) will be awarded for one year (fall and winter semesters) to one student from each in-district high school with the highest GPA. The President’s Scholarship is non-need-based and must be used for the semester for which it was awarded and cannot be held for attendance in a different semester. Students should submit their transcript with six completed semesters by April 1 in order to be considered.

Trustees’ Scholarships: High school or alternative education seniors will be awarded this $600 ($300 fall/winter semesters) scholarship based on their high school GPA of 3.0 to 4.0. This scholarship is for one year (fall and winter semesters) and the student must attend full-time (12 credit hours or more). The Trustees' Scholarship is non-need-based and must be used for the semester for which it was awarded and cannot be held for attendance in a different semester. Selection for this scholarship is on a first come first serve basis. Students should submit their transcript with six completed semesters in order to qualify. Students who qualify for more than one institutional scholarship will be awarded the scholarship with the highest monetary amount.

Admissions Scholarships: High school and alternative education seniors will be awarded this $400 ($200 fall/winter semesters) scholarship based on their high school/alternative education GPA of 2.0 to 2.9. This scholarship is for one year (fall and winter semesters) and the student must attend full-time (12 credit hours or more). The Admissions Scholarship is non-need-based and must be used for the semester for which it was awarded and cannot be held for attendance in a different semester. Selection for this scholarship is on a first come first serve basis. Students should submit their transcript with six completed semesters in order to qualify. Students who qualify for more than one institutional scholarship will be awarded the scholarship with the highest monetary amount.

Technical Education Awards: Students who enroll in one of the following programs: Automotive Technology; Heating, Refrigeration & Air Conditioning; Industrial Technology/Drafting & Design; Industrial Technology/Machine Tool; Business Information Systems; Graphic Design; Welding Technology; or M-TEC classes will be awarded this $500 ($250 fall/winter semesters) scholarship based on their GPA of 2.0 or higher. This scholarship is for one year (fall and winter semesters). The Technical Education Award is non-need-based and must be used for the semester for which it was awarded and cannot be held for attendance in a different semester. Selection for this scholarship is on a first come first serve basis. High school senior or alternative education students should submit their transcript with six completed semesters in order to qualify. Current MMCC students should pick up a scholarship application in the Financial Aid Department. Students who qualify for more than one institutional scholarship will be awarded the scholarship with the highest monetary amount.

Ellis VanDeventer Adult Incentive Award: This award is to assist adult students who are not served effectively by the Federal Pell Grant Program, but still have a relatively low income and high financial need in the Federal Formula. Most of these students are not coming directly out of high school and therefore have limited opportunities to qualify for traditional scholarships. Awards are made for one academic year and are renewable for one additional year if a student has not completed 60 credit hours. An award of $400 per semester with a maximum of $800 per year will be made to qualifying full-time students. An award of $200 per semester with a maximum of $400 per year will be made to qualifying students attending at least half-time but less than full-time. Awards are made subject to fund availability.

Junior High Scholarship: The scholarship is in the amount of $250 and is presented to outstanding Junior High (8th grade) students that will be graduating into high school. This scholarship is in acknowledgment of academic excellence. To achieve this recognition, the honored recipients must have earned a cumulative GPA of 3.5 or better.

Senior Citizen’s Discount Awards: Senior citizens may enroll in any credit or non-credit course offered by the College, except those courses in a program requiring an admissions decision, and receive a 20% tuition discount. To qualify for such a discount, senior citizens must be 62 years of age or older and retired, must have their primary residence in the State of Michigan, and must be participating in U.S. Social Security retirement benefits. Senior citizens must request such a discount at the time of registration. This discount does not apply to fees, books, materials or supplies, trips, or other special events.
STATE OF MICHIGAN FINANCIAL AID PROGRAMS

Michigan Rehabilitation Services: Michigan Rehabilitation Services is a division of the Michigan Department of Labor and Economic Growth and provides rehabilitative services to vocationally handicapped or impaired individuals. Any person with impairment can make an application for service by contacting the Office of the State of Michigan Rehabilitation Services serving the student's local area. All services provided are individually planned to meet the established need and could include, for example, tuition, fees, books, prosthetic devices, maintenance, or other services that would be required for the completion of a rehabilitation program.

Michigan Competitive Scholarships: These scholarships are credited to tuition and fees of Michigan residents of 12 months who are high school graduates, who qualify through a competitive examination, and who show financial need. Awards may be renewed annually for a maximum of ten semesters as long as need and at least a 2.0 GPA are maintained. More information is available from high school counselors and by contacting the Office of Scholarships & Grants, MHEAA, at 1-888-447-2687 or email osg@michigan.gov.

Tuition Incentive Program (TIP): This high school completion program offers to pay for the first two years of college and beyond for state identified students who graduate from high school or complete their GED before age 20. TIP covers up to 24 credit hours of tuition and most fees per year at Mid Michigan Community College and select Michigan Universities.

FEDERAL FINANCIAL AID PROGRAMS

Federal Pell Grants: Students may apply for Pell Grants by filing a FAFSA. Eligibility for Pell Grants is based on financial need as determined by the federal formula and is awarded to all applicants. Awards for 2012-2013 range from $555 to $5,550 and are subject to change. The amount of the award will be adjusted based on the student's actual enrollment status.

Federal College Work-Study Program (FCWS): These work opportunities are awarded to students who meet requirements included in the Financial Aid Eligibility section. Job placement extends to most areas of College activity. Every effort is made to refer students to positions compatible with their interest and qualifications, although this is not always possible. Pay rates are commensurate with federal wage guidelines. Students are paid once every two weeks for hours worked. Placement of students in FCWS employment is handled through the Admissions Office. Applications can be obtained online at www.michigan.edu/collegeworkstudy.

Federal Supplementary Educational Opportunity Grants (FSEOG) is a federal grant awarded to students with the greatest financial need according to the federal formula. The grants vary from $100 to $1,000 per year for MMCC students. Students must be making satisfactory progress; and meet all other conditions outlined in the Financial Aid Eligibility section to continue receiving the grant. The FSEOG is awarded by the Financial Aid Office in accordance with federal guidelines.

William D. Ford Federal Direct Loan Program provides low-interest Stafford Student Loans directly from the Department of Education. Student loans are insured by the federal government. These loans are only to be used to finance the cost of education and must be repaid.

Subsidized Stafford Loans are based on financial need and the interest is paid by the government while the student is in school. Unsubsidized Stafford Loans are for students who do not qualify for Subsidized Stafford Loans or are borrowing more than the subsidized limits. Students are responsible for the interest from the time the loan is dispersed until the loan is paid in full. The interest rate is determined by federal regulation and may be paid monthly, quarterly, or capitalized. Capitalizing interest will increase the amount of loan the student will have to repay.

Loans are made in equal multiple disbursements throughout the academic loan period. The lender may charge up to 1.5% in fees on each loan disbursement. Students can receive a subsidized loan and an unsubsidized loan for the same enrollment period as long as the annual loan limits are not exceeded.

The annual loan limits for dependent students are:
- $5,500 for students with less than 24 completed credit hours.
- $6,500 for students with 24 or more completed credit hours.

The annual loan limits for independent students are:
- $9,500 for students with less than 24 completed credit hours.
- $10,500 for students with 24 or more completed credit hours.

For either type of Stafford loan, students must first fill out a FAFSA and provide the college all necessary forms to complete the financial aid file requirements. Students may be eligible for a Federal Direct Loan if they meet the requirements included in the Financial Aid Eligibility section and are enrolled at least halftime (6 credits). Students must complete all federal and school requirements such as completing Entrance Loan Counseling, a Master Promissory Note (MPN) and a Direct Loan Request Form. If the loan is approved, the borrower will receive a Disclosure Statement from the Department of Education listing the approved amount of the loan and the approximate date(s) the loan funds will be sent to the school.

The Department will be making a financial commitment to the borrower by helping to finance the student’s education. Borrowers will be responsible for contacting their loan servicer immediately if they:
1. Withdraw, graduate or are enrolled less than halftime;
2. Change their name or address; and/or
3. Transfer schools.
In their last semester of attendance, students must complete Exit Counseling. Six months after a student is no longer enrolled at least half-time, payment arrangements must be made with the loan servicer. Payment arrangements are subject to all of the following regulations:

1. The minimum monthly payment must be $50. Under unusual circumstances the loan servicer may permit reduced payments.
2. The standard repayment period is 10 years; however, there are other repayment options available for up to 25 years.
3. Repayment in whole or in part may be made at any time without penalty.

Students may be entitled to a temporary postponement of payments called a “deferment.” Loan Servicers have a complete listing of all authorized deferments and time limitations. This information may also be found on the student’s master promissory note.

Default will occur if the borrower:
1. Fails to make scheduled loan payments; or
2. Fails to meet other terms of the promissory note.

If the student defaults on the loan, the student’s loan servicer may, add collection costs, report the default to national credit bureaus, and may pursue collection in the following manner:
1. Assign the student’s loan to a collection agency;
2. File suit against the student to recover the amount owed, plus court costs and fees;
3. Garnish the student’s wages or federal funds; and/or
4. Withhold federal and state income tax refunds.

A defaulted loan is immediately due and payable in full. Student’s credit rating will be adversely affected and may seriously jeopardize chances for qualifying for any future loans (auto, mortgage, etc.) Students who have defaulted on loans will not be eligible to receive any additional Federal or State Financial Aid.

PLUS Loans are for parents or legal guardians, who want to borrow to help pay for their dependent children’s education. The child’s dependency status will be determined by completing a FAFSA. Parent PLUS loan eligibility is contingent upon credit history. Parents may borrow up to the remaining need of the dependent student cost of attendance minus other financial aid. PLUS loans are issued at a fixed interest rate and cannot exceed 7.9%. Parent PLUS loan funds are disbursed to the school at equal intervals within the loan period. Repayment on the PLUS loan normally begins within 60 days of disbursement, however payment deferment is available. Repayment terms are scheduled by the loan servicer and usually range from 5 to 10 years. In general, the minimum monthly payment is $50.

Veterans Administration Benefits are available to veterans of the armed services. To qualify for VA benefits, veterans must apply online at www.gibill.va.gov. All students must complete the MMCC Admissions Application and then contact the MMCC VA Certifying Official. To ensure prompt receipt of VA payments, veterans must be registered for classes at least 30 days prior to start of each semester. To be eligible for maximum benefits, veterans must enroll full time each semester. Students enrolled less than full time are eligible for prorated payments. Veterans who have attended other schools beyond high school must have an official transcript from their previous school(s) sent to the MMCC Office of Enrollment Services for evaluation of possible transfer credit(s). MMCC will notify the US Department of Veterans Affairs and the veteran, of the credit(s) granted. In accordance with VA guidelines, veterans must make satisfactory academic progress towards their degree to continue receiving VA benefits. Veterans not meeting the minimum standards of the MMCC Financial Aid Satisfactory Academic Progress Policy will no longer be eligible to receive VA benefits. Veterans who have previously received VA benefits at other institutions must complete the “Change of Study/Program” form.

Michigan Children of Veterans Tuition Grant: Dependent children of deceased or disabled veterans whose injuries were a result of military service may be eligible for VA Benefits. Children must be between the ages of 18 and 23. They must be enrolled at least half-time and the amount will depend on enrollment status. Applications may be obtained from the Financial Aid Office. Students that are covered under any of the veteran’s programs must contact the Financial Aid Office each semester.

OTHER FINANCIAL AID PROGRAMS

Scholarship applications are available on the MMCC website. Students may apply for any and all scholarships they believe they may be eligible for. Availability of all scholarships listed is subject to minimum fund balances sufficient to make awards on deposit with MMCC.

Information about scholarships administered by MMCC can be found at www.midmich.edu/scholarships.

THE COST OF ATTENDING COLLEGE

TUITION RATES*

In-District Resident, Out-District Resident, Out-of-State Resident, and International rates are available on our website, and are charged per contact hour.

In-state tuition will be granted to an active duty armed forces member, spouse or dependent child. Once the student qualifies for in-state tuition, that status will continue while the student stays enrolled in the same degree program at MMCC. The in-state tuition rate would remain in effect even if the student’s military spouse or parents are transferred out of Michigan.

Students are considered in-district residents if they meet one of the following criteria:

1. They are dependent students (according to the Department of Internal Revenue regulations) residing with a parent or guardian and the parent or guardian maintains
their primary residence within one of the public school districts of Beaverton, Clare, Farwell, Gladwin, or Harrison.

2. They have resided within the State of Michigan for at least 6 months and within the College district for at least 30 days following their 18th birthday and prior to the start of the semester.

3. The student, the student's spouse, or the parents of a dependent student hold real property within the College district against which real property taxes have been assessed in support of the College for the tax year immediately preceding registration; the tax receipt must show proof of payment of taxes which support the College.

4. The students are employees of businesses or industrial firms or governmental agencies or are members of professional organizations within the College district and the employers or organizations, by written agreement, agree to pay directly to the College all tuition and/or fees of students for employer-approved courses.


*Tuition rates are subject to change without notice by action of the Board of Trustees.

Pursuant to current state appropriations laws, a student's residency must be verified each semester. To accomplish this, informational postcards will be mailed to the student's address on our system using the "POSTMASTER DO NOT FORWARD" label. If a postcard is return to MMCC because the mail is undeliverable, future registrations will be billed at the out-of-district rate until the student proves residency.

Contact Hour(s): As of the summer 2002 session students will be charged tuition on contact hours instead of academic credit hours.

Contact hours are computed by totaling the lecture + lab hours. For example:

BIO.101 4 credits (3 lectures + 2 labs) 3+2 = 5 contact hours

The exceptions are: 1) a cap of 15 contact hours per class; 2) Co-op students at worksites is exempt. Please refer to your schedule for billing credits on current course offerings.

Credit Hour Definition: For each credit hour awarded, MMCC will require 800 minutes of instruction, or its equivalent, be delivered. In addition to this instructional time, there will be two (2) hours of out-of-class student work each week for fifteen weeks, or its equivalent. For courses delivered in an online format, they will be awarded the same credit hours as their face-to-face version provided that the same learning outcomes are expected in both formats.

Credit hours for labs, clinicals, internships, co-ops and other similar instructional activities will be awarded on a ratio of contact hours to credit hours ranging from 2:1 to 5:1, depending on how independently the student is working. The more independently the student works, the more time required. For example, in a typical science lab where there is a lab instructor present and overseeing the students as they conduct independent experiments, a 2:1 ratio is appropriate. In an automotive co-op setting where the students are working even more independently on repairing cars, and only having the instructor inspect their completed work or the student checking in with the instructor when they encounter a difficulty, the ratio of 5:1 would be appropriate.

### Percent of Tuition and Fee Refund Schedule

<table>
<thead>
<tr>
<th>Calendar days beginning with and including first day of classes.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td>12 Week Classes</td>
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<td>8 Week Classes</td>
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<td>5 Week Classes</td>
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<td>4 Week Classes</td>
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<td>2 Week Classes</td>
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<td>1 Week Classes</td>
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The date the drop is initiated will be counted as the date of refund. **Enrollment Fee is Non-Refundable**

### Fees**

Assessment Fees: Anyone who is not a registered MMCC student will be charged an Assessment Fee when making use of the services of the Academic Support Center (ASC). A complete listing of fees is available in the ASC.

Course Fees: Such fees are charged for selected courses to defray the cost of special equipment, facilities, materials and/or malpractice insurance.

Enrollment Fee: A non-refundable Enrollment Fee is required for each semester a student enrolls, with the amount based upon total hours taken. This fee reserves classes but does not apply to tuition. The enrollment fee covers the costs of enrolling as well as providing enrolled students access to computer labs for academic pursuits. The fee schedule is as follows:
Enrollment Fee: $50 (6 contact hours or more)
Enrollment Fee: $25 (5.9 contact hours or less)

Non-Resident Student Facility Fee: A $10 per contact hour facility fee is charged to non-resident students.

Student Activity Fee: A $20 fee is charged each semester to all students enrolling in 3 or more credit hours. The fee is non-refundable unless a total withdrawal is made within the 100% refund period.

Technology Fee: A $10 per contact hour fee is assessed on all courses, except those that are offered exclusively online and for which an online tuition rate is charged.

**Fees are subject to change without notice by action of the Board of Trustees.

TUITION REFUND POLICY

Mid Michigan Community College has an established schedule for the refunding of tuition and course fees (excluding the Enrollment Fee) based upon the date when a student withdraws from a course. During a 15-week semester, a full refund is allowed through the first 7 calendar days of the semester. There is no differentiation between partial and total withdrawals in terms of amount of refund of tuition and fees. Sessions containing less than 15 weeks are prorated, as are classes that vary in length. Library Learning Services courses and Independent Study courses shall be considered to be 15 weeks in length.

RETURN OF TITLE IV FUNDS POLICY

Students that withdraw from all classes prior to completing more than 60% of a semester will have their eligibility for aid recalculated based on the percent of the semester completed. For example, a student who withdraws and completes 30% of the semester will have "earned" only 30% of any Title IV aid they are entitled to. The school and/or the student must return the remaining 70%. Students considering withdrawal from all classes PRIOR to completing 60% of the semester are strongly encouraged to contact the Financial Aid Office to determine how withdrawal will affect current and future financial aid.

1. This policy applies to all students who withdraw, drop out, unofficially withdraw, receive all F's, receive all F's and/or W's, or are expelled from MMCC and receive financial aid from Title IV funds:
   A. Title IV Funds include Federal financial aid programs authorized under the Higher Education Act of 1965, as amended, and includes the following programs: Federal Direct Loans including Stafford Unsubsidized, Stafford Subsidized, and PLUS Loans, Federal Pell Grants, and Federal SEOG.
   B. A student’s official withdrawal date is the date the student began the institution’s withdrawal process as defined in the MMCC Catalog, officially notified the institution of intent to withdraw, or the midpoint of the period for a student who leaves without notifying the institution, or the student’s last date of attendance at a documented academically related activity.

2. Title IV aid is earned in a prorated manner on a per day basis up to and including the 60% point in the semester. Title IV aid and all other aid is viewed as 100% earned after 60% of the semester is complete.
   A. When the total amount of unearned aid is greater than the amount returned by MMCC from the student’s account, the student is responsible for returning unearned aid to the appropriate program(s) as follows:
      1. Unsubsidized Stafford Loan*
      2. Subsidized Stafford Loan*
      3. PLUS - Parent Loans to Undergraduate*
      4. Federal Pell Grant
      5. Federal SEOG
   *Loan amounts are returned within the terms of the promissory note.

3. A notice of refund calculation and a detailed statement of charges owed to the college and/or the federal aid program will be sent to the student’s home address following the withdrawal or after grades are submitted at the end of the semester.
   A. Students are responsible for any portion of their institutional charges that the college has to return to the federal aid program. Repayment arrangements may be made with the MMCC Business Office within thirty days to avoid further action.
   B. Students who owe unearned grant aid directly to the federal program may repay the college within thirty days to avoid losing Title IV eligibility and being turned over to the U.S. Department of Education (FSA) Collection Division.

4. If you did not receive all of the funds that you earned, you may be due a post-withdrawal disbursement. If the post-withdrawal disbursement includes loan funds, you must notify MMCC that you wish to receive the loan funds. MMCC may automatically use all or a portion of your post-withdrawal disbursement including loan funds, if you accept them for current year tuition and fees. For all other school charges, the school needs your permission to use the post-withdrawal disbursement. If you do not give your permission, you will be offered the funds. However, it may be in your best interest to allow MMCC to keep the funds to reduce your debt.

5. Refunds and adjusted bills will be sent to the student’s home address following withdrawal. Students are re-
sponsible for any portion of their institutional charges that are left outstanding after Title IV funds are returned.

6. The fees, procedures, and policies listed above supersede those published previously and are subject to change at any time.

7. Any notification of a withdrawal or cancellation of classes should be in writing and addressed to the Enrollment Services Office.

TUITION PAYMENT PLAN
All students are expected to pay 100% of all assessed charges at the time of registration. Students may opt to use a convenient tuition budget plan offered by Nelnet Business Solutions for a $25.00 per semester NON-REFUNDABLE fee.

Brochures explaining the program are available at the Office of Enrollment Services on either campus, on the MMCC web site www.midmich.edu, or you may call Mid Michigan Community College Cashier’s Office at (989)386-6611 or NBS at (800) 609-8056.

OUTSTANDING BILLS
Any student with an outstanding bill with the College will not be allowed to use any charge system, will not be allowed to re-enroll, and will not be able to obtain grades, transcripts, or diplomas until such time as their bill is paid in full.

COLLEGE BOOKSTORE PURCHASES
MMCC Bookstore purchases are payable by using cash, check, credit card or by using Financial Aid. Financial Aid includes: Federal Pell Grants, student loans, third party sponsorships, Michigan Works, VA funding and others. All aid will be verified by MMCC’s Financial Aid Office before any bookstore charges will be allowed.

COLLEGE PROGRAMS
Mid Michigan Community College offers training credentials, certificates and associate degrees. Also available are transfer programs and career programs. Transfer programs are planned for students intending to transfer credits earned at Mid Michigan Community College to another institution. Transfer guides for many institutions are available on the college’s transfer website at www.midmich.edu/transfer. Students planning to transfer are strongly encouraged to consult early with the transfer receiving institution for specific course selection.

The College is a signatory to the Michigan Association of Collegiate Registrars and Admissions Officers agreement (MACRAO). Students may meet MACRAO agreement requirements without obtaining an Associate degree.

Career programs are designed to provide students with the necessary skills and related knowledge to qualify for skilled, technical, and semi-professional positions in business, industry,

and the allied health fields.

In addition to the above programs, Mid Michigan Community College offers a variety of continuing education and community service courses, workshops, and seminars

GENERAL EDUCATION REQUIREMENTS
In August of 1993 the MMCC Board of Trustees approved a new General Education program that reflects the college’s commitment to providing our students with a first-class education to meet the challenges of tomorrow. Any student who enrolls in an associate degree program at MMCC is required to fulfill the competencies of the General Education program. General Education requirements may be met by completing the required course work, meeting equivalent competency (as stated below) or through Credit by Examination.

Students may not register for 200 Level General Education Core courses until all of the 100 Level competencies are met. Students should consult with counselors or advisors to plan their academic program.

All students entering MMCC from summer 1993 session and beyond must meet the General Education Requirement.

LEVEL I: CIS 100, ENG 111, MAT (as specified on the degree) & either SPE 101 or 257

LEVEL II: HUM 200, SCI 200, and SSC 200 or their respective equivalents

SCI 200 -or- 8 hrs in Science; 1 of which is a natural science & 1 in physical science (one class w/lab required)

SSC 200 -or- 9 hrs in 2 Social Science disciplines.

HUM 200 -or- 9 hrs of Humanities with at least 3 credits at 200 level -or- 6 hrs of Humanities & 3 hrs Fine Arts one of which is at the 200 level

Students who transfer to MMCC after completing a degree at an accredited institution will be given the following exemptions:

1. From a Two-Year Institution: Students transferring to MMCC with a two-year degree from an accredited institution will be exempt from 100 Level General Education requirements with the exception of math. 200 Level requirements will be determined in the transcript evaluation process.

2. From a Four-Year Institution: Students transferring to MMCC with a four-year degree from an accredited institution will be exempt from both the 100 and 200 Level General Education requirements with the exception of math.

Assessment of student academic achievement is an institutional requirement and may be required in General Education courses.
DISTRIBUTION GROUPS

All regular college courses offered by Mid Michigan Community College which apply toward associate degrees and certificate programs are arranged into Distribution Groups. Many of the programs specify a certain number of prescribed and elective courses in the various groups.

The groups are as follows:

I  Communication Skills
   English 104, 110,111, 222, 225, Journalism, Speech

II  Science and Mathematics
    Mathematics: Mathematics
    Natural Science: Biology
    Physical Science: Chemistry, Computer Science (CIS 110, 111, 151, 152, 175, 176), Geology, Physical Science, Physics, Science

III  Social Science
    Anthropology, Economics, History 211, 212, 223, 251, 252, MID 103, Political Science, Psychology, Social Science, Sociology

IV  Humanities and Fine Arts
    Fine Arts: Art, Music, Theatre (except MUS 275, TAI 275)
    Humanities: English 112, 201, 202, 205, 206, 211, 212, 213, 281, French, German, History 101, 102, Humanities, Japanese, MUS 275, Philosophy, Religion, Spanish, TAI 275

V  Applied Arts & Sciences

VI  Health/Physical Education
    Health Education, Physical Education

VII  Education
    Elementary Education, Secondary Education

VIII  Personal Development

MID Courses

MACRAO AGREEMENT

The College is a signatory of the Michigan Association of Collegiate Registrars and Admissions Officers Agreement (MACRAO), which allows students completing the MACRAO requirements to transfer into 4-year institutions that are also signatories* with 30 hours of general education requirements met.

To satisfy MACRAO requirements at Mid Michigan Community College, students must complete:

1. ENG 111 and ENG 222;
2. Eight hours of science and mathematics (Group II) electives in more than one discipline, with one course being a laboratory science;
3. Eight hours of social sciences (Group III) electives in more than one discipline; and
4. Eight hours of humanities and fine arts (Group IV) electives in more than one discipline.

AND

At least 12 credit hours must be taken at MMCC.

Students graduating with an Associate in Arts, Associate in Science, or Associate in Business Administration transfer degrees will automatically have the statement “MACRAO Requirements Satisfied” affixed to their transcripts provided they have fulfilled the courses required on these programs. MMCC will automatically verify MACRAO requirements and post a MACRAO training credential to the transcript if applicable, whenever a student completes a Graduation Application or Transcript Request Form.

*Some signatories have qualifications to the MACRAO agreement. Transfer students are advised to check with their transfer receiving institution for specific course selection.

CANCELLATION OF COURSES AND PROGRAMS

The courses and programs listed in this publication generally represent those presently available through Mid Michigan Community College; however, new courses are being developed continuously and occasionally unavoidable circumstances necessitate the removal of courses and programs from the College’s current offerings. In addition, not all courses and programs are available during any given semester. Please go to MidWeb on the College website for course offering information.
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**ASSOCIATE IN ARTS**  
**CONCENTRATION: BUSINESS STUDIES TRANSFER**

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 62 credits is required to complete this program.  
A minimum of 15 credit hours must consist of 200 level coursework.

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 9 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111* (3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>ENG 222* (3) Expository Writing &amp; Research</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) – 9 credit hours</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 105 (3) Intermediate Algebra OR</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>MAT 116 (3) Business Math I</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>SCI 200 (3) Science, Technology &amp; Society</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>Elective (3) Group II MAT 212 highly recommended</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences (Group III) - 9 credit hours</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 201 (3) Principles of Economics (Macro)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECO 202 (3) Principles of Economics (Micro)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective (3) Group III – other than ECO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) - 9 credit hours</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses must be taken in more than one discipline with at least one at the 200-level. Only three credits allowed from Fine Arts classes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) - 16 credit hours</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>Electives (13) ACC, BUS, CIS or BIS only</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELECTIVES – 10 credit hours</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses must come from Groups I, II, III, IV, V, VI (HED, PED). (Maximum of 2 credit hours in Group VI.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students should consult with an Academic Advisor to select courses appropriate for transfer.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Most universities require demonstrated competency by completing these courses with a minimum grade of "C".  
** Consult your advisor to determine which courses are Group IV

---

**@ PREREQUISITES**

- a. Placement into ENG 111 or ENG 110 with a minimum grade of "C"
- b. Minimum grade of "C" in ENG 111
- c. Minimum grade of "C" in MAT 104 or equivalent
- d. Minimum grade of "C" in MAT 105 or equivalent
- e. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
- f. Touch keyboarding skills recommended
### Communication Skills (Group I) - 9 credit hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>(3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>ENG 222</td>
<td>(3) Expository Writing &amp; Research</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>SPE 101</td>
<td>(3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>(3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Science and Mathematics (Group II) - 9 credit hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 105</td>
<td>(3) Intermediate Algebra</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>SCI 200</td>
<td>(3) Science, Technology &amp; Society</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>(3) Group II</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Social Sciences (Group III) - 9 credit hours

- (minimum of 2 disciplines with at least three credits at the 200 level)
- Elective (9) Group III

### Humanities and Fine Arts (Group IV) - 9 credit hours (minimum of 2 disciplines)

- Courses must be taken in more than one discipline with at least one at the 200-level.
- Only three credits allowed from Fine Arts classes.

### Applied Arts and Sciences (Group V) – Minimum of 18 credit hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>(3) Introduction to Information Systems</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>(15) Elective (9 hours in CJS required)</td>
<td>(f)</td>
<td></td>
</tr>
</tbody>
</table>

#### Electives- 8 credit hours

- Elective: Choose from Group III, IV, V and VI (PED 255 recommended)

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**NOTE:** Prior to entering Law Enforcement programs, students must meet with an advisor to assure that the student meets the minimum standards set by the Michigan Commission on Law Enforcement Standards (MCOLES). After completion of the CJS associate program, students take and pass the MCOLES pre-employment reading/writing test and a physical skills test before entering a college MCOLES approved Police Academy.

### @ PREREQUISITES

- a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- b. Minimum grade of “C” in ENG 111
- c. Minimum grade of “C” in MAT 104 or equivalent
- d. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
- e. Touch keyboarding skills recommended
- f. Students should select CJS courses in conjunction with an advisor to develop a plan that best meets the requirements of their chosen transfer institution.
# ASSOCIATE IN ARTS: LIBERAL STUDIES TRANSFER

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

**A minimum of 62 credits is required to complete this program.**

**A minimum of 15 credit hours must consist of 200 level coursework.**

## GENERAL EDUCATION COURSES

### Communication Skills (Group I) - 9 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111*</td>
<td>3</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>ENG 222*</td>
<td>3</td>
<td>(b)</td>
<td></td>
</tr>
</tbody>
</table>

### OR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPE 101</td>
<td>3</td>
</tr>
<tr>
<td>SPE 257</td>
<td>3</td>
</tr>
</tbody>
</table>

### Science and Mathematics (Group II) - 9 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 105*</td>
<td>3</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

### OR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 212</td>
<td>3</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>SCI 200</td>
<td>3</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

### Elective (3) Group II

### Social Sciences Electives (Group III)- 9 credit hours

Courses must be taken in more than one discipline with at least 3 credits at the 200 level.

### Humanities and Fine Arts Electives (Group IV) - 9 credit hours

Courses must be taken in more than one discipline with at least one at the 200-level. Only 3 credits allowed from Fine Arts Classes.

### Applied Arts and Sciences (Group V) - 3 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>(e)</td>
<td></td>
</tr>
</tbody>
</table>

### ELECTIVES - 23 credit hours

Courses must come from Groups I, II, III, IV, VI (HED, PED) and VII (EDU).

(Maximum of 2 credit hours in Group VI.)

You are strongly encouraged to meet with your Academic Advisor to select courses that are appropriate for your academic and career goals.

*Most universities require demonstrated competency by completing these courses with a minimum grade of “C”.

@ PREREQUISITES

- a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- b. Minimum grade of “C” in ENG 111
- c. Minimum grade of “C” in MAT 104 or equivalent
- d. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
- e. Touch keyboarding skills recommended
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 62 credits is required to complete this program. A minimum of 15 credit hours must consist of 200 level coursework.

### Communication Skills (Group I) - 9 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111*</td>
<td>3</td>
<td>Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>ENG 222*</td>
<td>3</td>
<td>Expository Writing &amp; Research</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>SPE 101*</td>
<td>3</td>
<td>Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>3</td>
<td>Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Science and Mathematics (Group II) - 9 credit hours

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
<th>Course</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>MAT 105 or higher*</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>SCI 200</td>
<td>3</td>
<td>Science, Technology &amp; Society</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>Group II</td>
<td></td>
<td></td>
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</table>

### Social Sciences (Group III) - 9 credit hours

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
<th>Course</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>9</td>
<td>Group III</td>
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### Humanities and Fine Arts (Group IV) - 31 credit hours

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
<th>Course</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>3</td>
<td>Drawing I - Introductory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>3</td>
<td>Design I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUM 101</td>
<td>3</td>
<td>World of Creativity I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUM 102</td>
<td>3</td>
<td>World of Creativity II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ART 241</td>
<td>1</td>
<td>Portfolio</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>ART XXX**</td>
<td>18</td>
<td>Select from: ART 110, 130, 135, 137, 152, 205, 206, 210, 211, 215, 230, 235, 236, 237, 239, 240, 247, 252, 253, 254, 256, 280</td>
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</table>

### Applied Arts and Sciences (Group V) - 3 credit hours

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
<th>Course</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>Introduction to Information Systems</td>
<td>(f)</td>
<td></td>
</tr>
</tbody>
</table>

### Electives - 3 credit hours

Electives from Groups I, II, III, IV and V.

* Most universities required demonstrated competency by completing these courses with a minimum grade of “C”.
** See MMCC Catalog for prerequisite information

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**PREREQUISITES**

- Placement into ENG 111 or ENG 110 with minimum grade of “C”
- Minimum grade of “C” in ENG 111
- Minimum grade of “C” in MAT 104 or equivalent.
- Level I General Ed: CIS 100, MAT, ENG 111 and SPE 101-or-SPE 257
- Permission of instructor
- Touch keyboarding skills recommended.
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 62 credits is required to complete this program.

### Communication Skills (Group I) - 6 credit hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>3</td>
<td>Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>SPE 101</td>
<td>3</td>
<td>Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>3</td>
<td>Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Science and Mathematics (Group II) – 6 credit hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 105</td>
<td>3</td>
<td>Intermediate Algebra OR</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>MAT 116</td>
<td>3</td>
<td>Business Math I</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>SCI 200</td>
<td>3</td>
<td>Science, Technology &amp; Society</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

### Social Sciences (Group III) - 3 credit hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200</td>
<td>3</td>
<td>The Social Sciences &amp; Contemporary America Society</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

### Humanities and Fine Arts (Group IV) - 3 credit hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200</td>
<td>3</td>
<td>Modernity &amp; Culture Society</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

### Applied Arts and Sciences (Group V) - 44 credit hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>Introduction to Information Systems</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>ACC 201</td>
<td>4</td>
<td>Financial Accounting</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>ACC 205</td>
<td>3</td>
<td>Payroll Accounting</td>
<td>(g)</td>
<td></td>
</tr>
<tr>
<td>ACC 211</td>
<td>4</td>
<td>Managerial Accounting</td>
<td>(h)</td>
<td></td>
</tr>
<tr>
<td>ACC 231</td>
<td>3</td>
<td>Principles of Cost Accounting</td>
<td>(i)</td>
<td></td>
</tr>
<tr>
<td>ACC 251</td>
<td>3</td>
<td>Tax Accounting I</td>
<td>(j)</td>
<td></td>
</tr>
<tr>
<td>ACC 252</td>
<td>3</td>
<td>Tax Accounting II</td>
<td>(k)</td>
<td></td>
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<tr>
<td>ACC 261</td>
<td>3</td>
<td>Computerized Accounting</td>
<td>(l)</td>
<td></td>
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<tr>
<td>ACC 280</td>
<td>3</td>
<td>Co-op Accounting</td>
<td>(m)</td>
<td></td>
</tr>
<tr>
<td>BIS 264</td>
<td>3</td>
<td>Business Communications II</td>
<td></td>
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<tr>
<td>BUS 151</td>
<td>3</td>
<td>Introduction to Business Issues</td>
<td></td>
<td></td>
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<tr>
<td>BUS 153</td>
<td>3</td>
<td>Business Law</td>
<td></td>
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<tr>
<td>BUS 255</td>
<td>3</td>
<td>Entrepreneurial Finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS 130</td>
<td>3</td>
<td>Applications with Microcomputers</td>
<td></td>
<td></td>
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</tbody>
</table>

**@ PREREQUISITES**

- Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- Minimum grade of “C” in MAT 104 or equivalent
- Minimum grade of “C” in MAT 105 or equivalent
- Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
- Touch keyboarding skills recommended
- ACC 201 recommended
- Minimum grade of “C” in ACC 201
- ACC 211
- ACC 251
- CIS 130, ACC 211
- Completed at least 45 credit hours in the Accounting Program
- BIS 164 or ENG 111
- Minimum grade of “C” in CIS 100
Suggested Sequence of Courses

FIRST SEMESTER
ACC 201
BUS 153

SECOND SEMESTER
ACC 211
BUS 255
CIS 130
BUS 151

THIRD SEMESTER
ACC 205
ACC 251
ACC 261

FOURTH SEMESTER
ACC 231
ACC 252
ACC 280
# ASSOCIATE IN APPLIED SCIENCE

## CONCENTRATION: AUTOMOTIVE TECHNOLOGY

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 69 credits is required to complete this program.

<table>
<thead>
<tr>
<th>Communication Skills (Group I) 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 101 (3) Basic Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCI 200 (3) Science, Technology &amp; Society</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Science (Group III) 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200 (3) The Social Sciences &amp; Contemporary America</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200 (3) Modernity &amp; Culture</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) 51 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
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<tbody>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS 104 (2) Basic Automotive Electricity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS 110 (4.5) Engine Fundamentals and Overhaul</td>
<td></td>
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</tr>
<tr>
<td>AMS 125 (5) Engine Performance I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS 116 (3) Electrical Systems I: Electrical Accessories</td>
<td></td>
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</tr>
<tr>
<td>AMS 124 (4) Automotive Heating &amp; Air Conditioning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS 126 (5) Engine Performance II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS 205 (4) Steering &amp; Suspension Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS 206 (4) Brakes</td>
<td></td>
<td></td>
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<tr>
<td>AMS 223 (4) Electrical Systems II: Engine Electrical Systems</td>
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<td></td>
</tr>
<tr>
<td>AMS 214 (4.5) Automatic Transmissions</td>
<td></td>
<td></td>
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<tr>
<td>AMS 222 (4) Manual Transmissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS 232 (4) Automotive Co-op</td>
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</table>

Note: AMS coursework must be completed with a minimum grade of “C” to be eligible for AMS 232 Automotive Co-op.

@ PREREQUISITES

a. Placement into ENG 111 or ENG 110 with minimum grade of “C”
b. LEVEL I General Ed: CIS 100, MAT, ENG 111 and SPE 101-or-SPE 257
c. Touch keyboarding skills recommended
d. AMS 104 (may be taken concurrently) or Instructor approval
e. AMS 104 and AMS 125, OR State certified in engine tune-up area
f. Completion of 45 credits of program with remaining courses concurrent to Co-op. Permission of the Co-op Coordinator required. Professional tools required.

A suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
RECOMMENDED COURSE SEQUENCE

FIRST SEMESTER
AMS 104 (2)  Basic Automotive Electricity
AMS 110 (4.5) Engine Fundamentals and Overhaul
AMS 125 (5)  Engine Performance I

SECOND SEMESTER
AMS 116 (3)  Electrical Systems I: Electrical Accessories
AMS 124 (4)  Automotive Heating & Air Conditioning
AMS 126 (5)  Engine Performance II

THIRD SEMESTER
AMS 205 (4)  Steering & Suspension Systems
AMS 206 (4)  Brakes
AMS 223 (4)  Electrical Systems II: Engine Electrical Systems

FOURTH SEMESTER
AMS 214 (4.5) Automatic Transmissions
AMS 222 (4)  Manual Transmissions
AMS 232 (4)  Automotive Co-op

(AMS 214 & 222 can be concurrent)
ASSOCIATE IN APPLIED SCIENCE
CONCENTRATION: BIS – MEDICAL TRANSCRIPTION

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 63 credits is required to complete this program.

Prerequisite to the Program: BIS 140 (3) Beginning Word Processing/Keyboarding OR equivalent OR concurrent.

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 111 (3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) – 3 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCI 200 (3) Science, Technology &amp; Society</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences (Group III) - 3 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200 (3) The Social Sciences &amp; Contemporary America Society</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) - 3 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200 (3) Modernity &amp; Culture Society</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) - 48 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALH 100 (2) Medical Terminology</td>
</tr>
<tr>
<td>ALH 220 (3) Medical Law and Ethics</td>
</tr>
<tr>
<td>BIO 101 (4) College Biology</td>
</tr>
<tr>
<td>BIO 131 (3) Basic Anatomy and Physiology</td>
</tr>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
</tr>
<tr>
<td>BIS 120 (3) Office Mathematics</td>
</tr>
<tr>
<td>BIS 126 (3) Introduction to Medical Transcription</td>
</tr>
<tr>
<td>BIS 136 (3) Terminology and Proofreading</td>
</tr>
<tr>
<td>BIS 142 (3) Intermediate Word Processing/Keyboarding</td>
</tr>
<tr>
<td>BIS 164 (3) Business Communications I</td>
</tr>
<tr>
<td>BIS 236 (3) Medical Transcription I</td>
</tr>
<tr>
<td>BIS 240 (3) Advanced Word Processing/Keyboarding</td>
</tr>
<tr>
<td>BIS 246 (3) Medical Transcription II</td>
</tr>
<tr>
<td>BIS 254 (3) Office Procedures</td>
</tr>
<tr>
<td>BIS 256 (3) Medical Transcription III</td>
</tr>
<tr>
<td>BIS 260 (3) Co-op</td>
</tr>
</tbody>
</table>

@ PREREQUISITES

a. Placement into ENGR 111 or ENGR 110 with a minimum grade of “C”
b. Level I General Education courses (CIS 100, MAT, ENGR 111, SPE 101 or 257)
c. BIO 101 with a minimum grade of “C”
d. Touch keyboarding skills recommended
e. BIS 140 or competency. Corequisite ALH100 recommended.
f. BIS 164 or ENGR 111
g. BIS 140 or equivalent
h. Recommended concurrent enrollment in BIS 140 or CIS 100 or knowledge of correct keyboarding techniques
i. ALH 100, BIS 142, BIS 230
j. ENGR111, BIS 136, BIS 142, BIS 200
k. BIS 236
l. BIS 246
m. The student should have completed the first three semesters of the program and the approval of the MMCC Co-op Coordinator and BIS instructor in order to be placed in a training site

A suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
Suggested Sequence of Courses

FIRST SEMESTER
ALH 100
BIO 101
CIS 100
BIS120
BIS126
BIS 164

SECOND SEMESTER
BIO 131
BIS 136
BIS 142
BIS 236

THIRD SEMESTER
BIS 240
BIS 246

FOURTH SEMESTER
ALH 220
BIS 254
BIS 256
BIS 260
A minimum of 65 credits is required to complete this program.

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
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</thead>
<tbody>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) – 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 105 (3) Intermediate Algebra OR</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>MAT 116 (3) Business Math I</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>SCI 200 (3) Science, Technology &amp; Society</td>
<td>(d)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Social Sciences (Group III) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 201 (3) Principles of Economics (Macro) OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECO 202 (3) Principles of Economics (Micro)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSC 200 (3) The Social Sciences &amp; Contemporary America Society</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) - 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200 (3) Modernity &amp; Culture Society</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) - 44 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 201 (4) Financial Accounting</td>
<td></td>
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<tr>
<td>ACC 211 (4) Managerial Accounting</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>BIS 264 (3) Business Communications II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 122 (3) Management Theory &amp; Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 151 (3) Introduction to Business Issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 153 (3) Business Law</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 162 (3) Principles of Marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 231 (3) Principles of Advertising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 255 (3) Entrepreneurial Finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 291 (3) Business Internship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>CIS 130 (3) Applications with Microcomputers</td>
<td>(g)</td>
<td></td>
</tr>
</tbody>
</table>

**6 hours must come from any combination of the following courses**

| ACC 251 (3) Tax Accounting I                         |                |           |
| ACC 252 (3) Tax Accounting II                        | (h)            |           |
| BUS 225 (3) International Business                   |                |           |
| BUS 250 (3) Entrepreneurial Management               |                |           |
| PSY 101 (3) Introduction to General Psychology       |                |           |
| BIS 140 (3) Beginning Word Processing/Keyboarding    |                |           |

**@ PREREQUISITES**

- a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- b. Minimum grade of “C” in MAT 104 or equivalent
- c. Minimum grade of “C” in MAT 105 or equivalent
- d. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
- e. Minimum grade of “C” in ACC 201
- f. Touch keyboarding skills recommended
- g. Minimum grade of “C” in CIS 100
- h. ACC 251

A suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
Suggested Sequence of Courses

FIRST SEMESTER (Fall) 15 Credit Hours
BUS 122 (3)
BUS 151 (3)
CIS 100 (3)
MAT 116 (3)
BIS 140 (3)

SECOND SEMESTER (Winter) 16 Credit Hours
ACC 201 (4)
BUS 162 (3)
CIS 130 (3)
ENG 111 (3)
SPE 101 (3) OR SPE 257 (3)

THIRD SEMESTER (Fall) 16 Credit Hours
ACC 211 (4)
BUS 231 (3)
ECO 201 (3) OR ECO 202 (3)
HUM 200 (3)
BUS 225 (3)

FOURTH SEMESTER (Winter) 18 Credit Hours
BUS 153 (3)
BUS 255 (3)
BUS 291 (3)
BIS 264 (3)
SCI 200 (3)
SSC 200 (3)
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 64 credits is required to complete this program.

Prerequisite to the Program: BIS 140 (3) Beginning Word Processing/Keyboarding OR equivalent OR concurrent.

Communication Skills (Group I) – 6 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>(3) Freshman English Composition</td>
</tr>
<tr>
<td>SPE 101</td>
<td>(3) Fundamentals of Communication OR</td>
</tr>
<tr>
<td>SPE 257</td>
<td>(3) Public Speaking</td>
</tr>
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</table>

Science and Mathematics (Group II) – 3 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCI 200</td>
<td>(3) Science, Technology &amp; Society</td>
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</tbody>
</table>

Social Sciences (Group III) - 3 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200</td>
<td>(3) The Social Sciences &amp; Contemporary America Society</td>
</tr>
</tbody>
</table>

Humanities and Fine Arts (Group IV) - 3 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200</td>
<td>(3) Modernity &amp; Culture Society</td>
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</tbody>
</table>

Applied Arts and Sciences (Group V) - 43 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>(3) Introduction to Information Systems</td>
</tr>
<tr>
<td>BIS 120</td>
<td>(3) Office Mathematics</td>
</tr>
<tr>
<td>BIS 127</td>
<td>(4) Applied Office Accounting</td>
</tr>
<tr>
<td>BIS 136</td>
<td>(3) Terminology and Proofreading</td>
</tr>
<tr>
<td>BIS 142</td>
<td>(3) Intermediate Word Processing/Keyboarding</td>
</tr>
<tr>
<td>BIS 164</td>
<td>(3) Business Communications I</td>
</tr>
<tr>
<td>BIS 200</td>
<td>(3) Advanced Word Processing Applications</td>
</tr>
<tr>
<td>BIS 230</td>
<td>(3) Transcription I</td>
</tr>
<tr>
<td>BIS 234</td>
<td>(3) Transcription II</td>
</tr>
<tr>
<td>BIS 240</td>
<td>(3) Advanced Word Processing/Keyboarding</td>
</tr>
<tr>
<td>BIS 250</td>
<td>(3) Records Management</td>
</tr>
<tr>
<td>BIS 254</td>
<td>(3) Office Procedures</td>
</tr>
<tr>
<td>BIS 260</td>
<td>(3) Co-op</td>
</tr>
<tr>
<td>BIS 264</td>
<td>(3) Business Communications II</td>
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</tbody>
</table>

A minimum of 6 hours must come from a select track

<table>
<thead>
<tr>
<th>Track</th>
<th>General BIS Track</th>
<th>Medical Office Track</th>
<th>Legal Office Track</th>
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</thead>
<tbody>
<tr>
<td>BUS 151</td>
<td>(3) Introduction to Business Issues</td>
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<tr>
<td>CIS 130</td>
<td>(3) App. with microcomputers</td>
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<tr>
<td>ALH 100</td>
<td>(2) Medical Terminology</td>
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<tr>
<td>ALH 112</td>
<td>(3) Insurance Billing</td>
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<tr>
<td>BIS 236</td>
<td>(3) Medical Transcription I</td>
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<tr>
<td>BIS 138</td>
<td>(3) Basic Legal Terminology</td>
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<tr>
<td>BIS 238</td>
<td>(3) Legal Transcription</td>
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<tr>
<td>BUS 153</td>
<td>(3) Business Law</td>
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</table>

@ PREREQUISITES

a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
b. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
c. Touch keyboarding skills recommended
d. BIS 120
e. BIS 164, ENG 111 may be taken concurrently
f. BIS 140 or equivalent
g. Recommended concurrent enrollment in BIS 140 or CIS 100 or knowledge of correct keyboarding techniques
h. BIS 140 or equivalent, CIS 100 recommended
i. ENG 111, BIS 136, BIS 142, BIS 164, CIS 100
j. BIS 200, BIS 230, BIS 240
k. ENG 111, BIS 136, BIS 142, BIS 200
l. In order to be placed in a training site and enrolled in BIS 260, the student should have completed the first three semesters of the program and must have approval of the BIS Co-op Instructor and the MMCC Co-op Coordinator.
m. BIS 164 or ENG 111

A suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
Suggested Sequence of Courses

FIRST SEMESTER
BIS 120
CIS 100
BIS 164

SECOND SEMESTER
BIS 136
BIS 142
BIS 200

THIRD SEMESTER
BIS 230
BIS 240
BIS 250
BIS 264

FOURTH SEMESTER
BIS 127
BIS 234
BIS 254
BIS 260
### Communication Skills (Group I) - 6 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>3</td>
<td>Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>SPE 101</td>
<td>3</td>
<td>Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>3</td>
<td>Public Speaking</td>
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<td></td>
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</tbody>
</table>

### Science and Mathematics (Group II) – 9-13 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 170</td>
<td>3</td>
<td>Technical Math II OR</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>MAT 124</td>
<td>5</td>
<td>Pre-Calculus*</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>SCI 200</td>
<td>3</td>
<td>Science, Technology, &amp; Society</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>PHY 103</td>
<td>3</td>
<td>Applied Physics OR</td>
<td>(e)</td>
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</tr>
<tr>
<td>PHY 211</td>
<td>5</td>
<td>General Physics I*</td>
<td>(f)</td>
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</table>

### Social Sciences (Group III) - 3 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200</td>
<td>3</td>
<td>The Social Sciences &amp; Contemporary America</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

### Humanities and Fine Arts (Group IV) - 3 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200</td>
<td>3</td>
<td>Modernity &amp; Culture</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

### Applied Arts and Sciences (Group V) - 33 credit hours

**Required:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>Introduction to Information Processing Systems</td>
<td>(g)</td>
<td></td>
</tr>
<tr>
<td>DRF 101</td>
<td>3</td>
<td>Technical Drawing</td>
<td>(h)</td>
<td></td>
</tr>
<tr>
<td>DRF 105</td>
<td>2</td>
<td>Intro to Geometric Dimensioning &amp; Tolerancing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 120</td>
<td>3</td>
<td>Introduction to AutoCAD</td>
<td>(i)</td>
<td></td>
</tr>
<tr>
<td>DRF 201</td>
<td>4</td>
<td>Mechanical Detail Drafting w/CAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 210</td>
<td>3</td>
<td>Introduction to SolidWorks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 220</td>
<td>3</td>
<td>Introduction to SoftPlan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 250</td>
<td>3</td>
<td>Drafting/CAD Co-Op</td>
<td>(j)</td>
<td></td>
</tr>
<tr>
<td>DRF 280</td>
<td>3</td>
<td>CAD Program and Software Certification</td>
<td>(k)</td>
<td></td>
</tr>
<tr>
<td>IND 101</td>
<td>4</td>
<td>Basic Machine Shop Practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 113</td>
<td>2</td>
<td>CNC Machining</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Electives – 4-8 credit hours from the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 116</td>
<td>4</td>
<td>CNC Programming</td>
<td>(l)</td>
<td></td>
</tr>
<tr>
<td>MNF 1000</td>
<td>3</td>
<td>Fundamentals of Pneumatics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNF 1200</td>
<td>3</td>
<td>Fundamentals of Hydraulics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELT 212</td>
<td>3</td>
<td>Basic Electrical Theory</td>
<td>(m)</td>
<td></td>
</tr>
<tr>
<td>MNF 1400</td>
<td>3</td>
<td>Industrial Drives and Mechanisms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNF 1600</td>
<td>3</td>
<td>Basic Introduction to Robotics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WLD 126</td>
<td>3</td>
<td>Basic Welding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 140</td>
<td>3</td>
<td>Metallurgy and Industrial Metals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Suggested courses for Ferris State University Transfer Program:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 222</td>
<td>3</td>
<td>Expository Writing and Research</td>
<td>(n)</td>
<td></td>
</tr>
<tr>
<td>MAT 124</td>
<td>5</td>
<td>Pre-Calculus</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>PHY 211</td>
<td>5</td>
<td>General Physics I</td>
<td>(f)</td>
<td></td>
</tr>
</tbody>
</table>

A list of pre-requisites and a suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
PREREQUISITES

a. Placement into ENG 111 or ENG 110 with minimum grade of “C”
b. Minimum grade of “C” in MAT 101 OR minimum grade of “C” in MAT 102 OR equivalent
c. Minimum grade of “C” in MAT 105 OR equivalent
d. LEVEL I General Ed: CIS 100, MAT, ENG 111 and SPE 101-or-SPE 257
e. Corequisite: MAT 104 OR MAT 170
f. MAT 126 OR equivalent
g. Touch keyboarding skills recommended
h. DRF 101 Technical Drawing; IND 101 recommended
   i. DRF 120
j. Minimum grade of “B” in DRF 101, 105, 120, 201, 210 and IND 101, 113 OR successful completion of competency exam with minimum score of 80%
k. Minimum grade of “B” in DRF 101, 105, 120, 201, and 210 OR successful completion of competency exam with minimum score of 80%
l. IND 101, IND 113, minimum grade of “C” in MAT 105 OR MAT 170 OR equivalent
m. Minimum grade of “C” in MAT 104 OR placement into MAT 105 or higher; Minimum grade of “C” in ENG 104 OR placement into ENG 110 or higher
n. Minimum grade of “C” in ENG 111

Suggested Sequence of Courses

FIRST SEMESTER (Fall) 15-16 Credit Hours
DRF 101 (3)
DRF 120 (3)
ELECTIVE (3-4)
CIS 100 (3)
MAT 170 (3)

SECOND SEMESTER (Winter) 16-17 Credit Hours
DRF 201 (4)
DRF 210 (3)
ELECTIVE (3-4)
ENG 111 (3)
SPE 101 (3)

THIRD SEMESTER (Fall) 16 Credit Hours
DRF 105 (2)
PHY 103 (4)
IND 101 (4)
SCI 200 (3)
DRF 220 (3)

FOURTH SEMESTER (Winter) 14 Credit Hours
DRF 280 (3)
DRF 250 (3)
IND 113 (2)
SSC 200 (3)
HUM 200 (3)
**COMMUNICATION SKILLS (GROUP I) - 6 CREDIT HOURS**

- ENG 111 (3) Freshman English Composition
- SPE 101 (3) Fundamentals of Communication OR SPE 257 (3) Public Speaking

**SCIENCE AND MATHEMATICS (GROUP II) – 6 CREDIT HOURS**

- MAT 105 (3) Intermediate Algebra OR MAT 116 (3) Business Math I
- SCI 200 (3) Science, Technology & Society

**SOCIAL SCIENCES (GROUP III) - 3 CREDIT HOURS**

- SSC 200 (3) The Social Sciences & Contemporary America Society

**HUMANITIES AND FINE ARTS (GROUP IV) - 3 CREDIT HOURS**

- HUM 200 (3) Modernity & Culture Society

**APPLIED ARTS AND SCIENCES (GROUP V) - 46 CREDIT HOURS**

- ACC 201 (4) Financial Accounting
- BIS 264 (3) Business Communications II
- BUS 151 (3) Introduction to Business Issues
- CIS 100 (3) Introduction to Information Systems
- CIS 132 (3) Microsoft Excel
- CIS 135 (3) Introduction to Website Design
- CIS 270 (3) Networking Essentials

**Students must complete one of the following three CIS concentrations:**

<table>
<thead>
<tr>
<th>Networking</th>
<th>VB Programming</th>
<th>C++ Programming</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 255 - Operating Systems (h)</td>
<td>CIS 221 – Comp. In Business (o)</td>
<td>CIS 221 – Comp. In Business (o)</td>
</tr>
<tr>
<td>CIS 190 – Cisco I (j)</td>
<td>CIS 225 – Database Systems (i)</td>
<td>CIS 225 – Database Systems (i)</td>
</tr>
<tr>
<td>CIS 195 – Cisco II (k)</td>
<td>CIS 260 – Systems Analysis (h)</td>
<td>CIS 260 – Systems Analysis (h)</td>
</tr>
<tr>
<td>CIS 290 – Cisco III (l)</td>
<td>CIS 110 – VB Programming I (n)</td>
<td>CIS 175 – C++ Programming I (n)</td>
</tr>
<tr>
<td>CIS 295 – Cisco IV (m)</td>
<td>CIS 111 – VB Programming II (s)</td>
<td>CIS 176 – C++ Programming II (s)</td>
</tr>
</tbody>
</table>

- 9 elective hours must come from any combination of the following courses or any course from a track that you are not using for your concentration

**PREREQUISITES**

- a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- b. Minimum grade of “C” in MAT 104 or equivalent
- c. Minimum grade of “C” in MAT 105 or equivalent
- d. Level 1 General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
- e. BIS 164 or ENG 111
- f. Touch keyboarding skills recommended
- g. Minimum grade of “C” in CIS 100
- h. CIS 110 or CIS 130
- i. CIS 110 or CIS 130
- j. CIS 100, MAT 104
- k. CIS 190
- l. CIS 195
- m. CIS 290
- n. MAT 104 or equivalent
- o. Prerequisite or corequisite: ACC 201
- p. CIS 270
- q. CIS 271
- r. Completion of 45 credit hours toward CIS degree
- s. CIS 110
- t. CIS 175
ASSOCIATE IN APPLIED SCIENCE
CONCENTRATION: CRIMINAL JUSTICE - CORRECTIONS

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 62 credits is required to complete this program.
A minimum of 15 credit hours must consist of 200 level coursework.

Communication Skills (Group I) - 9 credit hours
ENG 111 (3) Freshman English Composition @Prerequisites (a) Completed
ENG 222 (3) Expository Writing & Research (b)
SPE 101 (3) Fundamentals of Communication OR SPE 257 (3) Public Speaking

Science and Mathematics (Group II) - 9 credit hours
MAT 105 (3) Intermediate Algebra (c)
SCI 200 (3) Science, Technology & Society (d)
Elective (3) Group II

Social Sciences (Group III) - 9 credit hours
(minimum of 2 disciplines with at least three credits at the 200 level)
Elective (9) Group III

Humanities and Fine Arts (Group IV) - 9 credit hours (minimum of 2 disciplines)
Elective (9) Group IV
Courses must be taken in more than one discipline with at least one at the 200-level. Only 3 credits allowed from Fine Arts Classes.

Applied Arts and Sciences (Group V) – 12-18 credit hours
CIS 100 (3) Introduction to Information Systems (e)

Select one of the following concentration tracks:

<table>
<thead>
<tr>
<th>State Corrections</th>
<th>Local Detention</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJS 220 – Intro to Corrections</td>
<td>CJS 231 – Local Detention Academy I</td>
</tr>
<tr>
<td>CJS 221 – Legal Issues in Corrections</td>
<td>CJS 232 – Local Detention Academy II</td>
</tr>
<tr>
<td>CJS 222 – Corr. Facilities and Institutions</td>
<td>CJS 233 – Local Detention Academy III</td>
</tr>
<tr>
<td>CJS 223 – Client Growth &amp; Dev. in Corr.</td>
<td></td>
</tr>
<tr>
<td>CJS 224 - Client Relations in Corrections</td>
<td></td>
</tr>
</tbody>
</table>

Electives- 8-14 credit hours
Elective (8-14) Choose from Group III, IV, and VI (PED 255 recommended)

@ PREREQUISITES
a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
b. Minimum grade of “C” in ENG 111
c. Minimum grade of “C” in MAT 104 or equivalent
d. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
e. Touch keyboarding skills recommended
ASSOCIATE IN APPLIED SCIENCE
CONCENTRATION: CRIMINAL JUSTICE - PRE-SERVICE

A minimum of 63 credits is required to complete this program.

Communication Skills (Group I) - 6 credit hours
ENG 111 (3) Freshman English Composition
SPE 101 (3) Fundamentals of Communication OR
    SPE 257 (3) Public Speaking

Science and Mathematics (Group II) - 6 credit hours
MAT 105 (3) Intermediate Algebra
SCI 200 (3) Science, Technology & Society

Social Sciences (Group III) - 3 credit hours
SSC 200 (3) The Social Sciences & Contemporary America

Humanities and Fine Arts (Group IV) - 3 credit hours
HUM 200 (3) Modernity & Culture

Applied Arts and Sciences (Group V) – 42 credit hours
CIS 100 (3) Introduction to Information Systems
CJS 200 (3) Intro to Law Enforcement and Criminal Justice
CJS 201 (3) Criminal Law for Police Officers
CJS 202 (3) Juvenile Law & Procedures
CJS 203 (3) Fundamentals of Supervision & Management in Criminal Justice
CJS 204 (3) Criminal Investigation
CJS 205 (3) Evidence and the Police Officer
CJS 215 (21) Police Academy

Health and Physical Education (Group VI) - 3 credit hours
PED 255 (3) Physical Training

@ PREREQUISITES

a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
b. Minimum grade of “C” in MAT 104 or equivalent
c. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
d. Touch keyboarding skills recommended
e. CJS 200
f. CJS 201
ASSOCIATE IN APPLIED SCIENCE
CONCENTRATION: EARLY CHILDHOOD EDUCATION

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 62 credits is required to complete this program.

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) – 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 101 (3) Basic Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCI 200 (3) Science, Technology &amp; Society</td>
<td>(b)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences (Group III) – 9 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200 (3) The Social Sciences &amp; Contemporary America Society OR</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>PSY 101 (3) Intro to Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY 212 (3) Developmental Psychology OR</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>PSY 281 (3) Behavior Modification</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) - 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200 (3) Modernity &amp; Culture Society</td>
<td>(b)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) - 36 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>ECE 101 (4) Intro to Early Childhood Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECE 112 (4) Infancy</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>ECE 113 (4) Early Childhood</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>ECE 114 (4) Interacting with Children, Parent/Adult Child Relations</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>ECE 201 (3) Guidance &amp; Implementation of Programs for Young Children</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>ECE 202 (3) Creative Development of the Child</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>ECE 206 (3) Parent, School &amp; Community Involvement</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>ECE 207 (4) Early Childhood Education Practicum</td>
<td>(g)</td>
<td></td>
</tr>
<tr>
<td>ECE 208 (4) Early Childhood Education Administration</td>
<td>(h)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective – 2-3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select ONE: ART 245, ECE 150, EDU 107, ENG 222, ENG 281, MUS 131</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All courses listed on this program guide must be completed with a minimum grade of “C”. ECE courses require students to show validation of NO evidence of Child Abuse or Neglect per Public Act 68 of 1993 by third week of class.

@ PREREQUISITES

a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
b. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
c. PSY 101
d. Touch keyboarding skills recommended
e. Corequisite: ECE 101
f. Corequisites: ECE 112 + 114 or 113 +114, and ENG 111 or permission of Instructor or Coordinator.
g. Prerequisites: ECE 101, 112, or 113 and 114. Corequisites: ECE 201, 202, 206, and ENG 111
h. Corequisites: ECE 112 + 114 or 113 +114, and ENG 111 or permission of Instructor or Coordinator.

A suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
Suggested Sequence of Courses

FIRST SEMESTER
ECE 101
ECE 112

SECOND SEMESTER
ECE 113
ECE 114

THIRD SEMESTER
ECE 201
ECE 202
ECE 206

FOURTH SEMESTER
ECE 207
ECE 208
ASSOCIATE IN APPLIED SCIENCE
CONCENTRATION: GENERAL TECHNOLOGY

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 62 credits is required to complete this program.

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 9 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required: ENG 111 (3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>Elective (3) Group I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR SPE 257 (3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required: Mathematics (104 or higher)</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>SCI 200 (3) Science, Technology, &amp; Society</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences (Group III) - 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required: SSC 200 (3) The Social Sciences &amp; Contemporary America</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) - 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required: HUM 200 (3) Modernity &amp; Culture</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) - 36 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required: CIS 100 (3) Introduction to Information Systems</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>Electives (33) Group V</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Electives - 5 credit hours                           |                |           |
| Electives (5) Groups I - VII                         |                |           |

@ PREREQUISITES

- Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- Minimum grade of "C" in MAT 101 OR Minimum grade of “C” in MAT 102 OR equivalent
- LEVEL I General Ed: CIS 100, MAT, ENG 111 and SPE 101-or-SPE 257
- Touch keyboarding skills recommended
A minimum of 66 credits is required to complete this program.

**Communication Skills (Group I) - 6 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>3</td>
<td>Freshman English Composition</td>
<td>(a)</td>
</tr>
<tr>
<td>SPE 101</td>
<td>3</td>
<td>Fundamentals of Communication OR</td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>3</td>
<td>Public Speaking</td>
<td></td>
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</tbody>
</table>

**Science and Mathematics (Group II) – 6 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 101</td>
<td>3</td>
<td>Basic Mathematics</td>
<td></td>
</tr>
<tr>
<td>SCI 200</td>
<td>3</td>
<td>Science, Technology &amp; Society</td>
<td>(b)</td>
</tr>
</tbody>
</table>

**Social Sciences (Group III) - 3 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200</td>
<td>3</td>
<td>The Social Sciences &amp; Contemporary America Society</td>
<td>(b)</td>
</tr>
</tbody>
</table>

**Humanities and Fine Arts (Group IV) - 42 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 101</td>
<td>3</td>
<td>World of Creativity I</td>
<td></td>
</tr>
<tr>
<td>HUM 102</td>
<td>3</td>
<td>World of Creativity II</td>
<td></td>
</tr>
<tr>
<td>ART 105</td>
<td>3</td>
<td>Drawing I - Introductory</td>
<td></td>
</tr>
<tr>
<td>ART 110</td>
<td>3</td>
<td>Basic Photography</td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>3</td>
<td>Design I</td>
<td></td>
</tr>
<tr>
<td>ART 205</td>
<td>3</td>
<td>Drawing II</td>
<td>(c)</td>
</tr>
<tr>
<td>ART 215</td>
<td>3</td>
<td>Design II</td>
<td>(d)</td>
</tr>
<tr>
<td>ART 130</td>
<td>3</td>
<td>Painting I</td>
<td></td>
</tr>
<tr>
<td>ART 135</td>
<td>3</td>
<td>Graphic Design I</td>
<td></td>
</tr>
<tr>
<td>ART 235</td>
<td>3</td>
<td>Graphic Design II</td>
<td>(e)</td>
</tr>
<tr>
<td>ART 236</td>
<td>3</td>
<td>Graphic Design III</td>
<td>(f)</td>
</tr>
<tr>
<td>ART 211</td>
<td>3</td>
<td>Page Layout I</td>
<td></td>
</tr>
<tr>
<td>ART 239</td>
<td>3</td>
<td>Page Layout II</td>
<td>(g)</td>
</tr>
<tr>
<td>ART 240</td>
<td>3</td>
<td>Studio Problems in Graphic Design</td>
<td>(h)</td>
</tr>
</tbody>
</table>

**Applied Arts and Sciences (Group V) - 3 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>Introduction to Information Systems</td>
<td>(i)</td>
</tr>
</tbody>
</table>

**Elective – 6 credit hours** Choose TWO from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 210</td>
<td>3</td>
<td>Illustration</td>
<td>(j)</td>
</tr>
<tr>
<td>ART 237</td>
<td>3</td>
<td>Photography II</td>
<td>(k)</td>
</tr>
<tr>
<td>ART 230</td>
<td>3</td>
<td>Painting II</td>
<td>(l)</td>
</tr>
<tr>
<td>ART 152</td>
<td>3</td>
<td>Introduction to Website Design OR</td>
<td></td>
</tr>
<tr>
<td>CIS 135</td>
<td>3</td>
<td>Introduction to Website Design</td>
<td>(m)</td>
</tr>
<tr>
<td>ART 137</td>
<td>3</td>
<td>Digital Photography</td>
<td>(n)</td>
</tr>
<tr>
<td>ART 206</td>
<td>3</td>
<td>Comic Book &amp; Graphic Novel Illustration</td>
<td>(c)</td>
</tr>
<tr>
<td>ART 247</td>
<td>3</td>
<td>Contemporary Photography</td>
<td>(o)</td>
</tr>
<tr>
<td>ART 252</td>
<td>3</td>
<td>Website Design II</td>
<td>(p)</td>
</tr>
<tr>
<td>ART 253</td>
<td>3</td>
<td>Flash Fundamentals</td>
<td>(m)</td>
</tr>
<tr>
<td>ART 254</td>
<td>3</td>
<td>Motion Graphics</td>
<td>(q)</td>
</tr>
<tr>
<td>ART 281</td>
<td>3</td>
<td>Internship I</td>
<td>(r)</td>
</tr>
<tr>
<td>BUS 231</td>
<td>3</td>
<td>Principles of Advertising</td>
<td></td>
</tr>
<tr>
<td>DRF 120</td>
<td>3</td>
<td>Introduction to AutoCAD</td>
<td></td>
</tr>
</tbody>
</table>

Prerequisites and suggested sequence on reverse (print)/page two (electronic)
**PREREQUISITES**

- Placement into ENG 111 or ENG 110 with a minimum grade of "C"
- Level I Gen Ed: CIS 100, MAT, ENG 111, and SPE 101 or SPE 257
- ART 105
- ART 115
- ART 135
- ART 235
- ART 211
- ART 110, 130, 205, 215, 236, 239
- Touch keyboarding skills recommended
- ART 255, ART 205
- ART 110
- ART 130
- CIS 100
- ART 110 or permission of instructor
- ART 110, 137
- ART 152 or CIS 135
- ART 253
- Permission of the Internship Coordinator

### Graphic Design ART Course Sequencing Schedule

**FIRST SEMESTER (Fall)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>3</td>
<td>Drawing I - Introductory</td>
</tr>
<tr>
<td>ART 115</td>
<td>3</td>
<td>Design I</td>
</tr>
<tr>
<td>ART 135</td>
<td>3</td>
<td>Graphic Design I</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER (Winter)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 205</td>
<td>3</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ART 215</td>
<td>3</td>
<td>Design II</td>
</tr>
<tr>
<td>ART 235</td>
<td>3</td>
<td>Graphic Design II</td>
</tr>
<tr>
<td>ART 211</td>
<td>3</td>
<td>Page Layout I</td>
</tr>
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</table>

**THIRD SEMESTER (Fall)**

<table>
<thead>
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<th>Course</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ART 110</td>
<td>3</td>
<td>Basic Photography</td>
</tr>
<tr>
<td>ART 130</td>
<td>3</td>
<td>Painting I</td>
</tr>
<tr>
<td>ART 236</td>
<td>3</td>
<td>Graphic Design III</td>
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<tr>
<td>ART 239</td>
<td>3</td>
<td>Page Layout II</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>Choose one elective from the list below</td>
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**FOURTH SEMESTER (Winter)**

<table>
<thead>
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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 240</td>
<td>3</td>
<td>Studio Problems in Graphic Design</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>Choose one elective from the list below</td>
</tr>
<tr>
<td>ART 210</td>
<td>3</td>
<td>Illustration</td>
</tr>
<tr>
<td>ART 237</td>
<td>3</td>
<td>Photography II</td>
</tr>
<tr>
<td>ART 230</td>
<td>3</td>
<td>Painting II</td>
</tr>
<tr>
<td>ART 152</td>
<td>3</td>
<td>Introduction to Website Design OR</td>
</tr>
<tr>
<td>CIS 135</td>
<td>3</td>
<td>Introduction to Website Design</td>
</tr>
<tr>
<td>ART 137</td>
<td>3</td>
<td>Digital Photography</td>
</tr>
<tr>
<td>ART 206</td>
<td>3</td>
<td>Comic Book &amp; Graphic Novel Illustration</td>
</tr>
<tr>
<td>ART 247</td>
<td>3</td>
<td>Contemporary Photography</td>
</tr>
<tr>
<td>ART 252</td>
<td>3</td>
<td>Website Design II</td>
</tr>
<tr>
<td>ART 253</td>
<td>3</td>
<td>Flash Fundamentals</td>
</tr>
<tr>
<td>ART 254</td>
<td>3</td>
<td>Motion Graphics</td>
</tr>
<tr>
<td>ART 281</td>
<td>3</td>
<td>Internship I</td>
</tr>
<tr>
<td>BUS 231</td>
<td>3</td>
<td>Principles of Advertising</td>
</tr>
<tr>
<td>DRF 120</td>
<td>3</td>
<td>Introduction to AutoCAD</td>
</tr>
</tbody>
</table>
The HIT Program is no longer accepting new students to the program.

ASSOCIATE IN APPLIED SCIENCE
CONCENTRATION: HEALTH INFORMATION TECHNOLOGY

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 67.5 credits is required to complete this program.

<table>
<thead>
<tr>
<th>Prerequisites to the Program – 7.5 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
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<tbody>
<tr>
<td>ALH 100 (2) Medical Terminology</td>
<td>(a)</td>
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<tr>
<td>BIO 135 (5.5) Human Anatomy and Physiology</td>
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</tr>
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<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 6 credits hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) - 9 credits hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 120 (3) Introduction to Human Diseases</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>MAT 105 (3) Intermediate Algebra</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>SCI 200 (3) Science, Technology &amp; Society</td>
<td>(e)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences (Group III) – 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 200 (3) The Social Sciences &amp; Contemporary America</td>
<td>(e)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) – 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 200 (3) Modernity &amp; Culture</td>
<td>(e)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) - 39 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>HIT 101 (2) Introduction to Health Information Technology</td>
<td>(g)</td>
<td></td>
</tr>
<tr>
<td>HIT 115 (3) Pharmacology for Health Information Management</td>
<td>(h)</td>
<td></td>
</tr>
<tr>
<td>HIT 150 (2) Health Information Technology II</td>
<td>(i)</td>
<td></td>
</tr>
<tr>
<td>HIT 201 (4) International Classification of Diseases – 10th Revision (ICD-10)</td>
<td>(j)</td>
<td></td>
</tr>
<tr>
<td>HIT 205 (3) Health Data Content and Structure</td>
<td>(k)</td>
<td></td>
</tr>
<tr>
<td>HIT 220 (3) Legal Aspects of Healthcare for Health Information Management</td>
<td>(m)</td>
<td></td>
</tr>
<tr>
<td>HIT 225 (3) Healthcare Statistics for Health Information Management</td>
<td>(n)</td>
<td></td>
</tr>
<tr>
<td>HIT 230 (3) Revenue Cycle Management</td>
<td>(o)</td>
<td></td>
</tr>
<tr>
<td>HIT 240 (3) Supervisory &amp; Administrative Practice for H.I.M.</td>
<td>(p)</td>
<td></td>
</tr>
<tr>
<td>HIT 260 (6) Internship (6 weeks) 240 hours</td>
<td>(q)</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
- All courses on the curriculum guide must be passed with a minimum grade of “C”.
- All courses may be repeated one time only, including withdrawals.
- Limited enrollment program. Student must be admitted to HIT program prior to registering for HIT courses.
- Criminal Background check with fingerprinting required before admission to the program. Random drug screening may be done during internship at student’s expense.

The list of pre-requisites and a suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
The HIT Program is no longer accepting new students to the program.

@ PREREQUISITES

- BIO 101 or successful completion of BIO 135 entrance exam
- Placement into ENG 111 or ENG 110 with a minimum grade of “C”.
- ALH 100 recommended
- MAT 104 with a minimum grade of “C” or placement in MAT 105
- Level I General Education courses: CIS 100, MAT, ENG 111 and either SPE 101 or SPE 257
- Touch keyboarding skills recommended
- Acceptance into the HIT program; ALH 100, BIO 135, both with minimum grade of “C”.
- BIO 120, HIT 101, both with a minimum grade of “C”.
- HIT 101, ENG 111, both with a minimum grade of “C”.
- Program Director approval; BIO 120, ALH 100, both with a minimum grade of “C”.
- HIT 150, with a minimum grade of “C”.
- HIT 115, HIT 201, both with a minimum grade of “C”.
- HIT 205, with a minimum grade of “C”.
- MAT 105, HIT 205, both with a minimum grade of “C”.
- HIT 205, HIT 215, both with a minimum grade of “C”.
- HIT 205, with a minimum grade of “C”.
- Completion of all courses in HIT program. **HUM 200, SSC 200 or SCI 200 may be taken before or concurrently

REQUIRED SEQUENCE (Unless Otherwise Noted)

FIRST SEMESTER
HIT 101 Introduction to Health Information Technology
BIO 120 Introduction to Human Diseases (Recommended this semester)
CIS 100 Introduction to Information Systems (Recommended this semester)

SECOND SEMESTER
HIT 115 Pharmacology for Health Information Management
HIT 150 Health Information Technology II
MAT 105 Intermediate Algebra (Recommended this semester)
HIT 201 International Classification of Diseases – 10th Revision (ICD-10)

THIRD SEMESTER
HIT 205 Health Data Content and Structure
HUM 200 Modernity & Culture (Recommended this semester)
SSC 200 The Social Sciences & Contemporary America (Recommended this semester)

FOURTH SEMESTER - 12 credit hours
HIT 220 Legal Aspects of Healthcare for Health Information Management
HIT 225 Healthcare Statistics for Health Information Management
HIT 230 Revenue Cycle Management
HIT 240 Supervisory & Administrative Practice for H.I.M.

FIFTH SEMESTER
HIT 260 Internship (6 weeks) 240 hours
SCI 200 Science, Technology & Society (Recommended this semester)
**ASSOCIATE IN APPLIED SCIENCE**

**CONCENTRATION: HEATING/REFRIGERATION/AIR CONDITIONING**

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 69 credits is required to complete this program.

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
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</thead>
<tbody>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
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</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) – 10-13 credit hours</th>
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<tbody>
<tr>
<td>SCI 200 (3) Science, Technology &amp; Society</td>
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</tr>
<tr>
<td>MAT 170 (3) Technical Mathematics II OR</td>
<td>(c)</td>
</tr>
<tr>
<td>MAT 124 (5) Precalculus *</td>
<td>(d)</td>
</tr>
<tr>
<td>PHY 103 (4) Applied Physics OR</td>
<td>(e)</td>
</tr>
<tr>
<td>PHY 105 (5) Introductory College Physics I *</td>
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</table>

<table>
<thead>
<tr>
<th>Social Sciences (Group III) - 3 credit hours</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SSC 200 (3) Social Sciences &amp; Contemporary America</td>
<td>(b)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (Group IV) - 3 credit hours</th>
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</thead>
<tbody>
<tr>
<td>HUM 200 (3) Modernity &amp; Culture</td>
<td>(b)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) - 47 credit hours</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td>(g)</td>
</tr>
<tr>
<td>DRF 120 (3) Introduction to AutoCAD</td>
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</tr>
<tr>
<td>HRA 102 (3) Refrigeration Fundamentals</td>
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<tr>
<td>HRA 104 (3) Residential Refrigeration</td>
<td>(h)</td>
</tr>
<tr>
<td>HRA 105 (3) Hydronics</td>
<td>(i)</td>
</tr>
<tr>
<td>HRA 106 (3) Heating Fundamentals</td>
<td>(j)</td>
</tr>
<tr>
<td>HRA 108 (3) Heating Systems</td>
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<tr>
<td>HRA 116 (3) Fundamentals of Electricity</td>
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<tr>
<td>HRA 198 (1) EPA Refrigerant Handler Certification</td>
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<tr>
<td>HRA 204 (3) Light Commercial Refrigeration</td>
<td>(h)</td>
</tr>
<tr>
<td>HRA 205 (2) Motors &amp; Controls</td>
<td>(k)</td>
</tr>
<tr>
<td>HRA 215 (3) HRA Controls</td>
<td>(k)</td>
</tr>
<tr>
<td>HRA 220 (2) Commercial Refrigeration Design</td>
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</tr>
<tr>
<td>HRA 223 (3) Residential HVAC Load Determination</td>
<td>(m)</td>
</tr>
<tr>
<td>HRA 225 (3) Residential HVAC Distribution/Design</td>
<td>(n)</td>
</tr>
<tr>
<td>HRA 240 (3) Advanced Commercial Refrigeration</td>
<td>(o)</td>
</tr>
<tr>
<td>HRA 285 (3) Co-op (Heating, Refrigeration &amp; Air Cond.)</td>
<td>(p)</td>
</tr>
</tbody>
</table>

* Recommended for students transferring to Ferris State University

**@PREREQUISITES**

a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”

b. LEVEL I Gen Ed: CIS 100, MAT, ENG 111 and SPE 101-or-SPE 257

c. Minimum grade of “C” in MAT 101 OR equivalent

d. Minimum grade of “C” in MAT 105 OR equivalent

e. Co requisite: MAT 104 or MAT 170

f. Co requisite: MAT 124 OR equivalent

g. Touch keyboarding skills recommended

h. HRA 102

i. HRA 106

j. HRA 106, HRA 116

k. HRA 116

l. Co requisite: HRA 204

m. HRA 108

n. Co requisite: HRA 223

o. HRA 104, HRA 116, HRA 204

p. Minimum of 12 credits in HRA

A suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
## HRA Course Sequencing Schedule

### Fast Track – Fall Start

(Day Classes)

**Fall Semester**
- HRA 116 (3) credits
- HRA 205 (2) credits
- HRA 106 (3) credits
- HRA 108 (3) credits
- HRA 223 (3) credits

**Total (17) credits**

**Winter Semester**
- HRA 105 (3) credits
- HRA 102 (3) credits
- HRA 104 (3) credits
- HRA 285 (3) credits
- HRA 204 (3) credits
- HRA 220 (2) credits
- HRA 198 (1) credits

**Total (18) credits**

**Spring Session**
- HRA 215 (3) credits
- HRA 240 (3) credits

**Total (6) credits**

### Fast Track – Winter Start

(Evening Classes)

**Winter Semester**
- HRA 116 (3) credits
- HRA 205 (2) credits
- HRA 102 (3) credits
- HRA 285 (3) credits
- HRA 104 (3) credits
- HRA 204 (3) credits

**Total (17) credits**

**Spring Session**
- HRA 198 (1) credits
- HRA 220 (2) credits
- HRA 106 (3) credits
- HRA 108 (3) credits
- HRA 105 (3) credits

**Total (12) credits**

**Fall Semester**
- HRA 223 (3) credits
- HRA 225 (3) credits
- HRA 215 (3) credits
- HRA 240 (3) credits

**Total (12) credits**
ASSOCIATE IN APPLIED SCIENCE
CONCENTRATION: MAGNETIC RESONANCE IMAGING

In Collaboration with Michigan Community College Virtual Learning Collaboration

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 68.5 credits is required to complete this program.

<table>
<thead>
<tr>
<th>Prerequisites to the Program – 19.5-22 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
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</thead>
<tbody>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>ALH 100 (2) Medical Terminology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 104 (3) Basic Algebra</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>RAD 110 (3) Radiation Physics OR</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>PHY 101 (3) Introductory Physics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 135 (5.5) Human Anatomy and Physiology OR</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>BIO 141 (4) Anatomy &amp; Physiology I AND</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>BIO 142 (4) Anatomy &amp; Physiology II</td>
<td>(g)</td>
<td></td>
</tr>
</tbody>
</table>

Communication Skills (Group I) – 3 credit hours
SPE 101 (3) Fundamentals of Communication OR
SPE 257 (3) Public Speaking

Science and Mathematics (Group II)
Met with Prerequisites

Social Sciences (Group III) – 6 credit hours
PSY 101 (3) Introduction to General Psychology
SSC 200 (3) The Social Sciences & Contemporary America

Humanities and Fine Arts (Group IV) – 3 credit hours
HUM 200 (3) Modernity & Culture

Applied Arts and Sciences (Group V) – 39 credit hours
MRI 200 (3) Professional Prospectus
MRI 260 (3) MRI Pre-Clinical Preparation
MRI 220 (3) Physics I
MRI 241 (3) Applied Sectional Anatomy
MRI 222 (3) MRI Physics II
MRI 230 (3) MRI Procedures and Pathophysiology I
MRI 261 (3) Clinical Practice I
MRI 232 (3) MRI Procedures and Pathophysiology II
MRI 201 (3) Computer Applications in Medical Imaging
MRI 262 (3) Clinical Practice II
MRI 263 (3) Clinical Practice III
MRI 240 (3) Image Analysis
MRI 295 (3) MRI Certification Exam Preparation

NOTES:
• All MRI courses are offered through MCCLVC.
• Acceptance into the MRI program is required prior to taking MRI courses.
• MRI courses from previous semesters serve as prerequisite courses.
• All courses in a semester must be passed with a minimum grade of “C” to progress to the next semester.
• BIO 135 (or BIO 141 & BIO 142) must be passed with a minimum grade of “B-”.
• If students have taken science courses prior to admission into a specific program, the courses must have been completed within five (5) years of the date the student formally begins the program or the student must have worked in the field of Radiology during at least half of the interim.
• Prerequisites for this program may be repeated only once.

A suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
@ PREREQUISITES

a. Touch keyboarding skills recommended
b. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
c. Minimum grade of “C” in MAT 101 or a minimum grade of “C” in MAT 102 OR equivalent
d. Admission to the Radiography program
e. BIO 101 or successful completion of BIO 135 entrance exam.
f. BIO 101 or equivalent
g. LEVEL I General Ed: CIS 100, MAT, ENG 111 and SPE 101-or- SPE 257
h. Admission to the MRI program
i. MRI 200
j. MRI 260, MRI 220, MRI 221
k. MRI 222, MRI 230, MRI 261
l. MRI 232, MRI 201, MRI 262

REQUIRED SEQUENCE (Unless Otherwise Noted)

FIRST SEMESTER
SPE 101 (3) Fundamentals of Communication OR
SPE 257 (3) Public Speaking (Recommended this semester)
PSY 101 (3) Introduction to General Psychology (Recommended this semester)
MRI 200 (3) Professional Prospectus
MRI 260 (3) MRI Pre-Clinical Preparation

SECOND SEMESTER
SSC 200 (3) The Social Sciences & Contemporary America (Recommended this semester) OR
HUM 200 (3) Modernity & Culture (Recommended this semester)
MRI 220 (3) Physics I
MRI 230 (3) MRI Procedures and Pathophysiology I
MRI 241 (3) Applied Sectional Anatomy
MRI 261 (3) Clinical Practice I

THIRD SEMESTER
SSC 200 (3) The Social Sciences & Contemporary America (Recommended this semester) OR
HUM 200 (3) Modernity & Culture (Recommended this semester)
MRI 222 (3) MRI Physics II
MRI 232 (3) MRI Procedures and Pathophysiology II
MRI 201 (3) Computer Applications in Medical Imaging
MRI 262 (3) Clinical Practice II

FIFTH SEMESTER (Spring) - 9 credit hours
MRI 240 (3) Image Analysis
MRI 263 (3) Clinical Practice III
MRI 295 (3) MRI Certification Exam Preparation
### Prerequisites to the Program – 27 credit hours

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Freshman English Composition</td>
<td>(a)</td>
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<tr>
<td>SPE 101</td>
<td>Fundamentals of Communication OR</td>
<td></td>
<td></td>
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<tr>
<td>SPE 257</td>
<td>Public Speaking</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>BIO 131</td>
<td>Basic Anatomy &amp; Physiology</td>
<td>(c)</td>
<td></td>
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<tr>
<td>MAT 104</td>
<td>Basic Algebra</td>
<td>(d)</td>
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<tr>
<td>PSY 101</td>
<td>Intro to General Psychology</td>
<td>(e)</td>
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<tr>
<td>CIS 100</td>
<td>Introduction to Information Systems</td>
<td>(f)</td>
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<tr>
<td>ALH 100</td>
<td>Medical Terminology</td>
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<tr>
<td>BIS 127</td>
<td>Applied Office Accounting</td>
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<td>BIS 164</td>
<td>Business Communications</td>
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### Communication Skills (Group I)

Met with Prerequisites

### Science and Mathematics (Group II) - 3 credits hours

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<tbody>
<tr>
<td>SCI 200</td>
<td>Science, Technology &amp; Society</td>
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### Social Sciences (Group III) – 6 credit hours

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<tr>
<td>PSY 212</td>
<td>Developmental Psychology</td>
<td>(h)</td>
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<tr>
<td>Elective</td>
<td>Not PSY; SOC 101 Recommended</td>
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### Humanities and Fine Arts (Group IV) – 3 credit hours

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<th>Course Title</th>
<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>HUM 200</td>
<td>Modernity &amp; Culture</td>
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### Applied Arts and Sciences (Group V) - 26 credit hours

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<tbody>
<tr>
<td>ALH 112</td>
<td>Insurance Billing</td>
<td>(i)</td>
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<tr>
<td>ALH 220</td>
<td>Medical Law and Ethics</td>
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<tr>
<td>BIS 255</td>
<td>Procedures for the Medical Office</td>
<td>(j)</td>
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<tr>
<td>*ALH 212(3)</td>
<td>Clinical Procedures I</td>
<td>(k)</td>
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<tr>
<td>*ALH 213(3)</td>
<td>Pharmacology for the Medical Assistant</td>
<td>(l)</td>
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<tr>
<td>*ALH 230(4)</td>
<td>Laboratory Procedures for the Medical Office</td>
<td>(m)</td>
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<td>*ALH 214(3)</td>
<td>Clinical Procedures II</td>
<td>(n)</td>
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<tr>
<td>*ALH 250(4)</td>
<td>Medical Assistant Office Externship</td>
<td>(o)</td>
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### NOTES:

- All courses marked with an asterisk (*) are Restricted Enrollment Classes. The student must get a signature from the Program Director or the Associate Dean of Health Sciences to be granted permission to take these courses.
- All prerequisite courses must be passed with a minimum grade of “C” to be eligible for the MA program.
- Completion of BIO 131 must be taken within five years of being accepted into ALH 212.
- A cumulative GPA of 2.5 must be maintained in all program-specific courses (Restricted Enrollment Classes) in order to progress in the program.
- Prerequisites may be repeated only once, which includes withdrawals.

Pre-requisite and a sequence of courses is presented on reverse (printed version) or page two (digital version).
@ PREREQUISITES

a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
b. BIO 101 with a minimum grade of “C”
c. Minimum grade of “C” in MAT 101 or in MAT 102 equivalent
d. Touch keyboarding skills recommended
   MAT 104 for this degree
f. Recommended concurrent enrollment in BIS 140 OR knowledge of correct keyboarding techniques
   LEVEL I Gen Ed: CIS 100, MAT, ENG 111 & SPE 101 OR SPE 257
h. PSY 101
i. Prerequisite: ALH 100
   CIS 100 OR BIS 140
   Admission to MA Program. Corequisite: ALH 213
   Admission to MA Program. Corequisite: ALH 212
   ALH 212 & ALH 213. Corequisite: ALH 214
j. ALH 212 & ALH 213. Corequisite: ALH 230
k. ALH 212, ALH 213, ALH 214 & ALH 213

REQUIRED SEQUENCE

FALL SEMESTER
ALH 212  Clinical Procedures I
ALH 213  Pharmacology for the Medical Assistant

WINTER SEMESTER
ALH 230  Laboratory Procedures for the Medical Office
ALH 214  Clinical Procedures II

SPRING SEMESTER
ALH 250  Medical Assistant Office Externship
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 72.63 credits is required to complete this program.

### Prerequisites to the Program – 14.5-17 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
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<tr>
<td>PTA 101</td>
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<td>Orientation to Physical Therapy</td>
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<td>ALH 100</td>
<td>(2)</td>
<td>Medical Terminology</td>
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<tr>
<td>BIO 135</td>
<td>(5.5)</td>
<td>Applied Anatomy &amp; Physiology OR</td>
<td>(a)</td>
<td></td>
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<td>BIO 141</td>
<td>(4)</td>
<td>Anatomy &amp; Physiology I AND</td>
<td>(b)</td>
<td></td>
</tr>
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<td>BIO 142</td>
<td>(4)</td>
<td>Anatomy &amp; Physiology II</td>
<td>(c)</td>
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<tr>
<td>ENG 111</td>
<td>(3)</td>
<td>Freshman English Composition</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>SPE 101</td>
<td>(3)</td>
<td>Fundamentals of Communication OR</td>
<td>(e)</td>
<td></td>
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<tr>
<td>SPE 257</td>
<td>(3)</td>
<td>Public Speaking</td>
<td>(f)</td>
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### Other Program Requirements – 18 credit hours

The other program requirements must be passed with a cumulative GPA of “B-” (2.7) or higher with a minimum grade of “C” in each course and may be taken before or while PTA courses are in progress.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
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<tbody>
<tr>
<td>CIS 100</td>
<td>(3)</td>
<td>Introduction to Information Systems</td>
<td>(g)</td>
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<td>MAT 104</td>
<td>(3)</td>
<td>Basic Algebra</td>
<td>(h)</td>
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<td>PHY 101</td>
<td>(3)</td>
<td>Introductory Physics</td>
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<td>PSY 101</td>
<td>(3)</td>
<td>Intro to General Psychology</td>
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<td>HUM 200</td>
<td>(3)</td>
<td>Modernity &amp; Culture</td>
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<tr>
<td>SSC 200</td>
<td>(3)</td>
<td>The Social Sciences &amp; Contemp. America</td>
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### First Semester – 8.5 credits (Admission to the program required before taking PTA courses)

<table>
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<tr>
<td>PTA 115</td>
<td>(1.5)</td>
<td>Clinical Kinesiology</td>
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<tr>
<td>PTA 116</td>
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<td>Clinical Kinesiology Lab</td>
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<td>PTA 105</td>
<td>(1)</td>
<td>Modalities I</td>
<td>(l)</td>
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<td>PTA 106</td>
<td>(2)</td>
<td>Modalities I Lab</td>
<td>(m)</td>
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<td>PTA 110</td>
<td>(1)</td>
<td>Therapeutic Exercise</td>
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<td>PTA 111</td>
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<td>Therapeutic Exercise Lab</td>
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### Second Semester – 12.3 credits

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<tr>
<td>PTA 125</td>
<td>(1)</td>
<td>Measurement Techniques</td>
<td>(p)</td>
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<td>PTA 126</td>
<td>(2)</td>
<td>Measurement Techniques Lab</td>
<td>(q)</td>
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<td>PTA 130</td>
<td>(2)</td>
<td>Advanced Therapeutic Exercise</td>
<td>(r)</td>
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<td>PTA 131</td>
<td>(2)</td>
<td>Advanced Therapeutic Exercise Lab</td>
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<td>PTA 140</td>
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### Third Semester – 7.33 credits

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<tbody>
<tr>
<td>PTA 205</td>
<td>(2)</td>
<td>Modalities II</td>
<td>(u)</td>
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<tr>
<td>PTA 206</td>
<td>(1.33)</td>
<td>Modalities II Lab</td>
<td>(v)</td>
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<tr>
<td>PTA 207</td>
<td>(2)</td>
<td>Rehabilitation of Path &amp; Neuro Conditions</td>
<td>(w)</td>
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<tr>
<td>PTA 208</td>
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<td>Rehabilitation Techniques Lab</td>
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### Fourth Semester – 12 credits

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<th>Prerequisites</th>
<th>Completed</th>
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<tr>
<td>PTA 210</td>
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<td>Clinical Forum</td>
<td>(y)</td>
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<td>PTA 240</td>
<td>(9)</td>
<td>Clinic II</td>
<td>(z)</td>
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</table>

A list of prerequisites is presented on reverse (printed version) or page two (digital version).
Notes:

Prerequisite:
- The following courses must each be passed with a minimum grade of “B-” (2.7) and may be repeated only once: BIO 135 or (BIO 141 and BIO 142), ALH 100, ENG 111, SPE 101 or SPE 257 and PTA 101.
- BIO 135 or (BIO 141 and BIO 142) must be taken within 5 years of beginning the Physical Therapist Assistant (PTA) Program and may be repeated only once.

Other Program Requirements:
- The other program requirements must be passed with a cumulative GPA of “B-” (2.7) or higher with a minimum grade of “C” in each course and may be taken before or while PTA courses are in progress.

PTA Courses:
- Admission to the PTA Program is required before taking all PTA Courses with the exception of PTA 101 which is a prerequisite course.
- Students must pass each PTA course with a minimum grade of “B-” (2.7); each course may be repeated only once.

Notes:
- Student must finish their Associates Degree in Applied Science requirements before receiving their Physical Therapist Assistant Certificate.
- The Physical Therapist Assistant Program at Mid Michigan Community College has been granted Accreditation by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (1111 North Fairfax Street, Alexandria, VA 22314; phone (703) 706-3245; accreditation@apta.org).

@ PREREQUISITES

a. BIO 101 with a minimum grade of “C” or successful completion of BIO 135 entrance exam.
b. BIO 101 with a minimum grade of “C”
c. BIO 141
d. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
e. Touch keyboarding skills recommended
f. Minimum grade of “C” in MAT 101 or equivalent
g. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or SPE 257)
h. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or SPE 257)
i. Admission to Program; Corequisites: PTA 105, 106, 110, 111, 116
j. Admission to Program; Corequisites: PTA 105, 106, 110, 111, 115
k. Admission to Program; Corequisites: PTA 106, 110, 111, 115, 116
l. Admission to Program; Corequisites: PTA 105, 110, 111, 115, 116
m. Admission to Program; Corequisites: PTA 105, 106, 111, 115, 116
n. Admission to Program; Corequisites: PTA 105, 106, 110, 115, 116
o. PTA 105, 106, 110, 111, 115, 116; Corequisites: PTA 126, 130, 131, 140
p. PTA 105, 106, 110, 111, 115, 116; Corequisites: PTA 125, 130, 131, 140
q. PTA 105, 106, 110, 111, 115, 116; Corequisites: PTA 125, 126, 131, 140
r. PTA 105, 106, 110, 111, 115, 116; Corequisites: PTA 125, 126, 130, 140
s. PTA 105, 106, 110, 111, 115, 116 and obtain/keep a current CPR Certificate for the Health Care Provider or an AED/CPR Certificate for the Professional Rescuer; Corequisites: PTA 125, 126, 130, 131
t. PTA 125, 126, 130, 131, 140; Corequisites: PTA 206, 207, 208
u. PTA 125, 126, 130, 131, 140; Corequisites: PTA 205, 207, 208
v. PTA 125, 126, 130, 131, 140; Corequisites: PTA 205, 206, 208
w. PTA 125, 126, 130, 131, 140; Corequisites: PTA 205, 206, 207
x. PTA 205, 206, 207, 208; Corequisite: PTA 240
y. PTA 205, 206, 207, 208 and a current CPR Certificate for the Health Care Provider or an AED/CPR Certificate for the Professional Rescuer; Corequisite: PTA 210
# ASSOCIATE IN APPLIED SCIENCE
## CONCENTRATION: RADIOGRAPHY

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC. A minimum of 83 credits is required to complete this program.

## Prerequisites to the Program – 19 credit hours

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<td>Anatomy &amp; Physiology I</td>
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<td>ALH 100</td>
<td>Medical Terminology</td>
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<td>CHM 105</td>
<td>Introductory Chemistry</td>
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<tr>
<td>CIS 100</td>
<td>Introduction to Information Systems</td>
<td>(c)</td>
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<tr>
<td>ENG 111</td>
<td>Freshman English Composition</td>
<td>(d)</td>
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<tr>
<td>MAT 104</td>
<td>Basic Algebra</td>
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## Communication Skills (Group I) – 3 credit hours

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<td>SPE 257</td>
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## Science and Mathematics (Group II) – 5 credit hours

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<td>BIO 110</td>
<td>Concepts in Microbiology</td>
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## Social Sciences (Group III) – 6 credit hours

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<tr>
<td>PSY 101</td>
<td>Introduction to General Psychology</td>
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<tr>
<td>SSC 200</td>
<td>The Social Sciences &amp; Contemporary America</td>
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## Humanities and Fine Arts (Group IV) – 3 credit hours

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## Applied Arts and Sciences (Group V) - 47 credit hours

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<tr>
<td>RAD 100</td>
<td>Introduction to Radiologic Technology</td>
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<td>RAD 110</td>
<td>Radiation Physics</td>
<td>(h)</td>
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<td>RAD 115</td>
<td>Principles of Radiographic Exposure</td>
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<tr>
<td>RAD 130</td>
<td>Radiographic Positioning I</td>
<td>(j)</td>
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<td>RAD 175</td>
<td>Radiographic Positioning II</td>
<td>(k)</td>
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<td>RAD 200</td>
<td>Clinical Education I</td>
<td>(l)</td>
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<tr>
<td>RAD 201</td>
<td>Clinical Issues in Radiography I</td>
<td>(m)</td>
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<td>RAD 215</td>
<td>Radiologic Techniques I</td>
<td>(m)</td>
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<td>RAD 217</td>
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<td>RAD 221</td>
<td>Clinical Issues in Radiography II</td>
<td>(p)</td>
<td></td>
</tr>
<tr>
<td>RAD 225</td>
<td>Clinical Education III</td>
<td>(q)</td>
<td></td>
</tr>
<tr>
<td>RAD 226</td>
<td>Clinical Issues in Radiography III</td>
<td>(r)</td>
<td></td>
</tr>
<tr>
<td>RAD 230</td>
<td>Radiographic Quality Assurance</td>
<td>(s)</td>
<td></td>
</tr>
</tbody>
</table>

## NOTES:
- All courses in a semester must be passed with a minimum grade of “C” to progress to the next semester.
- BIO 141 & BIO 142 must be passed with a minimum grade of “B-“.
- If students have taken science courses prior to admission into a specific health program, the courses must have been completed within five (5) years of the date the student formally begins the program.
- Prerequisites for this program may be repeated only once.

The list of prerequisites and a suggested sequence of courses is presented on reverse (printed version) or page two (digital version).
@ PREREQUISITES

- BIO 101 with a minimum grade of “C”
- Corequisite: MAT 104 or equivalent
- Touch keyboarding skills recommended
- Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- Minimum grade of “C” in MAT 101 or a minimum grade of “C” in MAT 102 OR equivalent
- BIO 141
- LEVEL I General Education: CIS 100, MAT, ENG 111 and SPE 101 OR SPE 257
- Admission to the program
- Successful completion of all first semester RAD courses
- Corequisite: RAD 115
- Successful completion of all second semester RAD and science courses
- Successful completion of all first year requirements. Corequisite: RAD 201, RAD 215
- RAD 175. Corequisite: RAD 200
- RAD 200, RAD 201, RAD 215. Corequisite: RAD 220, RAD 221
- RAD 215
- RAD 200, RAD 201. Corequisite: RAD 220, RAD 217
- RAD 217, RAD 220
- RAD 220, RAD 221. Corequisite: RAD 225
- RAD 220. Corequisite: RAD 225

REQUIRED SEQUENCE (Unless Otherwise Noted)

FIRST SEMESTER
- BIO 142 Anatomy & Physiology II (Recommended this Semester)
- RAD 100 Introduction to Radiologic Technology
- RAD 110 Radiation Physics
- SPE 101 Fundamentals of Communication OR
  SPE 257 Public Speaking (Recommended this Semester)

SECOND SEMESTER
- PSY 101 Introduction of General Psychology (Recommended this Semester)
- RAD 115 Principles of Radiographic Exposure
- RAD 130 Radiographic Positioning I
- HUM 200 Modernity & Culture
- SSC 200 The Social Sciences & Contemporary America

THIRD SEMESTER
- RAD 175 Radiographic Positioning II

FOURTH SEMESTER
- BIO 110 Concepts in Microbiology
- RAD 200 Clinical Education I
- RAD 201 Clinical Issues in Radiography I
- RAD 215 Radiologic Techniques I

FIFTH SEMESTER
- RAD 217 Radiologic Techniques II
- RAD 220 Clinical Education II
- RAD 221 Clinical Issues in Radiography II

SIXTH SEMESTER
- RAD 225 Clinical Education III
- RAD 226 Clinical Issues in Radiography III
- RAD 230 Radiographic Quality Assurance
Prerequisites to apply to the Nursing Program: Completion of Group I, Group II, and Group V courses

**Communication Skills (Group I) - 6 credit hours**

- ENG 111 (3) Freshman English Composition
- SPE 101 (3) Fundamentals of Communication OR SPE 257 (3) Public Speaking

**Science and Mathematics (Group II) – 19 credit hours**

- BIO 141 (4) Anatomy & Physiology I
- BIO 142 (4) Anatomy & Physiology II
- BIO 210 (4) Microbiology
- CHM 106 (4) Organic & Biochemistry for Allied Health
- MAT 104 (3) Basic Algebra

**Social Sciences (Group III) - 3 credit hours**

- SSC 200 (3) The Social Sciences & Contemporary America

**Humanities and Fine Arts (Group IV) - 3 credit hours**

- HUM 200 (3) Modernity & Culture

**Applied Arts and Sciences (Group V) - 61 credit hours**

- ALH 100 (2) Medical Terminology
- CIS 100 (3) Introduction to Information Systems

**Level I – 31 credit hours**

- NUR 121 (6) Fundamentals of Nursing
- NUR 124 (5) Nursing Clinical I
- NUR 150 (3) Pharmacology
- NUR 125 (5) Care of Adult I
- NUR 127 (4) Maternal/Child
- NUR 128 (4) Nursing Clinical II
- NUR 130 (3) Nursing Clinical III
- NUR 134 (1) Trends in Leadership

**Level II – 25 credit hours**

- NUR 221 (2.5) Family-Centered
- NUR 222 (2.5) Family-Centered: Clinical IV
- NUR 223 (2.5) Mental Health
- NUR 224 (2.5) Mental Health: Clinical IV
- NUR 225 (5) Care of Adult II
- NUR 226 (5) Nursing Clinical V
- NUR 227 (2) Leadership
- NUR 228 (3) Preceptorship: Clinical VI

**Nursing Readmission Courses**

- NUR 132 (1) Clinical Practicum VI
- NUR 133 (1) Transition for Advanced Standing Nurses

The list of prerequisites the sequence of courses is presented on reverse and following page (printed version) or pages two and three (digital version).
NOTE: All NUR courses in a semester must be passed with a minimum grade of “C” to progress to the next semester. BIO 141 & BIO 142 courses must be passed with a minimum grade of “B” to enter the program. BIO 141 & BIO 142 courses must also be taken at the same institution. If students have taken BIO 141 & BIO 142 courses prior to admission to the Nursing Program, the courses must have been completed within five (5) years of the date the student formally begins the program. Prerequisites may be repeated only once, which includes withdrawals.

NOTE: Admissions to the MMCC Nursing Program is based on a Selective Admission Process. For further information contact the Nursing and Health Technology Department. Final acceptance into the Nursing Program is based on results of a criminal background check.

NOTE: All NUR courses require a signature on the registration form from the Director of Nursing. Entry level students will receive this form at the orientation scheduled for incoming nursing students.

@ PREREQUISITES

a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
b. BIO 101 or equivalent
c. BIO 141
d. BIO 101 OR a college course equivalent to BIO 101 OR a minimum grade of “B”, within the past 3 years, in a High School Advanced Placement Biology course.
e. Proven competency in basic chemistry by earning a minimum grade of “C” in CHM 105 (or an equivalent college chemistry course), earning a minimum grade of “B” or better in a High School chemistry course (within the last 3 years), or with permission from the instructor
f. Minimum grade of “C” in MAT 101 or minimum grade of “C” in MAT 102 OR equivalent
g. Level I General Ed: CIS 100, MAT, ENG 111 and SPE 101 or SPE 257
h. Level I General Ed: CIS 100, MAT, ENG 111 and SPE 101 or SPE 257
i. Touch keyboarding skills recommended
j. Admission to Level I of the program, Corequisite: NUR 124, NUR 150
k. Admission to Level I of the program, Corequisite: NUR 121, NUR 150
l. Admission to Level I of the program, Corequisite: NUR 121, NUR 124 unless previously passed.
m. NUR 121, NUR 124, NUR 150, Corequisite: NUR 128
n. NUR 121, NUR 124, NUR 150, Corequisite: None
o. NUR 121, NUR 124, NUR 150, Corequisite: NUR 125
p. NUR 121, NUR 124, NUR 150, NUR 125, NUR 127, NUR 128, Corequisite: NUR 134
q. NUR 121, NUR 124, NUR 150, NUR 125, NUR 127, NUR 128, Corequisite: NUR 130
r. Admission to Level II of the Program, Corequisite: NUR 222
s. Admission to Level II of the Program, Corequisite: NUR 221
r. Admission to Level II of the Program, Corequisite: NUR 224
u. Admission to Level II of the Program, Corequisite: NUR 223
v. Admission to Level II of the Program, Corequisite: NUR 226, NUR 227
w. Admission to Level II of the Program, Corequisite: NUR 225, NUR 227
x. NUR 221, NUR 222, NUR 223, NUR 224, Corequisite: NUR 225, NUR 226
y. Successful completion of all NUR courses, HUM 200, SSC 200, Corequisite: None
z. Successful completion of NUR 121, NUR 124, Corequisites: NUR 150
aa. Current LPN license
# Laddered Nursing Course Sequencing Schedule

<table>
<thead>
<tr>
<th>FALL COHORT</th>
<th>WINTER COHORT</th>
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<tbody>
<tr>
<td><strong>Level I-</strong></td>
<td><strong>Level I-</strong></td>
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<tr>
<td><strong>Fall Semester:</strong></td>
<td><strong>Winter Semester:</strong></td>
</tr>
<tr>
<td>NUR 121: Fundamentals of Nursing</td>
<td>NUR 121: Fundamentals of Nursing</td>
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<td>NUR 124: Nursing Clinical I</td>
<td>NUR 124: Nursing Clinical I</td>
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<td>NUR 150: Pharmacology</td>
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<th>Spring Semester:</th>
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<tbody>
<tr>
<td>NUR 125: Care of Adult I</td>
<td>NUR 125: Care of Adult I</td>
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<tr>
<td>NUR 128: Nursing Clinical II</td>
<td>NUR 128: Nursing Clinical II</td>
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<td>NUR 127: Maternal/Child</td>
<td>NUR 127: Maternal/Child</td>
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<th>Spring Semester:</th>
<th>Fall Semester:</th>
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<tbody>
<tr>
<td>NUR 130: Nursing Clinical III</td>
<td>NUR 127: Maternal/Child</td>
</tr>
<tr>
<td>NUR 134: Trends in Leadership</td>
<td>NUR 130: Nursing Clinical III</td>
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<tr>
<td>Total (4) credits</td>
<td>NUR 134: Trends in Leadership</td>
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<td>SSC 200 (3) credits (Recommended this semester)</td>
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<thead>
<tr>
<th><strong>Level II-</strong></th>
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<tr>
<td><strong>Fall Semester:</strong></td>
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<td>NUR 221: Family Centered</td>
<td>NUR 221: Family Centered</td>
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<td>NUR 222: Family Centered: Clinical IV</td>
<td>NUR 222: Family Centered: Clinical IV</td>
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<tr>
<td>NUR 223: Mental Health</td>
<td>NUR 223: Mental Health</td>
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<tr>
<td>NUR 224: Mental Health: Clinical IV</td>
<td>NUR 224: Mental Health: Clinical IV</td>
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<td>NUR 225: Care of Adult II</td>
<td>NUR 225: Care of Adult II</td>
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<tr>
<td>NUR 226: Nursing Clinical V</td>
<td>NUR 226: Nursing Clinical V</td>
</tr>
<tr>
<td>NUR 227: Leadership</td>
<td>NUR 227: Leadership</td>
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<td>Total (12) credits</td>
<td>Total (12) credits</td>
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<tr>
<td>HUM 200 (3) credits (Recommended this semester)</td>
<td>HUM 200 (3) credits (Recommended this semester)</td>
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<th>Winter Semester:</th>
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<tbody>
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<td>NUR 228: Preceptorship: Clinical VI</td>
<td>NUR 228: Preceptorship: Clinical VI</td>
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<tr>
<td>Total (3) credits</td>
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</tbody>
</table>
### EFFECTIVE FALL 2013

#### ASSOCIATE DEGREE IN NURSING

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 79 credits is required to complete this program.

**Prerequisites to apply to the Nursing Program: Completion of Group I and Group II courses**

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
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<tbody>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
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</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
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<tr>
<td>SPE 257 (3) Public Speaking</td>
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</table>

| Science and Mathematics (Group II) - 15 credit hours | | |
|------------------------------------------------------|---|
| BIO 141 (4) Anatomy & Physiology I                   | (b) |
| BIO 142 (4) Anatomy & Physiology II                  | (c) |
| BIO 210 (4) Microbiology                            | (d) |
| MAT 104 (3) Basic Algebra                           | (e) |

<table>
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<tr>
<th>Social Sciences (Group III) - 3 credit hours</th>
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<tbody>
<tr>
<td>SSC 200 (3) The Social Sciences &amp; Contemporary America</td>
<td>(f)</td>
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<tr>
<th>Humanities and Fine Arts (Group IV) - 3 credit hours</th>
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<tbody>
<tr>
<td>HUM 200 (3) Modernity &amp; Culture</td>
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**Highly Recommended Group - 6 credit hours**

<table>
<thead>
<tr>
<th>Applied Arts &amp; Sciences (Group V) - 52 credit hours</th>
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<tbody>
<tr>
<td>ALH 100 (2) Medical Terminology</td>
<td>(h)</td>
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<td>*CHM 106 (4) Organic &amp; Biochemistry for Allied Health</td>
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<table>
<thead>
<tr>
<th>Nursing Readmission Courses</th>
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<tr>
<td>NUR 132 (1) Clinical Practicum VI</td>
<td>(x)</td>
</tr>
<tr>
<td>NUR 133 (1) Transition for Advanced Standing Nurses</td>
<td>(y)</td>
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</tbody>
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60
*NOTE: CHM 105 will be awarded points as part of the Highly Recommended list in the selective admission process until 2014FA. This will allow students who had taken CHM 105 as a prerequisite for CHM 106 to earn additional points for one year.

NOTE: All NUR courses in a semester must be passed with a minimum grade of “C” to progress to the next semester. BIO 141 & BIO 142 courses must be passed with a minimum grade of “B-” to enter the program. BIO 141 & BIO 142 courses must also be taken at the same institution. If students have taken BIO 141 & BIO 142 courses prior to admission to the Nursing Program, the courses must have been completed within five (5) years of the date the student formally begins the Nursing Program. Prerequisites may be repeated only once, which includes withdrawals.

NOTE: Admissions to the MMCC Nursing Program is based on a Selective Admission Process. Highly Recommended Courses will be awarded additional bonus points toward overall admission score. For further information contact the Nursing and Health Technology Department. Final acceptance into the nursing program is based on results of a criminal background check.

NOTE: All NUR courses require a signature on the registration form from the Director of Nursing. Entry level students will receive this form at the orientation scheduled for incoming nursing students.

@ PREREQUISITES

a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”

b. BIO 101 or equivalent

c. BIO 141

d. BIO 101 OR a college course equivalent to BIO 101 OR a minimum grade of “B”, within the past 3 years, in a High School Advanced Placement Biology course.

e. Minimum grade of “C” in MAT 101 or minimum grade of “C” in MAT 102 OR equivalent

f. Level I General Ed: CIS 100 OR NUR.121, MAT, ENG 111, and SPE 101 or SPE 257

g. Level I General Ed: CIS 100 OR NUR.121, MAT, ENG 111, and SPE 101 or SPE 257

h. Proven competency in basic chemistry by earning a minimum grade of “C” in CHM 105 (or an equivalent college chemistry course), earning a minimum grade of “B” or better in a High School chemistry course (within the last 3 years), or with permission from the instructor

i. Admission to the Nursing Program, Corequisites: NUR 124, NUR 150, NUR 151

j. Admission to the Nursing Program, Corequisites: NUR 121, NUR 150, NUR 151

k. Admission to the Nursing Program, Corequisites: NUR 121, NUR 124, NUR 151

l. Admission to the Nursing Program, Corequisites: NUR 121, NUR 124, NUR 150

m. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, Corequisites: NUR 125, NUR 128

n. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, Corequisites: NUR 152, NUR 128

o. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, Corequisites: NUR 125, NUR 152

p. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, NUR 152, NUR 128, Winter Cohort must also successfully complete: NUR 225, NUR 226, NUR 227, Corequisites: NUR 222

q. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, NUR 152, NUR 128, Winter Cohort must also successfully complete: NUR 225, NUR 226, NUR 227, Corequisites: NUR 221

r. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, NUR 152, NUR 128, Winter Cohort must also successfully complete: NUR 225, NUR 226, NUR 227, Corequisites: NUR 224

s. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, NUR 152, NUR 128, Winter Cohort must also successfully complete: NUR 225, NUR 226, NUR 227, Corequisites: NUR 223

T. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, NUR 152, NUR 128, Fall Cohort must also successfully complete: NUR 221, NUR 222, NUR 223, NUR 224, Corequisites: NUR 226, NUR 227

u. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, NUR 152, NUR 128, Fall Cohort must also successfully complete: NUR 221, NUR 222, NUR 223, NUR 224, Corequisites: NUR 225, NUR 227

v. Successful completion of NUR 121, NUR 124, NUR 150, NUR 151, NUR 152, NUR 128, Fall Cohort must also successfully complete: NUR 221, NUR 222, NUR 223, NUR 224, Corequisites: NUR 225, NUR 226

w. Successful completion of all NUR courses, HUM 200, SSC 200, Corequisites: None

x. Successful completion of NUR 121, NUR 124, Corequisites: NUR 150

y. Current LPN license
### Associate Degree in Nursing Required Course Sequencing Schedule

<table>
<thead>
<tr>
<th>FALL COHORT</th>
<th>WINTER COHORT</th>
</tr>
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<tbody>
<tr>
<td><strong>Fall Semester:</strong></td>
<td><strong>Winter Semester:</strong></td>
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<tr>
<td>NUR 150: Pharmacology in Nursing (3) Credits</td>
<td>NUR 150: Pharmacology in Nursing (3) Credits</td>
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<tr>
<td>NUR 151: Assessment in Nursing (0.5) Credits</td>
<td>NUR 151: Assessment in Nursing (0.5) Credits</td>
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<td><strong>Total (14.5) Credits</strong></td>
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<table>
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<tr>
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<tbody>
<tr>
<td>NUR 125: Nursing Care of Adults I (5) Credits</td>
<td>NUR 125: Nursing Care of Adults I (5) Credits</td>
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<td>NUR 128: Nursing Care of Adults Clinical II (5) Credits</td>
<td>NUR 128: Nursing Care of Adults Clinical II (5) Credits</td>
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<td>NUR 152: Nutrition Across the Lifespan (1) Credit</td>
<td>NUR 152: Nutrition Across the Lifespan (1) Credit</td>
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<tr>
<td>SSC 200: The Social Sciences &amp; Contemporary America (Recommended this Semester) (3) Credits</td>
<td>SSC 200: The Social Sciences &amp; Contemporary America (Recommended this Semester) (3) Credits</td>
</tr>
<tr>
<td><strong>Total (14) Credits</strong></td>
<td><strong>Total (14) Credits</strong></td>
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<tr>
<td>NUR 133: Transition for Advanced Standing Nurses (1) Credit</td>
<td>NUR 133: Transition for Advanced Standing Nurses (1) Credit</td>
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<th>Fall Semester:</th>
<th>Winter Semester:</th>
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<tbody>
<tr>
<td>NUR 221: Family Centered Nursing (4) Credits</td>
<td>NUR 221: Family Centered Nursing (4) Credits</td>
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<td>NUR 222: Family Centered Nursing Clinical III (2.5) Credits</td>
<td>NUR 222: Family Centered Nursing Clinical III (2.5) Credits</td>
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<tr>
<td>NUR 223: Mental Health Nursing (2.5) Credits</td>
<td>NUR 223: Mental Health Nursing (2.5) Credits</td>
</tr>
<tr>
<td>NUR 224: Mental Health Nursing Clinical III (2.5) Credits</td>
<td>NUR 224: Mental Health Nursing Clinical III (2.5) Credits</td>
</tr>
<tr>
<td>HUM 200: Modernity &amp; Culture (Recommended this Semester) (3) Credits</td>
<td>HUM 200: Modernity &amp; Culture (Recommended this Semester) (3) Credits</td>
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<td>NUR 225: Nursing Care of Adults II (5) Credits</td>
<td>NUR 225: Nursing Care of Adults II (5) Credits</td>
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<td>NUR 226: Nursing Care of Adults Clinical IV (5) Credits</td>
<td>NUR 226: Nursing Care of Adults Clinical IV (5) Credits</td>
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<tr>
<td>NUR 227: Leadership in Nursing (2) Credits</td>
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<td>NUR 228: Preceptorship Clinical V (3) Credits</td>
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A minimum of 62 credits is required to complete this program.

### GENERAL EDUCATION, MACRAO, AND DEGREE COURSES

**Communication Skills (Group I) - 9 credit hours**

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<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
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<td>ENG 111*</td>
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<tr>
<td>ENG 222*</td>
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<td>(b)</td>
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<tr>
<td>SPE 101</td>
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<td>OR</td>
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<tr>
<td>SPE 257</td>
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**Science and Mathematics (Group II) - 24 credit hours.**

Courses must include a minimum of 9 credits at the 200-level in a Math/Science discipline (does not include SCI 200), such as CHM; MAT; BIO; or PHY.

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Prerequisites</th>
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<td>MAT 105*</td>
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<td>MAT 212</td>
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<tr>
<td>SCI 200</td>
<td>3</td>
<td>(d)</td>
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**Social Sciences Electives (Group III) - 9 credit hours**

Courses must be taken in more than one discipline with at least 3 credits at the 200 level.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
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<td></td>
<td></td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

**Humanities and Fine Arts Electives (Group IV) - 9 credit hours**

Courses must be taken in more than one discipline with at least one at the 200-level. Only three credits allowed from Fine Arts classes.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

**Applied Arts and Sciences (Group V) - 3 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>(e)</td>
<td></td>
</tr>
</tbody>
</table>

**ELECTIVES - 8 credit hours**

Courses must come from Groups I, II, III, IV, VI (HED, PED) and VII (EDU). (Maximum of 2 credit hours in Group VI.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(f)</td>
<td></td>
</tr>
</tbody>
</table>

Students should consult with an Academic Advisor to select courses appropriate for your academic and career goals.

*Most universities require demonstrated competency by completing these courses with a minimum grade of “C”.

**@ PREREQUISITES**

- a. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
- b. Minimum grade of “C” in ENG 111
- c. Minimum grade of “C” in MAT 104 or equivalent
- d. Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or 257)
- e. Touch keyboarding skills recommended

Distribution Group and General Education information on reverse (print version)/ page two (electronic version).
CERTIFICATE OF ACHIEVEMENT:
AUTOMOTIVE SERVICE MECHANIC (1 YEAR)

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 35.5 credits is required to complete this program.
For Gainful Employment information see reverse (print version) or page two (electronic version).

FIRST SEMESTER (Fall) - 17.5 credit hours
AMS 104  (2)  Basic Automotive Electricity  @Prerequisites       Completed
AMS 110  (4.5) Engine Fundamentals & Overhaul     
AMS 125  (5)  Engine Performance I
CIS 100  (3)  Introduction to Information Systems (a)       
WLD 126  (3)  Basic Welding I

SECOND SEMESTER (Winter) - 18 credit hours
AMS 116  (3)  Electrical Systems I: Electrical Accessories (b)     
AMS 124  (4)  Automotive Heating & Air Conditioning    
AMS 126  (5)  Engine Performance II (c)                  
ENG 111  (3)  Freshman English Composition (d)           
MAT 101  (3)  Basic Mathematics

@ PREREQUISITES

a. Touch keyboarding skills recommended
b. AMS 104 (may be taken concurrently) or Instructor approval
c. AMS 104 and AMS 125, OR State certified in tune-up area
d. Placement into ENG 111 or ENG 110 with a minimum grade of “C”.

64
PROGRAM COSTS

How much will this program cost me?

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$4861.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$8969.50</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1063.50</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

What are my financing options to pay for the program?

In addition to any grant and scholarship aid for which they are eligible, 0% of graduates used loans to finance their education. The median debt for program graduates:

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Median Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$0</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

How long will it take me to complete this program?

The program is designed to take 30 weeks to complete.

XX% of graduates from this program finished in this time.

* there were no graduates in this program in 2010/2011

What are the chances of getting a job when I graduate?

The job placement rate for students who compete the program is n/a.

Will I be able to pay back my student loans?

XX% of students in this institution who took out federal student loans are successfully repaying them. * there were no graduates in this program in 2010/2011

ADDITIONAL LINKS AND INFORMATION

Occupation: Automotive Service Technicians and Mechanics

SOC code: 49-3023.00

Occupational Profile URL: http://www.onetonline.org/link/summary/49-3023.00
CERTIFICATE OF ACHIEVEMENT
AUTOMOTIVE TECHNOLOGY (2 YEAR)

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 63 credits is required to complete this program.

### Communication Skills (Group I) – 6 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>3</td>
<td>Freshman English Composition</td>
<td>(a)</td>
</tr>
<tr>
<td>SPE 101</td>
<td>3</td>
<td>Fundamentals of Communication OR Public Speaking</td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Science and Mathematics (Group II) – 3 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 101</td>
<td>3</td>
<td>Basic Mathematics</td>
<td></td>
</tr>
</tbody>
</table>

### Applied Arts and Science (Group V) – 54 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>Introduction to Information Systems</td>
<td>(b)</td>
</tr>
<tr>
<td>AMS 104</td>
<td>2</td>
<td>Basic Automotive Electricity</td>
<td></td>
</tr>
<tr>
<td>AMS 110</td>
<td>4.5</td>
<td>Engine Fundamentals &amp; Overhaul</td>
<td></td>
</tr>
<tr>
<td>AMS 125</td>
<td>5</td>
<td>Engine Performance I</td>
<td></td>
</tr>
<tr>
<td>AMS 116</td>
<td>3</td>
<td>Electrical Systems I: Electrical Accessories</td>
<td>(c)</td>
</tr>
<tr>
<td>AMS 124</td>
<td>4</td>
<td>Automotive Heating &amp; Air Conditioning</td>
<td></td>
</tr>
<tr>
<td>AMS 126</td>
<td>5</td>
<td>Engine Performance II</td>
<td>(d)</td>
</tr>
<tr>
<td>AMS 205</td>
<td>4</td>
<td>Steering &amp; Suspension Systems</td>
<td></td>
</tr>
<tr>
<td>AMS 206</td>
<td>4</td>
<td>Brakes</td>
<td></td>
</tr>
<tr>
<td>AMS 223</td>
<td>4</td>
<td>Electrical Systems II: Engine Electrical Systems</td>
<td></td>
</tr>
<tr>
<td>AMS 214</td>
<td>4.5</td>
<td>Automatic Transmissions</td>
<td></td>
</tr>
<tr>
<td>AMS 222</td>
<td>4</td>
<td>Manual Transmissions</td>
<td></td>
</tr>
<tr>
<td>AMS 232</td>
<td>4</td>
<td>Automotive Co-op</td>
<td>(e)</td>
</tr>
<tr>
<td>WLD 126</td>
<td>3</td>
<td>Basic Welding I</td>
<td></td>
</tr>
</tbody>
</table>

Note: AMS coursework must be completed with a minimum grade of “C” to be eligible for AMS 232 Automotive Co-op.

@ PREREQUISITES

- Placement into ENG 111 or ENG 110 with minimum grade of “C”
- Touch keyboarding skills recommended
- AMS 104 (may be taken concurrently) or Instructor approval.
- AMS 104 and AMS 125, OR State certified in engine tune-up area
- Passed 45 credits of AMS courses with minimum grade of “C”. Permission of the Co-op Coordinator required. Professional tools required.
RECOMMENDED AMS COURSE SEQUENCE

FIRST SEMESTER
AMS 104 (2) Basic Automotive Electricity
AMS 110 (4.5) Engine Fundamentals and Overhaul
AMS 125 (5) Engine Performance I

SECOND SEMESTER
AMS 116 (3) Electrical Systems I: Electrical Accessories
AMS 124 (4) Automotive Heating & Air Conditioning
AMS 126 (5) Engine Performance II

THIRD SEMESTER
AMS 205 (4) Steering & Suspension Systems
AMS 206 (4) Brakes
AMS 223 (4) Electrical Systems II: Engine Electrical Systems

FOURTH SEMESTER
AMS 214 (4.5) Automatic Transmissions
AMS 222 (4) Manual Transmissions
AMS 232 (4) Automotive Co-op
CERTIFICATE OF ACHIEVEMENT
BUSINESS INFORMATION SYSTEMS

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 31 credits is required to complete this program.
For Gainful Employment information see reverse (print version) or page two (electronic version)

**FIRST SEMESTER (Fall) - 15 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 120</td>
<td>3</td>
<td>Office Mathematics</td>
<td></td>
</tr>
<tr>
<td>CIS 100</td>
<td>3</td>
<td>Introduction to Information Systems (a)</td>
<td></td>
</tr>
<tr>
<td>BIS 140</td>
<td>3</td>
<td>Beginning Word Processing/Keyboarding (b)</td>
<td></td>
</tr>
<tr>
<td>BIS 164</td>
<td>3</td>
<td>Business Communications I (b)</td>
<td></td>
</tr>
<tr>
<td>BIS 250</td>
<td>3</td>
<td>Records Management (c)</td>
<td></td>
</tr>
</tbody>
</table>

**SECOND SEMESTER (Winter) - 16 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 127</td>
<td>4</td>
<td>Applied Office Accounting (d)</td>
<td></td>
</tr>
<tr>
<td>BUS 151</td>
<td>3</td>
<td>Introduction to Business Issues</td>
<td></td>
</tr>
<tr>
<td>BIS 142</td>
<td>3</td>
<td>Intermediate Word Processing/Keyboarding (e)</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>3</td>
<td>Freshman English Composition (f)</td>
<td></td>
</tr>
<tr>
<td>SPE 101</td>
<td>3</td>
<td>Fundamentals of Communication OR</td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>3</td>
<td>Public Speaking</td>
<td></td>
</tr>
</tbody>
</table>

**@ PREREQUISITES**

- a. Touch keyboarding skills recommended
- b. Recommend concurrent enrollment in BIS 140 OR CIS 100 OR knowledge of correct keyboarding techniques.
- c. CIS 100, BIS 140 or equivalent
- d. BIS 120 for Business Information Systems students only
- e. BIS 140 or equivalent
- f. Placement into ENG 111, or ENG 110 with a minimum grade of “C”
PROGRAM COSTS

Q: How much will this program cost me?

A:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$3700.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$7020.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1729.51</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A:

In addition to any grant and scholarship aid for which they are eligible, 67% of graduates used loans to finance their education. The median debt for program graduates:

*Fewer than 10 students graduated in this program in 2010/2011 therefore data is not provided.

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$X,XXX</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A:

The program is designed to take 30 weeks to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A:

The job placement rate for students who complete the program is not available. Three students graduated in 2009/2010, however no students responded to graduate survey.

Q: Will I be able to pay back my student loans?

A:

XX% of students in this institution who took out federal student loans are successfully repaying them. *Fewer than 10 students graduated in this program in 2010/2011 therefore data is not provided.

ADDITIONAL LINKS AND INFORMATION

Occupation: Executive Secretaries and Executive Administrative Assistants

SOC code: 43-6011.00

Occupational Profile URL: [http://www.onetonline.org/link/summary/43-6011.00](http://www.onetonline.org/link/summary/43-6011.00)
CERTIFICATE OF ACHIEVEMENT:  
COMPUTER ASSISTED DRAFTING (CAD)

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 37 credits is required to complete this program.
For Gainful Employment information see reverse (print version) or page two (electronic version)

<table>
<thead>
<tr>
<th>FIRST SEMESTER - 16 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 101 (3) Technical Drawing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 120 (3) Introduction to AutoCAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 210 (3) Introduction to SolidWorks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 101 (4) Basic Machine Shop Practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIS 100 (3) Introduction to Computer Information Systems</td>
<td>(a)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND SEMESTER - 15 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 201 (4) Mechanical Detail Drafting w/CAD</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>DRF 220 (3) Introduction to SoftPlan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 113 (2) CNC Machining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>MAT 170 (3) Technical Math II</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>THIRD SEMESTER - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 280 (3) CAD Program and Software Certification</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257 (3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

@ PREREQUISITES

a. Touch keyboarding skills recommended
b. DRF 120
c. ENG 110 with a minimum grade of C; or placement into ENG 111
d. MAT 101 or equivalent
e. DRF 101, DRF 120, DRF 201, DRF 210, all with a minimum grade of B OR successful completion of a competency exam (80% or better)
PROGRAM COSTS

Q: How much will this program cost me?

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$4646.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$8547.00</td>
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<tr>
<td>Books and Supplies</td>
<td>$1269.28</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A: In addition to any grant and scholarship aid for which they are eligible, 67% of graduates used loans to finance their education. The median debt for program graduates: *Fewer than 10 students graduated from this program in 2010/2011 therefore data is not provided.

<table>
<thead>
<tr>
<th>Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$X,XXX</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 30 weeks to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is 33%

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them. *Fewer than 10 students graduated in in this program in 2010/2011 therefore data is not provided.

ADDITIONAL LINKS AND INFORMATION

Occupation: CAD Designer

SOC code: 17-3013.00

Occupational Profile URL: http://www.onetonline.org/link/summary/17-3013.00.
CERTIFICATE OF ACHIEVEMENT:
EARLY CHILDHOOD EDUCATION

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 31 credits is required to complete this program.

For Gainful Employment information see reverse (print version) or page two (electronic version)

Prerequisites to the Program:

**Required:**
- First Aid and CPR Certification
- Validation of no Evidence of Child Abuse or Neglect per Public Act 68 of 1993
- Health Requirements Met

<table>
<thead>
<tr>
<th>FIRST SEMESTER (Fall) - 14 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 101 (4) Introduction to Early Childhood Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECE 112 (4) Infancy</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>CIS 100 (3) Introduction to Information Systems</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>ENG 111 (3) Freshman English Composition</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND SEMESTER (Winter) - 17 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 113 (4) Early Childhood</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>ECE 114 (4) Interacting with Children, Parent/Adult Child Relations</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>MAT 101 (3) Basic Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY 101 (3) Introduction to General Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 101 (3) Fundamentals of Communication OR SPE 257 (3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Please Note:** If going for an Associate’s degree, all courses must be completed with a minimum grade of “C”.
ECE courses require students to show validation of NO Evidence of Child abuse or Neglect per Public Act 68 of 1993 by the third week of class.

**@ PREREQUISITES**

a. Corequisite: ECE 101

b. Touch keyboarding skills recommended

c. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
PROGRAM COSTS

**Q:** How much will this program cost me?

**A:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$3279.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$6225.50</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1014.15</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

**Q:** What are my financing options to pay for the program?

**A:** In addition to any grant and scholarship aid for which they are eligible, 33% of graduates used loans to finance their education. The median debt for program graduates:

* Fewer than 10 students graduated from this program in 2010/2011 therefore no data is provided.

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$X,XXX</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

**Q:** How long will it take me to complete this program?

**A:** The program is designed to take 30 weeks to complete.

XX% of graduates from this program finished in this time.

**Q:** What are the chances of getting a job when I graduate?

**A:** The job placement rate for students who complete the program is 25%

**Q:** Will I be able to pay back my student loans?

**A:** XX% of students in this institution who took out federal student loans are successfully repaying them. *Fewer than 10 students graduated in this program in 2010/2011 therefore data is not provided.

ADDITIONAL LINKS AND INFORMATION

**Occupation:** Child Care Worker

**SOC Code:** 39-9011.00

**Occupational Profile URL:** [http://www.onetonline.org/link/summary/39-9011.00](http://www.onetonline.org/link/summary/39-9011.00)
CERTIFICATE OF ACHIEVEMENT: HEATING/REFRIGERATION/AIR CONDITIONING

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 32 credits is required to complete this program. For Gainful Employment information see reverse (print version) or page two (electronic version).

<table>
<thead>
<tr>
<th>Communication Skills (Group I) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111  (3) Freshman English Composition</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPE 101  (3) Fundamentals of Communication OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPE 257  (3) Public Speaking</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science and Mathematics (Group II) – 3-5 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 170  (3) Technical Mathematics II OR</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>MAT 124  (5) Precalculus *</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Arts and Sciences (Group V) – 23 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100  (3) Introduction to Information Systems</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>DRF 120  (3) Introduction to AutoCAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRA 102  (3) Refrigeration Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRA 104  (3) Residential Refrigeration</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>HRA 106  (3) Heating Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRA 108  (3) Heating Systems</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>HRA 116  (3) Fundamentals of Electricity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRA 205  (2) Motors &amp; Controls</td>
<td>(g)</td>
<td></td>
</tr>
</tbody>
</table>

* Recommended for students transferring to Ferris State University

@PREREQUISITES

a. Placement into ENG 111 or ENG 110 with minimum grade of “C”
b. Minimum grade of “C” in MAT 101 OR equivalent
c. Minimum grade of “C” in MAT 105 OR equivalent
d. Touch keyboarding skills recommended
e. HRA 102
f. HRA 106, HRA 116
g. HRA 116
PROGRAM COSTS

Q: How much will this program cost me?

A:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$4263.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$7666.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1386.10</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A:

In addition to any grant and scholarship aid for which they are eligible, 31% of graduates used loans to finance their education. The median debt for program graduates:

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Median Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$0</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A:

The program is designed to take 30 weeks to complete. XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A:

The job placement rate for students who complete the program is n/a.

Q: Will I be able to pay back my student loans?

A:

XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers

SOC code: 49-9021.00

Occupational Profile URL: http://www.onetonline.org/link/summary/49-9021.00.
CERTIFICATE OF ACHIEVEMENT:  
MACHINE TOOL OPERATION

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 31 credits is required to complete this program.
For Gainful Employment information see reverse (print version) or page two (electronic version)

FIRST SEMESTER (Fall) - 15 credit hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 101</td>
<td>Basic Machine Shop Practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 113</td>
<td>CNC Machining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 120</td>
<td>Introduction to AutoCAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 170</td>
<td>Technical Mathematics II</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>WLD 126</td>
<td>Basic Welding I</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECOND SEMESTER (Winter) - 16 credit hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 102</td>
<td>Machine Tool Practices II</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>IND 116</td>
<td>CNC Programming</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>IND 140</td>
<td>Metallurgy and Industrial Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 105</td>
<td>Intro to Geometric Dimensioning &amp; Tolerancing</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>Freshman English Composition</td>
<td>(e)</td>
<td></td>
</tr>
</tbody>
</table>

@ PREREQUISITES

a. MAT 101 OR equivalent
b. IND 101 and a minimum grade of “C” in MAT 104 or equivalent
c. IND 101, IND 113, minimum grade of “C” in MAT 105 or MAT 170 or equivalent
d. DRF 101; IND 101 Recommended
e. Placement into ENG 111 or ENG 110 with grade a minimum grade of “C”
PROGRAM COSTS

Q: How much will this program cost me?

A: Tuition and Fees (in-district rates) $4167.00
Tuition and Fees (out-district rates) $7611.50
Books and Supplies $1040.28
On-campus room and board not offered

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A: In addition to any grant and scholarship aid for which they are eligible, 0% of graduates used loans to finance their education. The median debt for program graduates:

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$0</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 30 weeks to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is not available. Three students graduated in 2009/2010, no students responded to the graduate survey.

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Computer-Controlled Machine Tool Operator

SOC code: 51-4011.00

Occupational Profile URL: http://www.onetonline.org/link/summary/51-4011.00.
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 35 credits is required to complete this program.
For Gainful Employment information see reverse (print version) or page two (electronic version)

**FIRST SEMESTER (Fall) - 18 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLD 125</td>
<td>6</td>
<td>Basic Industrial Welding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRF 101</td>
<td>3</td>
<td>Technical Drawing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 140</td>
<td>3</td>
<td>Metallurgy &amp; Industrial Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 170</td>
<td>3</td>
<td>Technical Mathematics II</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>DRF 120</td>
<td>3</td>
<td>Introduction to AutoCAD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECOND SEMESTER (Winter) - 17 credit hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLD 130</td>
<td>3</td>
<td>Metal Fabrication</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>WLD 245</td>
<td>3</td>
<td>Pipe Welding OR</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>IND 101</td>
<td>4</td>
<td>Basic Machine Shop Practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WLD 225</td>
<td>8</td>
<td>Advanced Welding</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>3</td>
<td>Freshman English Composition</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

@ PREREQUISITES

a. MAT 101 OR equivalent
b. WLD 125 OR WLD 127, DRF 101
c. WLD 125 OR WLD 127
d. Placement into ENG 111 or ENG 110 with a minimum grade of “C”
PROGRAM COSTS

Q: How much will this program cost me?

A: Tuition and Fees (in-district rates) $5192.00
   Tuition and Fees (out-district rates) $9466.50
   Books and Supplies $784.25
   On-campus room and board not offered

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A: In addition to any grant and scholarship aid for which they are eligible, 70% of graduates used loans to finance their education. The median debt for program graduates:

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Median Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$8102.50</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$0</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 30 weeks to complete.
   XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is n/a.

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Welders, Cutters, Solderers, and Brazers

SOC code: 51-4121.00

Occupational Profile URL: http://www.onetonline.org/link/summary/51-4121.00
ADVANCED CREDENTIAL:
GEOTHERMAL TECHNOLOGY

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 19 credits is required to complete this program.

COURSES ARE DELIVERED IN A COMPRESSED SEQUENTIAL FORMAT

Note: This course of study is not intended for students without collegiate or professional experience. Please see pre-requisite “a” below.

<table>
<thead>
<tr>
<th>Course of Study - 19 credit hours</th>
<th>@Prerequisite</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRA 251 (3) Geothermal Basics</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>HRA 254 (3) Air Source Heat Pumps</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>HRA 261 (3) Geothermal System Design</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>HRA 262 (3) Geothermal Loop Systems</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>HRA 263 (3) Closed Loop Ground Source Heat Pump Installation Workshop IGSHPA</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>HRA 265 (4) Geothermal Research and Development</td>
<td>(b)</td>
<td></td>
</tr>
</tbody>
</table>

@PREREQUISITES

a. HRA 240 OR MMCC HRA Heating Specialist Certificate and MMCC Refrigeration Specialist Certificate OR Associate in Applied Science: Heating Refrigeration Air Conditioning from an accredited college or university OR Lead faculty approved significant, verifiable field experience in the heating, refrigeration and air conditioning industry.

b. HRA 251
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 26 credits is required to complete this program
For Gainful Employment information see reverse (print version) or page two (electronic version)

**Fast Track**

**Fall**

**Note:** FAST TRACK COURSES ARE DELIVERED IN A COMPRESSED SEQUENTIAL FORMAT

<table>
<thead>
<tr>
<th>FIRST SEMESTER (Fall) - 17 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRA 116 (3) Fundamentals of Electricity</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>HRA 205 (2) Motors &amp; Controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRA 106 (3) Heating Fundamentals</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>HRA 108 (3) Heating Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRA 223 (3) Residential HVAC Load Determination</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>HRA 225 (3) Residential HVAC Distribution/Design</td>
<td>(d)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND SEMESTER (Winter) - 6 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRA 105 (3) Hydronics</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>HRA 285 (3) Co-op (Heating, Refrigeration &amp; Air Conditioning)</td>
<td>(f)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>THIRD SEMESTER (SPRING) - 3 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRA 215 (3) HRA Controls</td>
<td>(a)</td>
<td></td>
</tr>
</tbody>
</table>

**@PREREQUISITES**

a. HRA 116  
b. HRA 106, HRA 116  
c. HRA 108  
d. HRA 223  
e. HRA 106  
f. Minimum of 12 credit hours completed in HRA

**HRA Course Sequencing Schedule**

**Fast Track – Fall Start** (Day Classes)

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HRA 116 (3) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 205 (2) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 106 (3) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 108 (3) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 223 (3) credits</td>
<td></td>
</tr>
<tr>
<td>Total (17) credits</td>
<td></td>
</tr>
</tbody>
</table>

**Winter Semester**

| HRA 105 (3) credits |                      |
| HRA 102 (3) credits |                      |
| HRA 104 (3) credits |                      |
| HRA 285 (3) credits |                      |
| HRA 225 (3) credits |                      |
| HRA 204 (3) credits |                      |
| HRA 198 (1) credits |                      |
| Total (18) credits |                      |

**Spring Session**

| HRA 215 (3) credits |                      |
| HRA 240 (3) credits |                      |
| Total (6) credits |                      |

**Fast Track – Winter Start** (Evening Classes)

<table>
<thead>
<tr>
<th>Winter Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HRA 116 (3) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 102 (3) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 104 (3) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 204 (3) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 220 (2) credits</td>
<td></td>
</tr>
<tr>
<td>HRA 198 (1) credits</td>
<td></td>
</tr>
<tr>
<td>Total (17) credits</td>
<td></td>
</tr>
</tbody>
</table>

**Spring Session**

| HRA 198 (1) credits |                      |
| HRA 220 (2) credits |                      |
| HRA 106 (3) credits |                      |
| HRA 108 (3) credits |                      |
| HRA 105 (3) credits |                      |
| Total (12) credits |                      |

**Fall Semester**

| HRA 223 (3) credits |                      |
| HRA 225 (3) credits |                      |
| HRA 215 (3) credits |                      |
| HRA 240 (3) credits |                      |
| Total (12) credits |                      |
PROGRAM COSTS

Q: How much will this program cost me?
A:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$3541.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$6197.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1006.45</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

Q: What are my financing options to pay for the program?
A: In addition to any grant and scholarship aid for which they are eligible, 31% of graduates used loans to finance their education. The median debt for program graduates:

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$0</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?
A: The program is designed to take 12 months to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?
A: The job placement rate for students who complete the program is not available. Seven students graduated in 2009/2010, no students responded to the graduate survey.

Q: Will I be able to pay back my student loans?
A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Heating and Air Conditioning Mechanics and Installers

SOC code: 49-9021.01

Occupational Profile URL: [http://www.onetonline.org/link/summary/49-9021.01](http://www.onetonline.org/link/summary/49-9021.01)
Fast Track
Winter

Note: FAST TRACK COURSES ARE DELIVERED IN A COMPRESSED SEQUENTIAL FORMAT

FIRST SEMESTER (Winter) - 17 credit hours
- HRA 116 (3) Fundamentals of Electricity
- HRA 205 (2) Motors & Controls
- HRA 102 (3) Refrigeration Fundamentals
- HRA 285 (3) Co-op (Heating, Refrigeration & Air Conditioning)
- HRA 104 (3) Residential Refrigeration
- HRA 204 (3) Light Commercial Refrigeration

SECOND SEMESTER (Spring) - 3 credit hours
- HRA 198 (1) EPA Refrigerant Handler Certification
- HRA 220 (2) Commercial Refrigeration Design

THIRD SEMESTER (Fall) - 6 credit hours
- HRA 215 (3) HRA Controls
- HRA 240 (3) Advanced Commercial Refrigeration

@PREREQUISITES
- a. HRA 116
- b. Minimum of 12 Credits in HRA
- c. HRA 102
- d. HRA 204
- e. HRA 104, HRA 116, HRA 204
- f. HRA 104
- g. HRA 104

HRA Course Sequencing Schedule

Fast Track – Fall Start (Day Classes)

Fall Semester
- HRA 116 (3) credits
- HRA 205 (2) credits
- HRA 106 (3) credits
- HRA 108 (3) credits
- HRA 223 (3) credits
- Total (17) credits

Winter Semester
- HRA 105 (3) credits
- HRA 102 (3) credits
- HRA 104 (3) credits
- HRA 285 (3) credits
- HRA 225 (3) credits
- HRA 204 (3) credits
- HRA 220 (2) credits
- HRA 198 (1) credits
- Total (18) credits

Spring Session
- HRA 215 (3) credits
- HRA 240 (3) credits
- Total (6) credits

Fast Track – Winter Start (Evening Classes)

Winter Semester
- HRA 116 (3) credits
- HRA 205 (2) credits
- HRA 106 (3) credits
- HRA 108 (3) credits
- HRA 285 (3) credits
- HRA 104 (3) credits
- HRA 204 (3) credits
- Total (17) credits

Spring Session
- HRA 198 (1) credits
- HRA 220 (2) credits
- HRA 106 (3) credits
- HRA 108 (3) credits
- HRA 105 (3) credits
- Total (12) credits

Fall Semester
- HRA 223 (3) credits
- HRA 225 (3) credits
- HRA 215 (3) credits
- HRA 240 (3) credits
- Total (12) credits
PROGRAM COSTS

Q: How much will this program cost me?

A:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$3579.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$6374.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1107.40</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A: In addition to any grant and scholarship aid for which they are eligible, 31% of graduates used loans to finance their education. The median debt for program graduates:

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$0</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$0</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 30 weeks to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is not available. Seven students graduated in 2009/2010, no students responded to the graduate survey.

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Refrigeration Mechanics and Installers

SOC code: 49-9021.02

Occupational Profile URL: [http://www.onetonline.org/link/summary/49-9021.02](http://www.onetonline.org/link/summary/49-9021.02)
Training Credential: 
Legal Office Specialist

You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 27 credits is required to complete this program.
For Gainful Employment information see reverse (print version) or page two (electronic version)

Prerequisites to Program: CIS 100 (3) Introduction to Information Processing Systems and BIS 140 (3) Beginning Word Processing/Keyboarding OR equivalent.

First Semester - 12 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 120</td>
<td>Office Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIS 142</td>
<td>Intermediate Keyboarding</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>BIS 138</td>
<td>Basic Legal Terminology</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>BIS 164</td>
<td>Business Communication I</td>
<td>(c)</td>
<td></td>
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</tbody>
</table>

Second Semester - 15 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 153</td>
<td>Business Law</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIS 250</td>
<td>Records Management</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>BIS 254</td>
<td>Office Procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIS 200</td>
<td>Advanced Word Processing Applications</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>BIS 264</td>
<td>Business Communication II</td>
<td>(f)</td>
<td></td>
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</tbody>
</table>

@Prerequisites

a. BIS 140 OR equivalent
b. BIS 140 OR equivalent OR concurrent enrollment, BIS 164 recommended OR concurrent enrollment.
c. Recommend concurrent enrollment in BIS 140 OR CIS 100 OR knowledge of correct keyboarding techniques.
d. CIS 100, BIS 140 OR equivalent
e. BIS 140 OR equivalent, CIS 100 recommended.
f. BIS 164 OR ENG 111
PROGRAM COSTS

Q: How much will this program cost me?

A: Tuition and Fees (in-district rates) $3,707.00
Tuition and Fees (out-district rates) $6,944.00
Books and Supplies $1,440.19
On-campus room and board not offered

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A: In addition to any grant and scholarship aid for which they are eligible, 100% of graduates used loans to finance their education. The median debt for program graduates:
* Fewer than 10 students graduated from this program in 2010/2011 therefore no data is provided.

<table>
<thead>
<tr>
<th>Loan Type</th>
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</thead>
<tbody>
<tr>
<td>Federal Loans</td>
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<tr>
<td>Private Educational Loans</td>
<td>$ X,XXX</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$ X,XXX</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 12 months to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is not available. Four students graduated in 2009/2010, no students responded to the graduate survey.

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Legal Secretary

SOC code: 43-6012.00

Occupational Profile URL: [http://www.onetonline.org/link/summary/43-6012.00](http://www.onetonline.org/link/summary/43-6012.00)
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 26 credits is required to complete this program.

For Gainful Employment information see reverse (print version) or page two (electronic version)

Prerequisites to Program: CIS 100 (3) Introduction to Information Systems and BIS 140 (3) Beginning Word Processing/Keyboarding OR equivalent.

First Semester - 11 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>@Prerequisites</th>
<th>Completed</th>
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<tbody>
<tr>
<td>ALH 100</td>
<td>2</td>
<td>Medical Terminology</td>
<td></td>
<td></td>
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<tr>
<td>BIS 120</td>
<td>3</td>
<td>Office Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIS 142</td>
<td>3</td>
<td>Intermediate Keyboarding</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>BIS 164</td>
<td>3</td>
<td>Business Communication I</td>
<td>(b)</td>
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Second Semester - 15 credit hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALH 112</td>
<td>3</td>
<td>Insurance Billing</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>BIS 250</td>
<td>3</td>
<td>Records Management</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>BIS 255</td>
<td>3</td>
<td>Medical Office Procedures</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>BIS 264</td>
<td>3</td>
<td>Business Communication II</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>CIS 130</td>
<td>3</td>
<td>Applications with Microcomputers</td>
<td>(g)</td>
<td></td>
</tr>
</tbody>
</table>

@ PREREQUISITES

a. BIS 140 OR equivalent
b. Recommend concurrent enrollment in BIS 140 OR CIS 100 OR knowledge of correct keyboarding techniques.
c. Prerequisite: ALH 100
d. CIS 100, BIS 140 OR equivalent
e. CIS 100, BIS 140
f. BIS 164 OR ENG 111
g. CIS 100 with a minimum grade of “C”
PROGRAM COSTS

Q: How much will this program cost me?

A:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$ 4314.00</td>
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<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$ 8090.50</td>
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<td>Books and Supplies</td>
<td>$ 1891.89</td>
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<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A: In addition to any grant and scholarship aid for which they are eligible, 0% of graduates used loans to finance their education. The median debt for program graduates:

* Fewer than 10 students graduated from this program in 2010/2011 therefore no data is provided.

<table>
<thead>
<tr>
<th>Financing Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$ X,XXX</td>
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<tr>
<td>Private Educational Loans</td>
<td>$ X,XXX</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$ X,XXX</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 12 months to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is not available. Three students graduated from the program in 2009/2010, no students responded to the graduate survey.

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Office Clerks and General Secretaries

SOC code: 43-9061.00

Occupational Profile URL: [http://www.onetonline.org/link/summary/43-9061.00](http://www.onetonline.org/link/summary/43-9061.00)
The Pharmacy Technician Program is a one-year training credential program emphasizing hospital, community, and home infusion/nursing home practice. Role play, communication, teamwork, and conflict management is emphasized. The comprehensive training program has laboratory course instruction which emphasizes hand-on skill development. The program includes 320 hours of an institutional and community pharmacy practicum. The coursework prepares the individual for the national certification exam. The certification exam must be taken within 6 months of graduation.

PHT courses must be taken in sequence

<table>
<thead>
<tr>
<th>SEMESTER I</th>
<th>12 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHT 104</td>
<td>(4) Orientation to Pharmacy Tech. &amp; Drug Preparations</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>PHT 105</td>
<td>(3) Pharmacy Law</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>PHT 106</td>
<td>(3) Pharmaceutical Calculations</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>ALH 100</td>
<td>(2) Medical Terminology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEMESTER II</th>
<th>10 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHT 113</td>
<td>(3) Institution and Community Pharmacy</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>PHT 114</td>
<td>(4) Pharmacology for Pharmacy Technicians</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>SPE 101</td>
<td>(3) Fundamentals of Communication OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 257</td>
<td>(3) Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEMESTER III</th>
<th>7.5 credit hours</th>
<th>@Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHT 115</td>
<td>(7.5) Pharmacy Technician Clinical</td>
<td>(f)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
- All courses in a semester must be passed with a minimum grade of “C” to progress to the next semester.
- Students must maintain a minimum GPA of 2.0.
- PHT courses may be repeated only once.
- Limited Enrollment Program. Student must be admitted to PHT program prior to registering for PHT classes.

**@PREREQUISITES**

a. Corequisites: ALH 100, PHT 105, PHT 106
b. Corequisites: ALH 100, PHT 104, PHT 106
c. Corequisites: ALH 100, PHT 104, PHT 105
d. PHT 104, PHT 105, PHT 106. Corequisites: PHT 114, SPE 101 OR SPE 257
e. PHT 104, PHT 105, PHT 106. Corequisites: PHT 113, SPE 101 OR SPE 257
f. PHT 113, PHT 114, SPE 101 OR SPE 257
PROGRAM COSTS

Q: How much will this program cost me?

A:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees (in-district rates)</td>
<td>$4255.00</td>
</tr>
<tr>
<td>Tuition and Fees (out-district rates)</td>
<td>$7990.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$860.60</td>
</tr>
<tr>
<td>On-campus room and board</td>
<td>not offered</td>
</tr>
</tbody>
</table>

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A:

In addition to any grant and scholarship aid for which they are eligible, 50% of graduates used loans to finance their education. The median debt for program graduates:

* Fewer than 10 students graduated in 2010/2011 therefore no data is provided.

<table>
<thead>
<tr>
<th>Financing Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Private Educational Loans</td>
<td>$X,XXX</td>
</tr>
<tr>
<td>Institutional Financing Loans</td>
<td>$X,XXX</td>
</tr>
</tbody>
</table>

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 45 weeks to complete.

XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is not available. One student graduated 2009/2010, no students responded to the placement survey.

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Pharmacy Technician

SOC code: 29-2052.00

Occupational Profile URL: [http://www.onetonline.org/link/summary/29-2052.00](http://www.onetonline.org/link/summary/29-2052.00)
You, as a student, are responsible for meeting requirements for your curriculum. Your advisor is available for consultation. At least 12 of these credit hours must be taken at MMCC.

A minimum of 27 credits is required to complete this program.

For Gainful Employment information see reverse (print version) or page two (electronic version)

**Prerequisites to Program:** CIS 100 (3) Introduction to Information Systems and BIS 140 (3) Beginning Word Processing/Keyboarding OR equivalent.

<table>
<thead>
<tr>
<th>First Semester - 12 credit hours</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 120 (3) Office Mathematics</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>BIS 142 (3) Intermediate Keyboarding</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>BIS 164 (3) Business Communication I</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>CIS 203 (3) Web Security and Maintenance OR</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>BIS 136 (3) Terminology and Proofreading</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Semester - 15 credit hours</th>
<th>Prerequisites</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 250 (3) Records Management</td>
<td>(e)</td>
<td></td>
</tr>
<tr>
<td>BIS 254 (3) Office Procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIS 200 (3) Advanced Word Processing Applications</td>
<td>(f)</td>
<td></td>
</tr>
<tr>
<td>BIS 264 (3) Business Communication II</td>
<td>(g)</td>
<td></td>
</tr>
<tr>
<td>CIS 205 (3) e-Commerce: Concepts &amp; Technology OR</td>
<td>(h)</td>
<td></td>
</tr>
<tr>
<td>CIS 221 (3) Computers in Business</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

@ **PREREQUISITES**

a. BIS 140 OR equivalent
b. Recommend concurrent enrollment in BIS 140 OR CIS 100 OR knowledge of correct keyboarding techniques.
c. CIS 100
d. BIS 164, ENG 111 may be taken concurrently
e. CIS 100, BIS 140 OR equivalent
f. BIS 140 OR equivalent, CIS 100 recommended.
g. BIS 164 OR ENG 111
h. Prerequisite or Corequisite: ACC 201
PROGRAM COSTS

Q: How much will this program cost me?

A: Tuition and Fees (in-district rates) $4631.00
   Tuition and Fees (out-district rates) $8739.50
   Books and Supplies $1661.94
   On-campus room and board not offered

PROGRAM FINANCING

Q: What are my financing options to pay for the program?

A: In addition to any grant and scholarship aid for which they are eligible, 50% of graduates used loans to finance their education. The median debt for program graduates:
   * Fewer than 10 students graduated from this program in 2010/2011 therefore no data is provided.

   Federal Loans $X,XXX
   Private Educational Loans $X,XXX
   Institutional Financing Loans $X,XXX

PROGRAM SUCCESS

Q: How long will it take me to complete this program?

A: The program is designed to take 12 months to complete.
   XX% of graduates from this program finished in this time.

Q: What are the chances of getting a job when I graduate?

A: The job placement rate for students who complete the program is n/a.

Q: Will I be able to pay back my student loans?

A: XX% of students in this institution who took out federal student loans are successfully repaying them.

ADDITIONAL LINKS AND INFORMATION

Occupation: Office Clerk

SOC code: 43-9061.00

Occupational Profile URL: http://www.onetonline.org/link/summary/43-9061.00

92
<table>
<thead>
<tr>
<th>Code</th>
<th>Program Name</th>
<th>Page</th>
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<tbody>
<tr>
<td>ACC</td>
<td>ACCOUNTING</td>
<td>95</td>
</tr>
<tr>
<td>ALH</td>
<td>ALLIED HEALTH</td>
<td>96</td>
</tr>
<tr>
<td>AMS</td>
<td>AUTOMOTIVE SERVICE</td>
<td>97</td>
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<td>ANT</td>
<td>ANTHROPOLOGY</td>
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<td>ART</td>
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<td>BIO</td>
<td>BIOLOGICAL SCIENCES</td>
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<td>BIS</td>
<td>BUSINESS INFORMATION SYSTEMS</td>
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<td>BUS</td>
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<td>CHM</td>
<td>CHEMISTRY</td>
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<td>CIS</td>
<td>COMPUTER INFORMATION SYSTEMS</td>
<td>106</td>
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<td>CJS</td>
<td>CRIMINAL JUSTICE SYSTEM</td>
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<td>CONSTRUCTION - M-TEC</td>
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<td>DRAFTING</td>
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<td>EARLY CHILDHOOD EDUCATION</td>
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<td>ENG</td>
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<td>ENVIRONMENTAL SCIENCE</td>
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<td>GERMAN</td>
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<td>HISTORY</td>
<td>119</td>
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<td>HEALTH INFORMATION TECHNOLOGY</td>
<td>120</td>
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<tr>
<td>HRA</td>
<td>HEATING / REFRIGERATION / AIR CONDITIONING</td>
<td>121</td>
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<tr>
<td>HUM</td>
<td>HUMANITIES</td>
<td>124</td>
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<tr>
<td>IND</td>
<td>INDUSTRIAL TECHNOLOGY (Machine Tool)</td>
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<td>JOR</td>
<td>JOURNALISM</td>
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<td>NATIVE AMERICAN LANGUAGE</td>
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<td>NURSING EDUCATION</td>
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<td>PHYSICAL EDUCATION</td>
<td>132</td>
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<td>PHL</td>
<td>PHILOSOPHY</td>
<td>133</td>
</tr>
<tr>
<td>PHT</td>
<td>PHARMACY</td>
<td>134</td>
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<tr>
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The College year is composed of two semesters, one fall and one winter, there is also one spring session, and the units of academic study are recorded in credit hours. Class dates and times are published on MidWeb.

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**EXAMPLE**

**ENG 201 English Literature I  3(3-0)**  
A survey of works of major authors of English literature from Beowulf through the 18th century.  
Prerequisite: ENG 112 or permission of the instructor.

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**COURSE LISTING DEFINITIONS ARE AS FOLLOWS:**

**Course Number and Title:** Designates the course discipline, number and title. Courses numbered 000-099 are designated to serve purposes at other than normal freshman or sophomore levels. Such courses normally will not transfer or satisfy graduation requirements. Courses numbered 100-199 are primarily introductory in scope and are normally, although not necessarily, taken during the freshman year. Courses numbered 200 and above are designed for the more advanced student and are usually elected during the sophomore year.

**Credit Hours:** The number of credits a course is assigned toward graduation.

**Lecture-Laboratory Hours:** The first number in parentheses refers to the hours the student will spend per week in the classroom, in a lecture setting. The second number refers to the instructional hours that a student will spend in a laboratory. The addition of these two figures will produce the total number of contact hours the student will spend per week in class.

**Course Description:** An explanation of the knowledge and skills gained by successful completion of the course.

**Prerequisite:** Requirements which must be met or courses which must be taken before enrolling in a specific course.

**Corequisite:** Courses which must be taken at the same time as the desired course unless previously completed.

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**ACC) ACCOUNTING**

**ACC 050 Accounting Basics 1(2-0)**  
This Individualized Learning Center course is a computerized accounting course designed for understanding of basic accounting concepts. The course may be taken as a review of such material or as initial preparation for further accounting studies.

**ACC 201 Financial Accounting 4(4-0)**  
This course is an introduction to the accounting process including measurement, reporting, and interpretation of principles for assets, liabilities, owners equity, revenues, and expenses. Covers service and merchandising types of businesses. Prerequisite: BIS 120 for Business Information students only.

**ACC 205 Payroll Accounting 3(4-0)**  
This course is designed as a study of the methods of computing wages and salaries, keeping payroll records, and making government reports. Students will practice completing government forms and filing of periodic reports. This course also introduces students to the processing of payroll through the use of the microcomputer. In addition to the classroom work, each student is required to do a minimum of one hour of individual laboratory work per week. Prerequisite: ACC 201 recommended.

**ACC 211 Managerial Accounting 4(4-0)**  
The emphasis in this course is on uses of accounting data internally by managers in directing the affairs of organizations. An introduction to financial statement analysis and manufacturing accounting included in addition to classroom work. Prerequisites: Minimum grade of C in ACC 201.

**ACC 231 Principles of Cost Accounting 3(3-0)**  
This course covers the use of cost accounting as an aid to management decision making. Process, job order, and standard cost systems are covered in detail. Prerequisite: ACC 211.

**ACC 251 Tax Accounting I 3(3-0)**  
This course is designed for persons new or inexperienced in the preparation of federal and Michigan income tax returns. The emphasis is preparation of form 1040 and supporting schedules. Included is an introduction to computerized tax planning and preparation. Prerequisite: ACC 201 recommended.

**ACC 252 Tax Accounting II 3(3-0)**  
The emphasis in this course is placed on current tax law provisions. Topics include corporations, partnerships, and estates and trusts, as well as more complex individual tax returns. Prerequisite: ACC 251.
**ACC 261 Computerized Accounting 3(3-0)**

An introduction to the use of computers in accounting, this course covers computerized business accounting systems including computerized payroll systems. In addition, there will be utilization of spreadsheets. In addition to classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisites: CIS 130, ACC 211

**ACC 280 Co-Op 3(1-0)**

Co-op is a capstone course planned for the last semester of the Associate in Business: Accounting Degree. The students will be employed in an approved co-op position selected by the college coordinator and will also attend a weekly one hour classroom lecture/discussion. A waiver may be allowed for the work component only with equivalent previous/present work experience as determined by the coordinator. An individual evaluation is made by the coordinator only upon student request. Documentation by the employer will be required. Prerequisite: The student must have completed at least 45 credit hours in the Associate in Applied Science: Accounting Degree.

**ACC 290 - 299 Selected Topics 3(3-0)**

These courses are designed to investigate various topics in Accounting not included in current courses. Topics will be announced.

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**ALH ALLIED HEALTH**

**ALH 100 Medical Terminology 2(2-0)**

This course is an introduction to medical terminology. Emphasis is placed on the meaning, pronunciation, spelling, and application of common medical terms, abbreviations, prefixes, stems, suffixes, etc., as related to the human body tissues, organs, systems, etc.

**ALH 112 Insurance Billing 3(3-0)**

This course deals with the insurance and billing processes needed to deal with the major health carriers. Students will learn how to process a variety of claim forms and will learn proper billing, record keeping, and collection procedures. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: ALH 100

**ALH 125 Introduction to the Health Care Environment 3(3-0)**

This course is designed to introduce the allied health student to health care today, health care systems, functions and trends, ethical and legal responsibilities in health care, workplace safety, handling hazardous materials, reporting hazardous activities, emergency preparedness, ergonomics, infection control, controlling health care costs, historical background, interpersonal-relationships, future roles, and successful employment strategies. The course will be laboratory based and cover a common core of clinical skills used by health care providers. The student will be introduced to health care professional organizations. The course provides the student with the foundation upon which other courses build and expand. Prerequisites: ALH 100

**ALH 212 Clinical Procedures I 3(3-0)**

This class is an introduction to common procedures performed in the medical office setting for the Medical Assistant. A course designed with emphasis on safe, accurate administration of medications. Through use of the text, the students will acquire knowledge of drug actions, major side effects, and techniques of administration as well as gain basic skills necessary to assist the physician in the examination of, diagnosis and treatment of patients in the office setting. Prerequisite: Admission to the Medical Assistant Program Corequisite: ALH 212

**ALH 213 Pharmacology for Medical Assistants 3(3-0)**

Competency-based objectives to guide Medical Assistant students in their study of each unit in the Pharmacology text. This class stresses the six rights of drug administration, including drug administration procedures that include standard precautions, purpose, equipment/supplies, and procedure steps to administering medications. Emphasis is placed on the legal implications of drug therapy, safety, and accuracy in calculating and administering medications. Prerequisite: Admission to the Medical Assistant Program Corequisite: ALH 212

**ALH 214 Clinical Procedures II 3(3-1)**

Introduction to clinical duties of the Medical Assistant student related to medical specialties. Review of anatomy and physiology of the human body. Disorders of the human body, diagnostic and therapeutic procedures are emphasized and critical thinking is utilized in caring for patients in the medical office. Prerequisites: ALH 212, ALH 213 Corequisite: ALH 230

**ALH 220 Medical Law and Ethics 3(3-0)**

This course is designed to teach the legal and ethical aspects of employment in health care delivery. Case studies will be reviewed and students will become familiar with the principles of medical ethics as they apply to both physicians and medical assistants. A few of the topics to be covered are: patient obligation in a medical contract, patient confidentiality, standards of care, physicians liability for employees, release of information, and patient rights and responsibility in receiving medical care.
ALL 230 Laboratory Procedures for the Medical Office 4(3-2)
This course is designed primarily for the allied health field, and medical assistant students in particular. The student should have a basic understanding of both biological principles and anatomy and physiology. The student will, through lecture and lab, gain an understanding of the theory of laboratory procedures as well as the skills to perform accurately in the Physicians Office Laboratory (POL) setting. Prerequisite: ALL 212, ALL 213 Corequisite: ALL 214

All 250 Medical Assisting Office Externship 4(1-0)
This externship course provides supervised and professional work experience in a medical office setting and will include both administrative and clinical procedures. Written projects and reports will enable the student to develop management skills, professional communications and critical thinking skills. Prerequisite: ALL 212, ALL 213, ALL 214, ALL 230.

ALL 290 Special Topics- Review of Clinical Procedures 1(0.5-0)
This course is designed for students who have taken ALL 210 and did not complete their externship within 12 months of the ALL 210 course. It is a review of the functions, role and responsibilities of a medical assistant in a medical office setting. Prerequisite: ALL 210 or permission from Department.

ALL 295 - 299 Current Topics in Allied Health 3(3-0)
These courses are designed to investigate various topics in health not included in current courses. Topics will be announced.

(AMS) AUTOMOTIVE SERVICE

AMS 104 Basic Automotive Electricity 2(1-2)
Studies fundamentals and applications in automotive electrical, electronics, voltage, current, resistance, series and parallel circuits, magnetism, application of Ohms Law, and wiring diagrams. Develops skills in establishing an electrical base for advanced electrical/electronic courses through the use of meters and test equipment.

AMS 110 Engine Fundamentals & Overhaul 4.5(3-3)
Studies will include engine principles, design construction and operation. Skill development of proper service procedures of modern gas engines will be stressed. The student will remove and replace an engine from a car or light truck. They will also disassemble and reassemble a complete engine with emphasis on manufacturer’s specifications and procedures.

AMS 116 Electrical Systems I: Electrical Accessories 3(2-2)
Studies lighting systems, instruments, warning devices, horn, and other accessory circuits using wiring diagrams. Develops skills in diagnosis, adjustment and repair of accessory and convenience circuits. Prerequisite: AMS 104 (may be taken concurrently) or Instructor approval

AMS 124 Automotive Heating & Air Conditioning 4(3-2)
Studies passenger car and light truck cooling, heating and air conditioning system operation and diagnosis. Will also cover the 134A system service. Develops skills in diagnosis and repair of the cooling, heating and air conditioning system components.

AMS 125 Engine Performance I 5(4-2)
Studies review of basic electricity and magnetism, fundamentals of electronics, basic ignition systems, basic fuel systems and introduction to emission systems. This course establishes a base for advanced work in AMS 126.

AMS 126 Engine Performance II 5(4-2)
Studies units of instruction on G.M., Ford and Chrysler throttle body and multi-port fuel injection systems. Also covers distributorless ignition systems and OBD II operation and service. The students will be performing operational tests on late model cars using scan tools and other special test tools. They will be doing drivability testing and troubleshooting on late model cars. Prerequisites: AMS 104, AMS 125, OR State certified in engine tune-up area.

AMS 205 Steering & Suspension Systems 4(3-2)
Studies suspension and steering systems. Skill development will be focused on subframe alignment, steering, suspension, and four-wheel alignment.

AMS 206 Brakes 4(3-2)
Studies brake systems. Skill development will be focused on drum, disc, hydraulic, power assist, and anti-lock brake systems.

AMS 214 Automatic Transmissions 4.5(3-3)
Studies passenger car and light truck automatic transmissions terminology, operation, service and diagnosis. Develops skills in service and repair of passenger car and light truck conventional and computer-shifted front-wheel and rear-wheel drive transmissions.

AMS 222 Manual Transmissions 4(3-2)
Studies passenger car and light truck clutches, manual transmissions, drive shafts, differentials, transaxles, front-drive axles, and transfer cases operation, service and diagnosis. Develops skills in diagnosis and service of clutches, manual transmissions, drive shafts, differentials, transaxles, front-drive axles, and transfer cases.

AMS 223 Electrical Systems II: 4(3-2)
Studies battery service, cranking systems, and charging systems. Develops skills in diagnosis, adjustment and repair of battery, cranking and charging systems.

AMS 232 Co-Op 4(1-0)
This course is a 15-hour, 15-week internship at an automotive dealership repair facility, or automotive repair facility that provides hands-on skills to enhance the professional qualifications and employment opportunities for students.
AMS 295 Special Topics 3(3-0)
This course is designed to investigate various topics in Automotive Technology that are not included in current courses. Topics will be announced. This course is offered based on demand.

(ANT) ANTHROPOLOGY

ANT 170 Introduction to Cultural Anthropology 3(3-0)
The student is introduced to the process of culture evolution as well as other anthropological theories. The purpose is to give the student an understanding of the underlying unity of the human experience while, at the same time, providing insight into cultural variability.

(Art) ART

ART 105 Drawing I-Introductory 3(3-0)
A basic introduction to drawing media and techniques and an exploration of the concepts of space and form in varied subject matters.

ART 110 Basic Photography 3(3-0)
This course is designed for persons wanting a working knowledge of cameras, lenses, and fundamentals of photography. Topics covered include: f-stops, shutter speeds, depth of field, film selection, composition, electronic flashes, and other basics. Students will be introduced to the black and white darkroom where they will develop film and produce prints.

ART 115 Design I 3(3-0)
Elements and principles of design and experiences with materials in problem situations.

ART 130 Painting I 3(3-0)
An introduction to painting with the exploration of media, techniques, and the concepts of space, form, and color.

ART 135 Graphic Design I 3(3-0)
An introduction to the concepts and techniques of visual communication. The focus is on typography, page layout, grid structure, production requirements, design history and the design problem-solving process.

ART 137 Digital Photography 3(3-0)
An introduction to digital photography and computer software used in photo manipulations. Students will learn various techniques in creating enhanced images, including color balance, sizing, sharpening. Students will learn how to download images from digital cameras and to scan photographic prints and film. Students will learn correct file formats for output and print management. Discussions will also include composition, lighting, and personal creativity. Prerequisites: ART 110 or permission of instructor

ART 150 Printmaking 3(3-0)
Introduction to the basic techniques of woodcut and printing as a fine art.

ART 152 Introduction to Website Design 3(3-0)
This course introduces the fundamentals of web design utilizing graphic design software, including Dreamweaver, and WISIWIG editors. Students will explore web based concepts, contemporary methods of applying media and dynamic rich content to their websites by applying a working knowledge of XHTML/HTML and Cascading style Sheets. Final course outcome is an online web portfolio. Prerequisite: CIS.100.

ART 205 Drawing II 3(3-0)
A concentration of experimental media, techniques, spatial relationships, and conceptual processes of drawing. Prerequisite: ART 105

ART 206 Comic Book and Graphic Novel Illustration (3-0)
This course is designed to give students a comprehensive introduction into the concepts and techniques used in the creation of comics and sequential art. Students will explore character development, layout, timing and illustration styles used in this specialized field, with specific focus on both print and digital media outlets.

ART 210 Illustration 3(3-0)
Development of conceptual and technical skills in drawing for reproduction using various media. Prerequisites: ART 235, ART 205

ART 211 Page Layout I 3(3-0)
This course introduces the student to the software and tools used in page layout. Emphasis is on learning the software and tools and applying basic design principles in the production of files for final output. Students will learn the fundamentals of page layout, typography, effective use of color, proofing, and preparing print ready documents.

ART 215 Design II 3(3-0)
Continuation of Design I, elements and principles of two-dimensional design. Introduction to three-dimensional design through problem-solving exercises. Prerequisite: ART 115

ART 220 Figure Drawing 3(3-0)
Students will learn to draw the human figure based on an understanding of anatomy, proportion, perspective, and the effect of light. Prerequisite: ART 205 or permission of instructor.

ART 230 Painting II 3(3-0)
Continuation of the aims of Painting I with emphasis on personal development. Prerequisite: ART 130
ART 235 Graphic Design II 3(3-0)
A continuation of ART 135 with an emphasis on the integration of type and image in visual communication. Focuses on an exploration of tools, techniques, and hands-on skills required in the creation of professional illustrations and graphics. Prerequisites: ART 135

ART 236 Graphic Design III 3(3-0)
Continuation of ART 235 with an emphasis on refining problem-solving skills required in a professional environment. Focuses on research and analysis of visual communication, as well as the creation of portfolio-building projects. Prerequisite: ART 235 or permission of Instructor

ART 237 Photography II 3(3-0)
This course is a continuation of ART 110 Basic Photography. Students will be given advanced projects in exposure, lighting, motion control, depth control, film and composition. Projects will be completed in black and white film, with the students processing and printing their own projects. Prerequisite: ART 110

ART 238 Advanced Desktop Publishing 3(3-0)
This course examines the process of taking a design layout successfully through the stages of a computer page layout software program, pre-press, proofing, printing, finishing and binding. Students will learn the use of scanners, halftones, color separations, proper resolutions, and effective fonts. Prerequisite: CIS 210 or permission of the Instructor

ART 239 Page Layout II 3(3-0)
This course is a continuation of ART 211 Page Layout I. Students will be assigned advanced page layout projects. This course will examine all aspects of production as they relate to print, including correct document construction, color space and color systems, separations, preflight, print production and paper considerations. Projects will focus on the use of effective design principles, proper file preparation, preflight of files, and production process. Prerequisite: ART 211

ART 240 Studio Problems in Graphic Design 3(3-0)
An opportunity for students to work independently on projects related to the graphic design industry. Included in the course will be individual assistance in preparing a portfolio for seeking employment or further education. Prerequisites: ART 110, 130, 205, 215, 236, and 239

ART 241 Portfolio 1(1-0)
In this course the student will be taken through the process of preparing an art portfolio, resume and artist statement based on their individual needs for the purpose of transfer to a 4-year college for further study or promotion of their artwork. Students will be guided through the process of selection of artwork, documentation, and compilation of the portfolio as well as the writing of a resume and artist statement. Prerequisite: Permission of instructor

ART 245 Art in the Elementary School 3(3-0)
An investigation of how art fits into the Elementary School Curriculum and what its impact is on all elementary children. To be presented through lecture, readings, slides or prints, and a team teaching experience by all participants. (*Note: Please be advised that ART 245 will transfer to Central Michigan University as ART 345 only if: 1) the student has successfully completed EDU 107; and 2) 45 clock hours of pre-professional experience in K-12 classroom.

ART 247 Contemporary Photography 3(3-0)
This course is designed for the student who has completed Art 110 and Art 137 and now wishes additional hands on practical experience using the concepts and principles learned in these classes. Students will learn more advanced techniques and will be able to apply these techniques to projects a professional photographer might encounter. Prerequisites: ART 110 and ART 137

ART 252 Website Design II 3(3-0)
This course introduces advanced web design techniques utilizing open source e-commerce content management system (CMS), Apache web server distribution software, graphic design software, such as Dreamweaver, advanced CSS and an introduction to PHP. Students will apply media and dynamic rich content to their CMS designs by applying a working knowledge of XHTML, Cascading Style Sheets, PHP and Apache. Final course outcome is an online e-commerce web portfolio. Prerequisite: ART 252 Website Design II 3(3-0)

ART 253 Flash Fundamentals 3(3-0)
This course introduces the fundamentals of the use of Flash in web design and animation utilizing Adobe graphic design software and implementing the foundations of ActionScript. Students will explore contemporary methods of applying animations to their Flash websites. The final course product is a promotional interactive portfolio. Prerequisite: CIS.100.

ART 254 Motion Graphics 3(3-0)
This course will focus on video pre and post-production for the purpose of commercial use, including video editing, sound production, operating production equipment, lighting and industry standard digital effects. Students will apply media and dynamic rich content to their motion graphics and video projects. Final course outcome is a video portfolio. Prerequisite: ART.253

ART 255 Emerging Web Technologies 3(3-0)
This course is a continuation of ART.252 Website Design II. It introduces advanced, emerging technologies in web design/ multimedia design and current emerging web technologies. This is a growing field and will give graphic design students opportunities to expand their background in current web technologies. The final course outcome is a functional, online portfolio. Prerequisite: ART.252.
ART 256 Business in Art-Entrepreneur 3(3-0)
This course will train students in the business of art, graphic design and in an introduction to small business ownership. It is designed for students seeking key opportunities to attain professional development, self-employment and administrative potential in the art and design industry or to prepare students to transfer their coursework towards further undergraduate study. Prerequisite: ART 252 or permission of instructor.

ART 280 Independent Study in Art I 3(3-0)
An opportunity for advanced students to work with an instructor on individualized projects in various selected media. Prerequisite: Permission of the Instructor.

ART 281 Internship I 3(1-0)
Designed to provide on-site work experience in a business environment. Under cooperative supervision by the College and the work-site Supervisor, students will further develop skills and gain training in the design field. Prerequisite: Permission of the Internship Coordinator.

ART 282 Internship II 3(1-0)
Continuation of ART 281. Designed to provide on-site work experience in a business environment. Under cooperative supervision by the College and the work-site Supervisor, students will further develop skills and gain training in the design field. Prerequisites: ART 281 and permission of the Internship Coordinator.

ART 285 Independent Study in Art II 3(3-0)
Continuation of ART 280. Prerequisites: ART 280 and permission of the Instructor.

ART 290 - 299 Special Topics 3(3-0)
This course is designed to investigate various topics in Art that are not included in current courses. Topics will be announced. This course is offered based on demand.

(BIO) BIOLOGY

BIO 101 College Biology 4(3-2)
Survey of major topics in biology, with emphasis on cell structure, physiology, reproduction, genetics, evolution, behavior, and morphology of plants and animals.

BIO 110 Concepts in Microbiology 1(1-0)
This course is an introductory study of microorganisms such as bacteria, fungi, algae, viruses, & protozoa. The disease process involving these microorganisms will also be studied. Prerequisite: Minimum grade of C in BIO 101.

BIO 120 Introduction to Human Disease 3(3-0)
This course is designed to introduce the student to the structure of common diseases, signs, symptoms, causes and effects, as well as treatment. Students will learn how the different diseases relate to the different body systems, and other conditions. *ALH 100 Recommended

BIO 131 Basic Anatomy & Physiology 3(3-0)
This is an introductory course to Anatomy and Physiology. It is assumed that students enrolling in this course have limited background in chemistry and biological science. The major topics presented in the course are biological principles, skeletal, muscular, integumentary, nervous, circulatory, respiratory, digestive, excretory, endocrine, and reproductive organ systems. Prerequisite: Minimum grade of C in BIO 101.

BIO 135 Human Anatomy and Physiology 5.5(4-3)
This course provides students with an intensive, in-depth introduction to the structure and function of all human body organ systems. The emphasis is on homeostasis of body systems under normal structure and function, with the inclusion of some pathologies. The laboratory portion includes dissections, study of anatomical models and slides, and physiological experiments. Prerequisites: Minimum grade of C in BIO 101, or successful completion of BIO 135 entrance exam.

BIO 141 Anatomy & Physiology I 4(3-2)
A lecture and laboratory course dealing with the anatomy and physiology of the human body with emphasis on homeostasis. Topics include skeletal, muscular, integumentary, nervous, and digestive systems. Prerequisite: Minimum grade of C in BIO 101.

BIO 142 Anatomy & Physiology II 4(3-2)
This course is a continuation of BIO 141. Topics include: respiratory, excretory, endocrine, reproductive, and circulatory systems. Emphasis is on physiology and integration of the systems of the body. Prerequisite: BIO 141

BIO 201 Botany 4(3-2)
Structure and function of major groups of plants with emphasis on metabolism and reproduction. Prerequisite: Minimum grade of C in BIO 101.

BIO 202 Field Ecology 3(3-2)
An introduction to a field study of basic ecology, with emphasis on the interactions between plants, animals, humans, and the environment.

BIO 203 Zoology 4(3-2)
Structure and function of major groups of animals with emphasis on complete study of selected types. Prerequisite: Minimum grade of C in BIO 101.
**BIO 204 Human Genetics 3(3-0)**

This is an introductory course dealing with principles of inheritance as they apply to humans. This course assumes no prior background in biology or chemistry. The topics considered are basic genetic principles, molecular basis of inheritance, regulation of gene expression, mutation, and the application of these principles to human heredity. Special emphasis is given to genetic disorders and the new technologies developed to deal with them.

**BIO 210 Microbiology 4(3-3)**

Microbiology involves a study of the bacteria, fungi, algae, viruses, protozoa, and other related micro-organisms and their relationship to our society. The laboratory acquaints the student with standard handling and culture techniques of most of these organisms, the preparation of culture media, classification techniques, representative micro-organisms (living and prepared slides) of the various groups, standard staining methods, and a number of biochemical tests. Prerequisite: BIO 101 with a minimum grade of C, OR High School Advanced Placement Biology course, completed within the past 3 years, with a minimum grade of B.

**BIO 215 Radiation Biology 1(1-0)**

This course is an introductory study of the biological effects of exposure to ionizing radiation. Topics include factors affecting radiosensitivity, hematologic effects, and radiation induced malignancy. Prerequisite: BIO 101 with a minimum grade of C.

**BIO 221 Nature Study 3(2-2)**

Practical knowledge of the out-of-doors is stressed. Collection and identification of plants and animals and field activities included. Prerequisite: BIO 101 recommended.

**BIO 245 Advanced Anatomy & Physiology/Intro to Pathophysiology 4(4-0)**

This course is an advanced study of the concept of Anatomy & Physiology with an emphasis on the disease process. It is intended for those students that have previously completed Anatomy & Physiology I & II more than 5 years ago and less than 10 years ago, and also for those students who would like to increase their knowledge of this subject matter. Pre-RAD or Pre-NUR students must complete this course with a minimum grade of B- to qualify for admission into the program. Prerequisite: BIO 141 & 142 completed less than 10 years ago.

**BIO 268 Independent Study in Biology 1(1-0)**

This course is designed for students who desire to advance their understanding and challenge their ability in specialized areas of biology. Library, laboratory and/or field research is required, as is a written report at the completion of the course. Prerequisites: Satisfactory completion of at least one laboratory biology course and permission of the Instructor.

**BIO 290 - 299 Selected Topics 5(6-0)**

Courses designed to investigate various topics in Biology not included in current courses. Topics will be announced.

**BIS 120 Office Mathematics 3(3-0)**

This course covers basic mathematical operations & concepts as applied to a variety of business and personal situations. Examples of topics: review of arithmetic operations, fractions, decimals, mortgages, taxes, checking accounts, payroll, & consumer & business credit. In addition to classroom work, each student is required to complete a minimum of 1 1/2 hours of individual lab work per week.

**BIS 126 Introduction to Medical Transcription 3(3-0)**

This course serves as an introduction to processing medical reports. Students prepare consultation reports, history and physical examination reports, operative reports, discharge summary reports, and special procedure reports including magnetic resonance imaging (MRI) reports, computerized axial tomography (CAT) reports, and sonogram reports. An integrated instructional approach is used where students learn medical terms as they appear in medical reports and relate those terms to the pathologies being treated. This course is an introduction to machine transcription for students pursuing the Associate in Business Degree: Medical Transcriptionist. In addition to classroom work, the students are required to complete a minimum of 1 1/2 hours of computer laboratory work per week. Prerequisite: BIS 140 or competency Corequisite: ALH 100 recommended.

**BIS 127 Applied Office Accounting 4(4-0)**

This course covers basic accounting skills needed in the medical and legal office. Emphasis is on both the how and why of accounting and on performing the accounting function. A practice set will be used to simulate accounting transactions in the medical or legal office-based on the student’s program emphasis. In addition to classroom work, the student is required to complete a minimum of 1 1/2 hours of individual lab work per week. Prerequisite: BIS 120 Prerequisite for Medical Assistant only: MAT 104.
BIS 136 Terminology and Proofreading 3(3-0)
This course helps the student build a better vocabulary & improve spelling & proofreading skills. Three hundred groups of commonly confused words & special lists of frequently misspelled terms are studied. Topics include working with the dictionary, pronunciation, phonetics, word division, prefixes and suffixes, plurals & possessives, & specialized & reference vocabularies. Students improve proofreading skills by identifying errors in typing, spelling, grammar, punctuation, capitalization, format, numbers, word division, & content using appropriate proofreaders marks. In addition to the classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer lab work per week. Prerequisites: BIS 164, ENG 111 may be taken concurrently

BIS 138 Basic Legal Terminology 3(3-0)
This course is designed to give students knowledge and understanding of approximately 800 terms commonly used in the legal field. The students will learn to spell and define the terms and to use them in a legal context. Students will learn correct pronunciation by studying pronunciation guides taken from the dictionary and by listening to CDs. Topics covered include courts and legal systems; litigation pretrial, trial, proceedings, verdicts, judgments, and appeals; civil actions; criminal law; probate, wills and estates; real property; contracts; leases; domestic relations, marriage, separation, and divorce; commercial paper; bankruptcy; agency; equity; partnerships; and corporations. In addition to classroom work, the students are required to complete a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisites: BIS 140 or equivalent or concurrent enrollment, BIS 164 recommended or concurrent enrollment

BIS 140 Beginning Word Processing/Keyboarding 3(3-0)
This course is for the beginning typist. Topics include mastery of the touch system, development of personal-use skills, basic letter styles, term papers, tabulation, and centering using the most current word processing software. Speed ranges of 25-40 words a minute are needed to pass. In addition to classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer laboratory work per week. Prerequisite: BIS 140 or equivalent

BIS 142 Intermediate Word Processing/Keyboarding 3(3-0)
This course is designed to build a marketable keyboarding (typewriting) skill. Business letters, business forms, speed, and accuracy are stressed. Students will use the most current word processing software to create documents. Speed ranges of 40-55 words a minute are needed to pass. In addition to the classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer laboratory work per week. Prerequisite: BIS 140 or equivalent

BIS 164 Business Communications I 3(3-0)
Students will learn/review basic grammar rules, punctuation rules, and sentence structure. Students will use the computer and current word processing software for realistic business office applications of the rules. Students will be introduced to machine transcription and will learn to use office reference manuals. In addition to classroom work, students are required to complete a minimum of 1 1/2 hours of individual computer laboratory work per week. Prerequisite: Recommend concurrent enrollment in BIS 140 or BIS 100 or knowledge of correct keyboarding techniques.

BIS 200 Advanced Word Processing Applications 3(3-0)
This course gives students hands-on experience and exposure to a wide variety of advanced word processing applications using computers and the most current word processing software. The advanced word processing features included teach students the skills needed to pass expert certification exams. These exams validate a student's skills, and supply objective proof to an employer, or prospective employer, that the student knows how to use the software efficiently and productively. Microcomputers are used to produce a wide variety of documents, as well as ways in which the software program interacts with Windows and the Internet. Practice exercises and assignments are the primary source of instruction on the microcomputer. In addition to classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer laboratory work per week. Microsoft Office Specialist (MOS) approved software is used to provide students with skills needed to complete the MOS Expert Certification Exam. Prerequisites: BIS 140 or equivalent, CIS 100 recommended

BIS 221 Computers in Business I 3(3-0)
This course provides insight into the applications of the computer in modern business. The student will study the components of a business computer system, typical applications involving mainframe and personal systems, structure, use of files and databases, and the concepts of networking, teleprocessing, and distributed systems; explore the techniques of business computer system development; and also develop skills in using productivity programs such as databases and spreadsheets to build models solving practical business problems. In addition to the classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer laboratory work per week. Prerequisite or Corequisite: ACC 201

BIS 230 Transcription I 3(3-0)
Using the computer, current word processing software, transcription machines and a variety of reference materials, students develop skill and accuracy in transcribing from CDs and producing mailable documents. Transcription begins with sentences and expands to business letters and other correspondence. Emphasis is placed on correct spelling, grammar, and punctuation skills and proofreading. In addition to classroom work, the students are required to complete a minimum of 1 1/2 hours of individual computer lab work per week. Prerequisites: ENG 111, CIS 100, BIS 136, BIS 142, BIS 164
BIS 234 Transcription II 3(3-0)
This course is an intense application of skills learned in business communications, English, keyboarding/word processing, transcription, and other BIS courses. The students transcribe dictated material into high-quality (mailable) typewritten documents using computers, current word processing software, CDs, and a variety of reference materials. To provide a realistic experience, a word processing simulation is used. In addition to classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer lab work per week. Prerequisites: BIS 200, BIS 230, BIS 240

BIS 236 Medical Transcription I 3(3-0)
This course is an intense application of skills learned in business communications, English, keyboarding, transcription, & medical terminology. The students transcribe dictated material into high-quality (mailable/usable) documents using computers, current word processing software, transcribing machines, & a variety of reference materials. To provide a realistic experience, a medical simulation is used along with dictated documents on CDs. In addition to classroom work, students are required to complete a minimum of 1 1/2 hours of individual computer lab work per week. Prerequisites: ALH 100, BIS 142, BIS 230

BIS 238 Legal Transcription 3(3-0)
This course is an intense application of skills learned in business communications, English, keyboarding/word processing, transcription, and legal terminology. The student will transcribe dictated material into high-quality (mailable) documents using computers, current word processing software, cassette transcribing machines, and a variety of reference materials. A legal simulation will be used along with dictated documents on CD recordings. In addition to classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer lab work per week. Prerequisites: BIS 138, BIS 200, BIS 230, BIS 240

BIS 240 Advanced Word Processing/Keyboarding 3(3-0)
Advanced keyboarding (typewriting) techniques as related to mailable production work are emphasized. Problem-solving ability is developed. To provide a realistic experience, a word processing simulation is used. Speed ranges from 55 to 70 words a minute are needed to pass. In addition to classroom work, each student is required to complete a minimum of 1 1/2 hours of individual lab work per week. Prerequisites: ENG 111, BIS 136, BIS 142, BIS 200

BIS 246 Medical Transcription II 3(3-0)
This course is a continuation of BIS 236 Medical Transcription. Students continue to build their medical terminology knowledge and to transcribe and format high-quality (mailable/usable) medical documents according to guidelines set by the American Association for Medical Transcription (AAMT). Students use computers, current word processing software, CDs, and a variety of reference materials. A medical simulation is used, giving students opportunities to hear and transcribe realistic dictation in many medical specialties as dictated by medical professionals from various ethnic groups. In addition to classroom work, the students are required to complete a minimum of 1 1/2 hours of individual computer lab work per week. Prerequisite: BIS 236

BIS 250 Records Management 3(3-0)
Emphasis is given to clear-cut rules established by the Association of Records Managers and Administrators (ARMA) for the alphabetic indexing and cross-referencing methods (the foundation of records storage methods), as well as the numeric, geographic, chronological, and subject methods. Students are provided realistic records management situations through the use of a simulation. Topics include creation, storage, retrieval, retention, and disposal of records as well as careers in records management. In addition to traditional/paper storage, students use the computer and current software for information storage and retrieval. In addition to classroom work, students are required to complete a minimum of 1 1/2 hours of individual lab work per week. Prerequisites: CIS 100, BIS 140 or equivalent

BIS 254 Office Procedures 3(3-0)
This is a capstone course planned for the last semester of the student's program and is an intense application of skills learned in previous courses. Topics include dress and grooming for business, human relations, telephone etiquette, dictation techniques, job search strategies, effective research and oral presentation techniques, interview preparation, self-analysis and self-improvement, professionalism, and problem solving. Students participate in mock employment interviews and program assessment exit interviews with BIS advisory committee members. Other forms of BIS program assessment may be required. The student continues with preparation of high-quality (mailable) documents from both dictated and rough draft materials. In addition to classroom work, the student is required to complete a minimum of 1 1/2 hours of individual lab work per week.
**BIS 255 Medical Office Procedures 3(3-0)**
This is a course that introduces and teaches medical assisting administrative tasks; teaches records management, medical communications, and scheduling skills; and describes procedures for preparing patients’ charts and bills. Medical practice management and finances are also addressed. Multi-day simulations provide real-world experience with physician dictation. Topics include dress and grooming for business, human relations, telephone etiquette, dictation techniques, job search strategies, effective research and oral presentation techniques, interview preparation, self-analysis and self-improvement interviews. In addition to classroom work, each student is required to complete a minimum of three hours of computer laboratory work per week. Prerequisites: CIS 100, BIS 140

**BIS 256 Medical Transcription III 3(3-0)**
This course is a continuation of BIS 246 Medical Transcription II and is the capstone course on the Associate in Business Degree: Medical Transcriptionist program. Students continue to build their knowledge of medical terminology and to transcribe and format high-quality medical records according to guidelines set by the American Association for Medical Transcription (AAMT). Students use microcomputers, word processing software, CDs, and a variety of reference materials. A medical simulation is used, giving students opportunities to hear and transcribe realistic dictation in several specialties as dictated by medical professionals from various ethnic groups. Students are also given critical-thinking and problem-solving scenarios. In addition to classroom work, the students are required to complete a minimum of 1 1/2 hours of individual computer lab work per week. Prerequisite: BIS 246

**BIS 260 Business Information Systems Co-Op 4(1-0)**
This is a capstone course planned for the last semester of the students program. Students will be employed in an approved Co-op position selected in conjunction with the BIS Co-op course instructor, the MMCC Co-op Coordinator, and the student. This course allows students to combine learning in the classroom with learning in the workplace. An agreement is signed by the student, the employer, and the coordinator to establish training outcomes and employer expectations. MMCC cannot guarantee that Co-op positions are paid positions. Prerequisites: In order to be placed in a training site and enrolled in BIS 260, the student should have completed the first three semesters of the program and must have approval of the BIS Co-op instructor and the MMCC Co-op Coordinator.

**BIS 264 Business Communications II 3(3-0)**
This course studies approaches to verbal and nonverbal communications in business-related situations. Students will prepare written correspondence including business letters and formal business reports. Students will learn techniques for effective oral presentations including the basic creation and use of PowerPoint slides. Internet use is emphasized throughout the course. In addition to classroom work, students are required to complete a minimum of 1 1/2 hours of individual lab work per week. Prerequisites: BIS 164 or ENG 111

**BIS 290 – 299 Special Topics 3(3-0)**
These courses are designed to investigate various topics in Business Information Systems that are not included in current courses. Topics will be announced. These courses are offered based on demand.

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**BUS 105 Food/Beverage Management 3(3-0)**
This course is designed to move the students through the various management steps involved in food service. Food production issues are studied from a managerial point of view. Standards in food production and beverage service are a focal area of the course. This course is designed to build the skills necessary to operate a successful and profitable food service operation.

**BUS 122 Management Theory & Practice 3(3-0)**
An analysis of the manager's job including functions, activities, problems, and responsibilities. The course is designed for first-line supervisors as well as those engaged in middle-management positions. A study is made of reasons why some managers fail and others succeed.

**BUS 151 Introduction to Business Issues 3(3-0)**
A broad, introductory approach to the principles, practices, and procedures employed in modern business and industrial operations. Topics include: business organization, management, the role of stockholders, wholesale and retail marketing, finance and insurance, and location and site determination. An analysis is made of the current issues facing the business environment.

**BUS 153 Business Law 3(3-0)**
Deals with the principles of the law of contracts and agencies and with the legal implications of the partnership and corporate forms of business organization.

**BUS 161 Principles of Merchandising 3(3-0)**
A detailed study of all phases of the movement of goods from the producer to the consumer. Particular attention is paid to the role of retailers and businesses that provide services to the consumer.

**BUS 162 Principles of Marketing 3(3-0)**
Introduction to the field of marketing, including history, market environment, marketing mix, specialized fields, and marketing arithmetic. A study of the marketing functions such as buying, selling, transportation, storage, financing, and pricing is included.

**BUS 171 Principles of Sales 3(3-0)**
Basic principles of sales techniques and personality, selection of sales force, personalities of customers, and methods of increasing sales are covered.
BUS 202 Legal Environment of Business 3(3-0)
Introduction of the concept and use of law as a social institution.

BUS 221 Purchasing and Inventory Control 3(3-0)
Presents a fundamental and practical approach to the problem of buying and basic merchandise control. Subject matter includes planning budgets and stock control through sales analysis. Prerequisite: Minimum grade of C in ACC 201

BUS 222 Labor and Management Relations 3(3-0)
This course covers the scope of industrial personnel management with emphasis upon procuring, developing, maintaining, and effectively using the work force. Attention is given to job analysis and evaluation and union-management relationships. Prerequisite: BUS 122

BUS 225 International Business 3(3-0)
This course analyzes environmental changes as the firm expands globally. Emphasis is placed on the understanding and utilization of diversity and ethics in the development, operation and international expansion of the firm. Multi-cultural work environments, employment and labor issues, domestic and international law, global marketing, trade and finance will be examined. Prerequisites: None

BUS 231 Principles of Advertising 3(3-0)
A survey of advertising as an instrument of modern business including various forms of advertising. Particular attention is paid to advertising for small and medium-sized businesses engaged in providing services and goods to the consumer.

BUS 235 Front Office Operations 3(3-0)
This course is a systematic approach to front office procedures by detailing the flow of business through a hotel, from the reservations process to check out and settlement. The course also examines the various elements of effective front office management, paying particular attention to the planning and evaluation of front office procedures and to human resources management. Front office procedures and management are placed within the context of the overall operation of the hotel.

BUS 241 Supervision and Personnel Administration 3(3-0)
Covers the role of supervision and personnel administration in large and small organizations. Develops techniques for hiring, training, developing, motivation, and evaluating of personnel. Covers wage, salary, and fringe-benefit administration.

BUS 250 Entrepreneurial Management 3(3-0)
A course for those persons interested in operating a small business. Course content includes financial, marketing, production management, and legal and governmental considerations which the proprietor of a successful business must manage. The course places emphasis on analysis of actual small business case studies.

BUS 255 Entrepreneurial Finance 3(3-0)
A course designed for persons desiring to operate or presently operating a small business. Course content includes the study of acquiring business ownership, initial financial planning, and on-going financing requirements. The course emphasizes actual case studies.

BUS 258 Profit Motive: Entrepreneurship 1(1-0)
The understanding of the various managerial, financial, and marketing methods used in the pursuit of profit in business. The exploration of the problems and opportunities for self-employment in the current economic environment. This course taken in combination with two additional courses selected from BUS 259, BUS 260, and BUS 261 will substitute for BUS 250.

BUS 259 Taxes/Accounting 1(1-0)
Various accounting and record-keeping systems are explored as well as the current tax structures as applied to small businesses. This course taken in combination with two additional courses selected from BUS 258, BUS 260, and BUS 261 will substitute for BUS 250.

BUS 260 Management 1(1-0)
Current supervisory, leadership, and time study management theories are studied as applied to small businesses. This course taken in combination with two additional courses selected from BUS 258, BUS 259, and BUS 261 will substitute for BUS 250.

BUS 261 Marketing 1(1-0)
Exploration of product, promotion, pricing, and distribution strategies with concentration on the social, economic, competitive, and legal business environments. This course taken in combination with two additional courses selected from BUS 258, BUS 259, and BUS 260 will substitute for BUS 250.

BUS 291 Business Internship 3(1-0)
Students will work in part-time jobs directly related to their degree programs. Training sessions are held with the employer, instructor, and student. The internship will be limited to students within one semester of graduation and will be used as a capstone course for Management & Marketing, Hospitality Management, and Small Business Management majors only. Prerequisite: Permission of the Internship Coordinator

BUS 293 - 299 Current Topics in Business 3(3-0)
Courses designed to investigate various topics in Business not included in current courses. Topics will be announced.
**CHM 100 Fire Science Chemistry 3(3-0)**
This course is designed specifically for those students on the Fire Science curriculum. The course includes the principles of basic chemistry and their application to the combustion process of fire.

**CHM 105 Introductory Chemistry 4(3-2)**
An elementary study of general chemistry. No previous chemistry background is necessary. The course deals with basic chemical principles and their application to inorganic chemistry. Designed for majors in liberal arts, business, pre-nursing, and to prepare students for CHM 106 or CHM 111. Two hours per week of lab work are included. Corequisite: MAT 104 or equivalent

**CHM 106 Biochemistry for Allied Health 4(3-2)**
Building on a background of basic inorganic chemistry, this course is intended to serve the needs of students in the ADN program and other allied health areas. The course includes an introduction into organic compounds, carbohydrates, fats, proteins, vitamins, hormones, enzymes, nucleic acids, and the energy relationships in metabolic processes. Two hours per week of lab work are included. Prerequisite: Proven competency in basic chemistry by earning a minimum grade of C in CHM 105 (or an equivalent college chemistry course), earning a minimum grade of B in a High School chemistry course (within the last 3 years), or with permission from the instructor.

**CHM 111 General College Chemistry I 4(3-2)**
Fundamental concepts, theories, laws and definitions as they apply to modern Chemistry. CHM 111 and CHM 112 are recommended to constitute the standard one-year course. Two hours per week of lab work are included. Prerequisites: One year high school chemistry or CHM 105 or equivalent; two years of high school algebra or MAT 105 (may be concurrent) or equivalent.

**CHM 112 General College Chemistry II 4(3-2)**
Continuation of CHM 111. A study of chemical equilibrium, electro chemistry, non-metals, metals, organic compounds and processes. Laboratory work includes qualitative analysis. Prerequisite: CHM 111.

**CHM 241 Organic Chemistry I 5(4-3)**
This course includes the study of the nomenclature, physical and spectral properties, structure, stereochemistry, and reactions (with their mechanisms) of saturated and unsaturated aliphatic and aromatic hydrocarbons, halide, alcohols, ethers, and carboxylic acids. Prerequisite: CHM 112

**CHM 242 Organic Chemistry II 5(4-3)**
This course includes the study of the nomenclature, physical and spectral properties, structure, stereochemistry, and reactions (with their mechanisms) of carboxylic acid derivatives, aldehydes, ketones, phenols, amines, alcohols, nucleic acids (proteins), lipids, carbohydrates, nucleic acids, and heterocyclic compounds. Prerequisite: CHM 241

**CIS 100 Introduction to Information Systems 3(3-0)**
This course is designed for students across the curriculum. CIS 100 will emphasize how the computer is used as a conceptual basis for problem solving and the role each hardware and software components play in the computer process. Students will do online research using the internet and electronic libraries. In addition, this course takes students to a higher level of learning in some of the most widely used application programs. Outside lab work is required. Prerequisite: Touch keyboarding skills recommended

**CIS 110 Computer Programming I (visual Basic) 3(3-0)**
A beginning level programming course using Object Oriented Programming. The student will learn programming techniques using a Windows based programming language in a graphical environment. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: MAT 104 or equivalent

**CIS 111 Computer Programming II (Visual Basic) 3(3-0)**
A continuation of CIS 110 in developing Object Oriented Languages concepts. The major project of the course is to develop a professional Windows application. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 110

**CIS 121 Introduction to Java Programming 3(3-0)**
This course is designed to introduce students to developing applications using the Java programming language, object-oriented programming concepts, along with the Java syntax needed to implement them. This course will also introduce students to Java’s role on the Internet. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: MAT 104 or equivalent
CIS 130 Applications With Microcomputers 3(3-0)
A study of various computer applications as applied to business problems. Applications covered include spreadsheets, windows presentation programs, and databases. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 100 with a minimum grade of C

CIS 131 Advanced Java Programming 3(3-0)
This course is designed to advance student's skills in developing applications using the Java programming language. Focusing on issues involved in designing and developing Java applications within an organization. This course will also allow students to develop Java applications for the Internet. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 121

CIS 132 Microsoft Excel 3(3-1.5)
This course covers advanced Excel concepts including Excel lists, working with multiple worksheets and workbooks, working with Excel's editing and web tools, developing an Excel application, data tables and scenario management, using Solver for complex problem solving, importing data into Excel, and using VBA (Visual Basic for Applications) to enhance Excel. In addition to the classroom work, each student is required to do a minimum of 1.5 hours of individual laboratory work per week. Required software is available on computers at the college; if students wish to complete assignments at home, they will need to procure the correct software. Prerequisite: CIS 100.

CIS 135 Introduction to Website Design 3(3-0)
This course introduces the fundamentals of web design utilizing graphic design software, including Dreamweaver, and WYSIWYG editors. Students will explore web based concepts, contemporary methods of applying media and dynamic rich content to their websites by applying a working knowledge of XHTML/HTML and Cascading style Sheets. Final course outcome is an online web portfolio. Prerequisite: CIS 100.

CIS 151 C# Programming I 3(3-0)
This course covers algorithm design and development. An introduction to the design and development of computer programs using the C# programming language is included. In-class work will consist of 1 1/2 hours of lecture followed by 1 1/2 hours of practical application. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work (outside of class) work per week. Required software is available on computers at the college; if students wish to complete assignments at home, they will need to procure the correct software. Prerequisite: MAT 104 or equivalent

CIS 152 C# Programming II 3(3-0)
A continuation of the C# Programming I course, this course provides a review of topics from C# Programming I but focuses on the inheritance, exception handling, using GUI objects and the Visual Studio IDE, controls, event handling, and file and stream processing. In-class work will consist of 1 1/2 hours of lecture followed by 1 1/2 hours of practical application. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of assigned programming work outside the classroom per week (homework). Required software is available on computers at the college; if students wish to complete assignments at home, they will need to procure the correct software. Prerequisite: MAT 104 and CIS 151

CIS 175 C++ Computer Programming I 3(3-0)
This course covers algorithm design and development. An introduction to the design and development of computer programs using the C++ programming language is included. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: MAT 104 or equivalent

CIS 176 C++ Computer Programming II 3(3-0)
A continuation of CPS 175, with an emphasis on elementary data structures, string manipulation, recursion, stacks, queues, linked lists, binary trees, sorting, & searching. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 175

CIS 190 Cisco Internetworking I 3(3-0)
This course is the first in a series of four in the Cisco Networking Academy Program designed to teach students to design, build and maintain computer networks. Fundamentals of computer networks are the primary focus in this course. In addition to classroom work, each student is expected to complete a minimum of 1 1/2 hours of individual work per week. Prerequisite: CIS 100, MAT 104

CIS 195 Cisco Internetworking II 3(3-0)
This course is the second in a series of four in the Cisco Networking Academy Program designed to teach students to design, build and maintain computer networks. Fundamentals of computer networks are the primary focus in this course. In addition to classroom work, each student is expected to complete a minimum of 1 1/2 hours of individual work per week. Prerequisite: CIS 190
CIS 203 Web Security and Maintenance 3(3-0)
This course is designed to introduce students from a variety of curriculums and educational backgrounds to web security and maintenance. CIS 203 is the second level in obtaining the Webmaster certification, and is designed to help individuals and businesses develop the skills they need to meet today’s rapidly growing demand for Web and Internet communication practitioners. Little or no previous technology expertise is required, though familiarity with the operation of a personal computer is necessary and html programming is recommended. In addition to the in-class work and demonstrations, the student is required to do a minimum of 1 1/2 hours of individual laboratory work per week, some must be done at MMCC. Prerequisite: CIS 100.

CIS 205 e-Commerce: Concepts & Technology 3(3-0)
This course introduces students to the basic principles of e-Commerce. The e-Commerce server software will be explored as well as crime and security problems. Students will learn which tools to use to protect networks, servers and clients. Digital payment and electronic billing models will be created. A working plan for internet marketing will be developed. Ethical, social, and political issues raised by e-commerce will be discussed. Prerequisite: CIS 100

CIS 221 Computers in Business I 3(3-0)
This course provides insight into the applications of the computer in modern business. The student will study the components of a business computer system, typical applications involving mainframe and personal systems, structure, use of files and databases, and the concepts of networking, teleprocessing, and distributed systems; explore the techniques of business computer system development; and also develop skills in using productivity programs such as databases and spreadsheets to build models solving practical business problems. In addition to the classroom work, each student is required to complete a minimum of 1 1/2 hours of individual computer laboratory work per week. Prerequisite or Corequisite: ACC 201

CIS 230 Special Topics 3(3-0)
Courses designed to investigate relevant computer information systems. Topics covered are not included in the courses that are currently listed and will be announced prior to the semester in which they are offered. Prerequisite: CIS 100

CIS 246 Computer Setup & Repair-Software 3(3-0)
This course provides students with the skills necessary to diagnose and correct problems that microcomputer users encounter. The course covers installing and upgrading operating systems and applications, memory optimization, and printer configuration. Prerequisite: CIS 100 Recommended.

CIS 247 Computer Setup & Repair-Hardware 3(3-0)
This course provides the student with practical, hands-on experience in installing, maintaining, and trouble-shooting microcomputer hardware. Topics include CPU, storage devices, add-on boards, video displays, printers, communication devices, and configuration. Prerequisite: CIS 100 Recommended

CIS 255 Computer Operating Systems 3(3-0)
A detailed study of the Windows operating system. Windows terms, commands, installation and optimizing techniques will be covered. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 100

CIS 255 Database Systems 3(3-1.5)
This course covers relational database concepts and tools. Specifically, relational database concepts (rows, tables, and keys), table creation/modification (DDL and SQL), forms, reports, and database administration tasks are presented. In-class work will consist of 1 1/2 hours of lecture followed by 1 1/2 hours of practical application. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual additional laboratory work per week (homework). Required software is available on computers at the college; if students wish to complete assignments at home, they will need to procure the correct software. Prerequisites: CIS 100 and CIS 130

CIS 256 Microsoft Windows 2000 Professional 3(3-0)
This course provides students with the knowledge and skills necessary to install, configure, customize, and troubleshoot Microsoft Windows 2000 a single-domain Microsoft Windows 2000-based network. In addition, students learn how to integrate Windows 2000 and Novell NetWare networks. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 270
CIS 260 Systems Analysis 3(3-0)
Introduces the student to the fundamental concepts of systems analysis and design. The role of the systems analyst and the training and skills required to function in this position are presented. Special emphasis is placed upon both written and oral communication skills. The life cycle concept and its application to business systems are discussed. Structured design techniques are emphasized. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 100

CIS 270 Networking Essentials 3(3-0)
This course serves as a general introduction for students to acquire a foundation in current network technologies for local area networks (LANs), wide area networks (WANs), and the Internet. The course provides an introduction to the hardware, software, terminology, components, design, and connections of a network, as well as the topologies and protocols for LANs. It covers LAN-user concepts and the basic functions of system administration and operation. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 110 or CIS 130

CIS 271 Microsoft Windows Server 3(3-0)
This course provides students with the knowledge and skills necessary to install, configure, customize, and troubleshoot Microsoft Windows 2000 Server with Microsoft Windows 2000-based network. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 270

CIS 272 Active Directory Services 3(3-0)
This course will introduce you to Microsoft Windows 2000 Active Directory and prepares the student to plan, configure, and administer Active Directory infrastructure. Students learn how to configure the Domain Name System (DNS) to manage name resolution, schema, and replication. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 256 or CIS 271

CIS 273 Implementation Microsoft Windows Network 3(3-0)
This course is for support professionals who are new to Microsoft Windows 2000 and will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows 2000 Server production. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 271 and CIS 256

CIS 274 Microsoft Internet Information Server 3(3-0)
This course teaches students how to support the various features of Microsoft Internet Information Server 4.0 (IIS). Students will learn how to install, configure, and implement all components that comprise IIS. Students will also have hands-on experience setting up a Web site. In addition to the classroom work, each student is required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: CIS 271

CIS 280 CO-OP 3(1-0)
Co-op is a capstone course planned for the last semester of the Associate in Business: Computer Information Systems Degree. The students will be employed in an approved co-op position selected by the college coordinator and will also attend a weekly one hour classroom lecture/discussion. A waiver may be allowed for the work component only with equivalent previous/present work experience as determined by the coordinator. An individual evaluation is made by the coordinator only upon student request. Documentation by the employer will be required. Prerequisite: The student must have completed at least 45 credit hours on the Associate in Applied Science: Computer Information Systems Degree.

CIS 290 Cisco Internetworking III 3(4-0)
This course is the third in a series of four in the Cisco Networking Academy Program designed to teach students to design, build and maintain computer networks. The focus of this course is on configuring switches and routers; configuring IGRP, Access Lists and IPX on routers. In addition to classroom work, each student is expected to complete a minimum of 1 1/2 hours of individual work per week. Prerequisite: CIS 190, CIS 195

CIS 295 Cisco Internetworking IV 3(4-0)
This course is the fourth in a series of four in the Cisco Networking Academy Program designed to teach students to design, build and maintain computer networks. The focus of this course is on Wide Area Networks, PPP, ISDN, Frame Relay and all CCNA Exam-related learning objectives. It is the final preparation for taking the Cisco Certified Networking Associate examination. In addition to classroom work, each student is expected to complete a minimum of 1 1/2 hours of individual work per week. Prerequisite: CIS 190, CIS 195, CIS 290

(CJS) CRIMINAL JUSTICE SYSTEM

CJS 200 Introduction to Law Enforcement & Criminal Justice 3(3-0)
An introductory course designed to acquaint the student with the components of the criminal justice system. Corrections, courts, police systems are examined. The criminal justice process is explored in detail. The history, relationships, administration, and philosophy of the criminal justice system is also examined.
CJS 201 Criminal Law for Police Officers 3(3-0)
This course is designed to familiarize persons or refresh law enforcement personnel with the purposes and functions of criminal law in the operation of a law enforcement agency. Topics of discussion include philosophy and source of criminal law, criminal procedure, search and seizure, arrest, specific crimes, judicial procedure, and other topics such as defendant rights.

CJS 202 Juvenile Law and Procedures 3(3-0)
This course will examine a broad spectrum of trends and causation of juvenile delinquency, specific treatment techniques, ways of controlling and preventing delinquency, and the role of the law enforcement officer in dealing with all aspects of the legal basis of the police officer’s work with juveniles.

CJS 203 Fundamentals of Supervision & Management in Criminal Justice 3(3-0)
An introductory course designed to acquaint the student with the basics of management and supervision. Criminal Justice roles and responsibilities are examined. Management styles are discussed. Issues of management, operations, employment, training, community relations, and leadership styles all receive attention within this course.

CJS 204 Criminal Investigation 3(3-0)
This course covers the fundamentals of criminal investigation including techniques of surveillance; search at the scene of the crime; collection, recording and preservation of evidence; interviewing witnesses; interrogation of suspects; methods used in the police science laboratory; and cooperation with other agencies in investigation procedures. Prerequisite: CJS 200

CJS 205 Evidence and the Police Officer 3(3-0)
A study of the rules of evidence, from its historical development through the present, pertaining to criminal cases. This course provides an examination into the testimonial, documentary and real evidence as discovered, and evaluated by police in anticipation of a criminal trial. Prerequisite: CJS 201

CJS 206 Police Patrol Operations 3(3-0)
This course provides a study of patrol function and its function. The course includes both the theoretical and functional aspects of patrol function. Emphasis is placed on police patrol responsibilities, its purpose, methods and the different types of police patrol. The student will examine the concept of police patrol to include community policing, types of service calls, interview and reports, the courtroom and testimony, and insights to the technological advancements affecting the patrol officer.

CJS 215 Police Academy 21(0-42)
Mid Michigan Community College has signed articulation agreements with Delta College and Kirtland Community College whereby the student completes Police Academy coursework on the Delta or Kirtland campus. Students who successfully complete the Police Academy Training at Delta College or Kirtland Community College, will receive Mid Michigan Community College credit. In order to receive credit, a student must submit an official transcript, showing satisfactory completion of the Basic Police Academy, as specified by MCOLES (Michigan Commission on Law Enforcement Standards).

CJS 220 Introduction to Corrections 3(3-0)
A study of the history, impact, and philosophy of community-based corrections services including sentencing alternatives and process, probation, parole, and imprisonment. Prisoner rights and offender profiles are also examined.

CJS 221 Legal Issues in Corrections 3(3-0)
An introduction to the laws and procedures regarding federal and state constitutional rights, criminal case processing, court organization, and prisoner rights.

CJS 222 Correctional Facilities and Institutions 3(3-0)
A study of American prisons and jails including their purpose, treatment program availability, organizational structure, and custodial and security requirements. The effect on the incarcerated inmate as well as future correctional considerations are also examined.

CJS 223 Client Growth/Development in Corrections 3(3-0)
An examination of the psychological, social, and environmental causes of criminal behavior in juveniles and adults, the impact of psychological, sexual, medical, and substance abuse problems of offenders and intervention strategies used in institutional and community settings.

CJS 224 Client Relations in Corrections 3(3-0)
An examination of the social and psychological formation of attitudes, their cultural influences, and their impact on minority perceptions. Discriminatory implications and professional responses in corrections are also considered.

CJS 231 Local Detention Academy One 3(3-0)
This course is designed to prepare Correctional Officers Training Students for employment at a local corrections (County Sheriff) facility. This course is one of three academic courses required to satisfy the Michigan Department of Corrections Local Detention Academy of 160 hours of total training. This course includes the following training academy modules and hours: Correctional Law (16 hours), Report Writing (8 hours), Interpersonal Communications (16 hours), Workplace Harassment (2 hours), Stress Management (4 hours), Cultural Diversity (4 hours).
CJS 232 Local Detention Academy Two 3(3-0)
This course is designed to prepare Correctional Officers Training Students for employment at a local corrections (County Sheriff) facility. This course is one of three academic courses required to satisfy the Michigan Department of Corrections Local Detention Academy of 160 hours of total training. This course includes the following training academy modules and hours: Booking and Intake (8 hours), Custody & Security (24 hours), Prisoner Behavior (8 hours), Suicide Awareness (8 hours), and Ethics in Corrections (2 hours).

CJS 233 Local Detention Academy Three 4(3-0)
This course is designed to prepare Correctional Officers Training Students for employment at a local corrections (County Sheriff) facility. This course is one of three academic courses required to satisfy the Michigan Department of Corrections Local Detention Academy of 160 hours of total training. This course includes the following training academy modules and hours: Defensive Tactics (40 hours), Fire Safety (12 hours), First Aid/CPR/AED (8 hours).

CJS 250 Correction Officer Training Internship 5(1-0)
The Corrections Officer Training Internship has been designed to provide the student a pragmatic work experience in a correctional institution/facility. The student intern will be required to complete a minimum of 60 hours at an operational corrections agency. The intern curriculum will include working in a variety of institutional departments and can be adjusted in accordance to the students needs and/or interests. Students must be recommended by one or more corrections instructors and successfully interview with a Corrections Department representative.

CJS 290 - 299 Special Topics 1(1-0)
Courses designed to investigate current topics in corrections not included in courses currently listed. Topics will be announced.

CST 230 NCCER Electrical Level I (part A) 6(6-0)
This is the first of a two-part program that provides a combination of internet-based, textbook and comprehensive hands-on training that addresses electrical safety, the fundamentals of AC/DC electrical systems, different types of electrical fasteners and anchors, single, multiple, and combination circuit designs, Ohm’s Law applications, electrical test equipment, National Electrical Code (NEC) application and construction of electrical raceways, boxes and fittings, conductors, and reading, understanding blueprints, electrical wiring concepts of light commercial and industrial applications, and electrical wiring of residential applications. Prerequisite: CST 230, minimum grade B

CST 231 NCCER Electrical Level I (part B) 6(6-0)
This is the second of a two-part program that provides a combination of internet-based, textbook and comprehensive hands-on training that addresses electrical safety, the fundamentals of AC/DC electrical systems, different types of electrical fasteners and anchors, single, multiple, and combination circuit designs, Ohm’s Law applications, electrical test equipment, National Electrical Code (NEC) application and construction of electrical raceways, boxes and fittings, conductors, and reading, understanding blueprints, electrical wiring concepts of light commercial and industrial applications, and electrical wiring of residential applications. Prerequisite: CST 230, minimum grade B

CST 232 NCCER Electrical Level II (part A) 6(6-0)
This is the first of a two-part program that provides a combination of internet-based, textbook and comprehensive hands-on training that addresses a wider, in-depth knowledge and skill for residential electrical construction. This course also introduces the student to the requirements and practices of light industrial and commercial electrical construction. Prerequisite: CST 231, minimum grade B or NCCER Level 1 Certificate.

CST 233 NCCER Electrical Level II (part B) 6(6-0)
This is the second of a two-part program that provides a combination of internet-based, textbook and comprehensive hands-on training that addresses a wider, in-depth knowledge and skill for residential electrical construction. This course also introduces the student to the requirements and practices of light industrial and commercial electrical construction. Prerequisite: CST 232; minimum grade B

(DRF) DRAFTING

DRF 101 Technical Drawing 3(3-0)
Basic through advanced technical sketching will be explored in order to master the skills of visualization, special perception, and basic blueprint reading. Freehand technical sketching, geometric constructions, orthographic (multi-view) projection, isometric drawings, auxiliary views, sectional views, and dimensioning will be covered as well as basic development of thread representation and manufacturing tolerances. Laboratory assignments include producing piece part technical drawings utilizing industry standards. Students will also be briefly introduced to a CAD program to experiment with computer-aided drafting at the end of the course. Prerequisites: none
This course is designed to introduce the fundamentals of geometric dimensioning and tolerancing. Intermediate through advanced blueprint reading will be explored. Emphasis is placed on basic concepts of dimensioning and tolerancing a drawing with respect to the actual function or relationship of other part features. Prerequisite: DRF 101; IND 101 Recommended

**DRF 120 Introduction to Auto CAD 3(3-0)**

This course is designed to acquaint students with computer aided-drafting using AutoCAD software. System interface, creating, modifying/editing and displaying geometry, dimension styles, block insertion, scale drawings, paper space/model space usage, creating templates, and file management will be introduced to students as they create basic mechanical detail drawings and basic architectural drawings. An introduction to 3-D solid modeling will be explored at the end of the course. Each student will be required to complete a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisites: none

**DRF 201 Mechanical Detail Drafting with CAD 4(4-0)**

This course will prepare the student to make working drawings of mechanical component parts and small assemblies using CAD while gaining more experience using the AutoCAD program. Emphasis will be placed on dimensioning, views, projection, and manufacturing tolerances. Additional skills will be developed in creating pictorials, depicting threads, and fasteners. Intermediate through advanced 2-D AutoCAD commands and techniques will be developed throughout the course. Each student will be required to complete a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisites: DRF 120

**DRF 210 Introduction to SolidWorks 3(3-0)**

Students will have a thorough introduction to 3-D parametric solid modeling design using SolidWorks. Students will explore introductory through advanced SolidWorks commands and techniques including part model creation, assembly model creation, part drawing documents, and other modeling features and commands related to 3-D solid modeling. Students will model mechanical component parts to apply commands and principles. Students are required to do a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisite: none

**DRF 220 Introduction to Soft Plan 3(3-0)**

Students will have a thorough introduction to 2D and 3D architectural design using Soft Plan. This class is available for students to design residential and light commercial buildings. Students will acquire the ability to design floor plans, floor systems and ceiling plans, roof plans, elevation drawings, cross section drawings, site plans, and framing diagrams. Each student is required to complete a minimum of 1 1/2 hours of individual laboratory work per week. Prerequisites: none

**DRF 250 Co-Op 3(1-0)**

This course will cover job readiness objectives that are required to become successful in a professional work environment: co-op is a capstone course planned for the last semester of the Associate in Applied Science Degree: Computer Aided Drafting & Design. The students will be employed in an approved co-op position selected by the college coordinator and will also attend a weekly one hour classroom lecture/discussion. A waiver may be allowed for the work component only with equivalent previous/present work experience as determined by the coordinator. An individual evaluation is made by the coordinator only upon request. Documentation by the employer will be required. Prerequisite: DRF 101, DRF 105, DRF 120, DRF 201, DRF 210, IND 101, IND 113, all with a minimum grade of B OR successful completion of a competency exam (80% or better).

**DRF 280 CAD Program & Software Certification 3(3-0)**

This course will cover the necessary skills and techniques that are included on nationally recognized CAD software certification exams. This course is designed as a CAP program capstone course to help students prepare for program assessment exam(s) as well as CAD software certification exam(s). This course will allow student to revisit the fundamental objectives in computer-aided drafting & design technology such as geometric constructions, object properties & organizational, orthographic & multi-view drawings, dimensioning and notes, auxiliary views, section views, and assembly drawings & block review. Student will also be reintroduced to solid modeling topics that include part modeling, advanced part modeling, assembly modeling, and advanced modeling theory and analysis. Prerequisite: DRF 101, DRF 120, DRF 201, DRF 210, all with a minimum grade of B OR successful completion of a competency exam (80% or better).

**DRF 295-299 Special Topics 1(1-0)**

These courses are designed to investigate various topics in Drafting and Design Technology that are not included in current courses. Topics will be announced. These courses are offered based on demand.

**ECE 101 Introduction to Early Childhood Education 4(4-0)**

This course is designed to assist the student to understand the role and personal characteristics of the childcare provider or teacher, to become familiar with early childhood settings, developmental milestones and development theories. The course consists of lecture and some hands-on activities to guide children’s learning. This course introduces the student to the Child Development Association (CDA) national credential.
ECE 112 Infancy 4(3-2)
This course explores prenatal development, modern childbirth practices, and their effect on the family, normal human development of infants from birth through 2.5 years, and the practical issues confronting professionals who work with children of this age group and their families. Students will choose licensed lab sites where infants and toddlers are in attendance. 30 lab hours are required. This class satisfies Department of Human Services (DHS) requirements for infant/toddler lead teachers.

ECE 113 Early Childhood 4(3-2)
This course explores the principles of growth and development of children ages 3-8 years, as well as strategies for teaching this age group, observation techniques, working with the child in the contest of their family and addressing family diversity. 30 lab hours are required in a licensed Department of Human Services (DHS) or school setting with children ages 3-8 years in attendance.

ECE 114 Interacting With Children, Parent/Adult 4(3-2)
This course will explore the theoretical perspective for interaction, and the influence of significant adults, especially parents, in the lives of children birth through age eight. The student will observe child-adult interactions in natural settings. 30 hours of lab time are required in observing young children in the community. Diversity and parenting styles will be studied.

ECE 150 Preparation for Child Development Associate Credential (CDA) 2(2-0)
This course is designed to prepare the student for assessment by the Council for Early Childhood Professional Recognition to earn the Child Development Associate Credential. The student will be guided through the preparation of a resource file, distribution of parent questionnaires, writing of statements of competence, and review of typical test questions and interview practice sessions. Prerequisites: Be employed in a licensed or registered child care setting, or be a regular volunteer in such a program able to accumulate 480 hours working with young children. (This requirement for the CDA must be accomplished in the nine months prior to sending an application for assessment.) Have accumulated 70 clock hours of early childhood training, either through high school vocational classes, college courses, or in-service training with an early childhood agency. Be able to document these training hours by transcript, certificates or other acceptable means. All hours must have been accumulated within the past four years.

ECE 201 Guidance & Implementenation of Programs for Young Children 3(4-0)
This course is designed to provide students with a variety of opportunities to learn developmentally appropriate methods and theories of guidance, both direct and indirect, in working with young children. In addition, the course will examine all aspects of the early childhood setting, including physical arrangement, curriculum development, positive atmosphere, and age and interest groupings. Evaluation techniques to assess child and program progress will be examined. 30 labs hours in a Department of Human Services (DHS) licensed setting are required.

ECE 202 Creative Development of the Child 3(3-0)
This course will focus on the creative development of children. Students will learn how children become creative thinkers, and how to encourage creativity in young children. Activities will be developed for use in the lab setting that encourage creativity in movement, art, drama and music. 30 lab hours are required in a Department of Human Services (DHS) licensed lab site or school setting.

ECE 206 Parent, School, & Community 3(3-0)
This course will explore the important relationship between the early childhood program and the families involved, as well as taking a look at the school and community resources available to programs and families. Some lab hours will be spent visiting service agencies and attending early childhood events, including a home visit, a parent-teacher meeting, and a parent-teacher conference.

ECE 207 Early Childhood Education Practicum 4(3-2)
This course takes the student into selected early childhood settings where they will prepare activities and give care to children using theories and techniques learned and observed in prerequisite courses. It includes time with peers and instructor to evaluate and discuss the field experience.

ECE 208 Early Childhood Administration 4(3-2)
This course is designed to give students knowledge of the “administration” of early childhood programs. Topics include: record keeping, the hiring and training of staff, child advocacy, using community resources, budgeting, food service, collaboration, public relations, marketing and fund raising. This course satisfies licensing requirements for Program Directors under the Department of Human Services (DHS).
(ECO) ECONOMICS

ECO 110 Economics and Society 3(3-0)
An examination of the development of economic thought and institutions with emphasis on the application of this knowledge to the understanding of today’s world.

ECO 201 Principles of Economics (Macroeconomics) 3(3-0)
Examines major subdivisions of the American economy. Some of the specific areas studied are national income theory, money and banking, the business cycle, economic growth, and international trade.

ECO 202 Principles of Economics (Microeconomics) 3(3-0)
This course is designed to introduce the basic terms and concepts of economics. The economic behavior of specific economic units such as households and business firms is examined. Some principle topics are postulates of economics, supply and demand concepts, and price determination by various types of businesses.

ECO 290 - 299 Selected Topics 3(3-0)
These courses are designed to investigate various topics in Economics that are not included in current courses. Topics will be announced.

(EDU) EDUCATION

EDU 107 Introduction to Teaching 3(3-0)
Introduction to teaching as a career. Survey of students behavior and effective teacher responsibilities preparatory to guided observation and participation in K-12 settings.

EDU 290 Technology in Education 3(3-0)
Students will learn to operate various technology-based equipment; select and assess instructional media materials, courseware, and software; and integrate technology and media into K-12 instruction. This course is taught as a hybrid; 1 1/2 hours in the computer lab and 1 1/2 hours are conducted online each week. Prerequisite: Students should have basic computer and keyboarding skills. Students must have taken EDU 107.

(ELT) ELECTRICITY

ELT 210 Applied NEC Math & Code 3(3-0)
This course will cover the skills required to properly identify specific National Electrical code Laws in the National Electrical code (NEC) book used and the applications of electrical construction. The course also introduces electrical mathematics, formulas, and functions as related to the National Electrical Code. Through a combination of electrical theory, basic electrical calculations, and illustrations relating to the NEC Code, students will gain the knowledge and skills in using the NEC Codebook as a primary tool for electrical applications in conjunction with the skills to properly calculate applied electrical mathematics that is required to work in the electrical industry. This course requires no lab activities. This course DOES NOT fulfill Group II math requirements. Prerequisites: MAT 104 and ENG 104 with a minimum grade of C

ELT 211 Industrial Safety 2(2-0)
This course is an on-line, internet-based training program that introduces safe practices and safety standards required by OSHA. Upon completion of this on-line, internet-based course, students will recognize and have the ability to apply safe practices as required by OSHA in the workplace. Topics included will be PPE, fall protection, hazard communication, back safety, ariel lift devices, indoor cranes, ladders & scaffolds, lockout/tagout, machine guarding, fire extinguishers, riffling, and electrical safety.

ELT 212 Basic Electrical Theory 3(3-0)
The course covers basic rules for AC/DC circuits including how Kirchoff’s law is applied to circuit analysis. Students will be exposed to a comprehensive, systematic approach to the study and application of basic operations of electrical circuits. Activities include inductive troubleshooting, safe circuit operation, analyzing electronic components and circuits. Prerequisites: MAT 104 with a minimum grade of C or placement into MAT 105 or higher AND ENG 104 with a minimum grade of C or placement into ENG 110 or higher.

ELT 213 Basic Applications of Industrial Sensors 2(2-0)
This module will introduce the students in the identification, application, and design of fiber optic sensing technologies used in today’s industry. Students will become familiar with various fiber optic sensing units, limit switches, and their applications in practical and applied technology through both theory and concept and hands-on lab applications. Prerequisites: MAT 104 with a minimum grade of C or placement into MAT 105 or higher AND ENG 104 with a minimum grade of C or placement into ENG 110 or higher.
ELT 214 Programmable Logic Controllers 3(2-0)
This hands-on training allows students to develop competence in operating, programming, and troubleshooting an actual industrial programmable logic controller. The hardware in combination with a student manual creates a curriculum that begins with basic wiring concepts and continues incorporating circuits, ladder logic, programming, and troubleshooting. Prerequisites: ELT 212 with a minimum grade of B

ELT 215 Electrical Control Systems 3(2-0)
Through the combination of internet-based, on-line computer training and practical hands-on lab exercises, this course will enable the student to understand the fundamentals of mechanical electrical control systems. The topics in the course include intro to control schematics, creating schematics, electrical lockout, design & troubleshooting, energy management and electronic controls. Prerequisites: ELT 212 with a minimum grade of B

ELT 216 Computer Control Systems 3(2-0)
Through the combination of internet-based, on-line computer training and practical hands-on lab exercises, this course will enable the student to understand the fundamentals of computer control systems. Topics to be introduced will be intro to programmable logic controllers (PLC), basic plc programming, PLC motor control, event sequencing, RS Logix 500 application development, PLC timer instructions, and PLC counter instructions. Prerequisites: ELT 215 with a minimum grade of B

ELT 217 Industrial Electronics 3(2-2.5)
This course provides comprehensive instruction and installation applications of the most common sensors and instruments used in industrial applications, programmable logic controllers, instrumentation and process control, electrical machines, motor controls, stepper-motor and servo amplifiers, and interfacing electronic systems and networks. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 8600 or ELT 216 with a minimum grade of B

ELT 218 Motor & Motor Controls 3(2-2.5)
A balanced combination of internet-based theory and hands-on practical instruction will enable students to understand the fundamentals and installation of motor control applications. This course is designed to familiarize the student with the subject of basic motor controls, overload and time delay relays, schematic symbols, wiring diagrams, starting methods for squirrel cage, Wye-Delta, synchronous, and wound rotor controls and installation and troubleshooting techniques. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 8000 or ELT 217 with a minimum grade of B

ELT 219 Panel Layout & Installation 3(2-2.5)
This course is a combination of online, internet-based and hands-on, practical instruction that will enable students to understand the fundamentals, terminology, and installation of different types of electrical panel installations and applications. This course is designed to familiarize the student with electrical control schematics and design, the use of AC/DC voltages, operating within the National Electrical Code Laws (NEC), and troubleshooting techniques. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 5403 or ELT 218 with a minimum grade of B

ELT 220 Industrial Conduit Bending & Cable Trays 3(2-2.5)
This course will introduce students to measure and calculate different types and sizes of electrical conduit, layout, and installation procedures, conduit bending and bonding processes, and also properly calculate, layout, measure, cut and assemble electrical cable tray systems in compliance with all National Electric Code Laws. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 5403 or ELT 219 with a minimum grade of B

ELT 221 Troubleshooting Industrial Processes 3(2-2.5)
This course will enable the student to analyze and perform troubleshooting techniques for a variety of commonly known faults found in industrial electrical processes and applications. Students will learn troubleshooting techniques and perform specific repairs based on troubleshooting a variety of circuit faults. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 1550 or ELT 220 with a minimum grade of B

ELT 222 Electrical Control Systems 3(2-0)
This course will introduce students to understand the fundamentals of mechanical electrical control systems. The topics in the course include intro to control schematics, creating schematics, electrical lockout, design & troubleshooting, energy management and electronic controls. Prerequisites: ELT 212 with a minimum grade of B

ELT 223 Computer Control Systems 3(2-0)
Through the combination of internet-based, on-line computer training and practical hands-on lab exercises, this course will enable the student to understand the fundamentals of computer control systems. Topics to be introduced will be intro to programmable logic controllers (PLC), basic plc programming, PLC motor control, event sequencing, RS Logix 500 application development, PLC timer instructions, and PLC counter instructions. Prerequisites: ELT 215 with a minimum grade of B

ELT 224 Industrial Electronics 3(2-2.5)
This course provides comprehensive instruction and installation applications of the most common sensors and instruments used in industrial applications, programmable logic controllers, instrumentation and process control, electrical machines, motor controls, stepper-motor and servo amplifiers, and interfacing electronic systems and networks. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 8600 or ELT 216 with a minimum grade of B

ELT 225 Motor & Motor Controls 3(2-2.5)
A balanced combination of internet-based theory and hands-on practical instruction will enable students to understand the fundamentals and installation of motor control applications. This course is designed to familiarize the student with the subject of basic motor controls, overload and time delay relays, schematic symbols, wiring diagrams, starting methods for squirrel cage, Wye-Delta, synchronous, and wound rotor controls and installation and troubleshooting techniques. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 8000 or ELT 217 with a minimum grade of B

ELT 226 Panel Layout & Installation 3(2-2.5)
This course is a combination of online, internet-based and hands-on, practical instruction that will enable students to understand the fundamentals, terminology, and installation of different types of electrical panel installations and applications. This course is designed to familiarize the student with electrical control schematics and design, the use of AC/DC voltages, operating within the National Electrical Code Laws (NEC), and troubleshooting techniques. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 5403 or ELT 218 with a minimum grade of B

ELT 227 Troubleshooting Industrial Processes 3(2-2.5)
This course will enable the student to analyze and perform troubleshooting techniques for a variety of commonly known faults found in industrial electrical processes and applications. Students will learn troubleshooting techniques and perform specific repairs based on troubleshooting a variety of circuit faults. This course consists of a combination of textbook instruction and hands-on, practical lab applications and instruction to be performed at the M-TEC on the Harrison campus. Prerequisites: MNFG 1550 or ELT 220 with a minimum grade of B
ENG 097 College Reading I 2(2-0)
ENG 097, College Reading I (2 credits), is designed to develop the strategies, skills, and attitudes necessary for reading college-level texts. Based on reading placement score, completion of the English self-placement quiz, and discussion with an academic advisor, students may enroll in ENG 097 in conjunction with English 110, Introduction to Academic Writing, or another course with college-level reading. Students will learn and practice a variety of reading strategies they can use to better understand what they read. In addition to strategic reading, emphasis will be on integrating critical thinking with reading, reading comprehension, reading flexibility, and expanding vocabulary. With an instructor facilitating, students will develop existing reading skills in an interactive, collaborative setting. Prerequisites: None Corequisites: ENG 110 or a class with college level reading.

ENG 098 College Reading II 1(1-0)
ENG 098, College Reading II (1 credit), is designed to develop the strategies, skills, and attitudes necessary for reading college-level texts. Based on reading placement score, completion of the English self-placement quiz, and discussion with an academic advisor, students may enroll in ENG 098 in conjunction with English 110, Introduction to Academic Writing, English 111, Freshman Composition, or another course with college-level reading. Students will learn and practice a variety of reading strategies they can use to better understand what they read. In addition to strategic reading, emphasis will be on integrating critical thinking with reading, reading comprehension, reading flexibility, and expanding vocabulary. With an instructor facilitating, students will develop existing reading skills in an interactive, collaborative setting. Prerequisites: None Corequisites: ENG 110, ENG 111, or a class with college level reading.

ENG 098A College Reading II 1(1-0)
ENG 098A, College Reading II (1 credit), is designed to develop the strategies, skills, and attitudes necessary for reading college-level texts. Based on reading placement score, completion of the English self-placement quiz, and discussion with an academic advisor, students may enroll in ENG 098 in conjunction with English 110, Introduction to Academic Writing, English 111, Freshman Composition, or another course with college-level reading. Students will learn and practice a variety of reading strategies they can use to better understand what they read. In addition to strategic reading, emphasis will be on integrating critical thinking with reading, reading comprehension, reading flexibility, and expanding vocabulary. With an instructor facilitating, students will develop existing reading skills in an interactive, collaborative setting. Prerequisites: None Corequisites: ENG 110, 111, or a class with college level reading.

ENG 098B College Reading II 1(1-0)
ENG 098B, College Reading II (1 credit), is designed to develop the strategies, skills, and attitudes necessary for reading college-level texts. Based on reading placement score, completion of the English self-placement quiz, and discussion with an academic advisor, students may enroll in ENG 098 in conjunction with English 110, Introduction to Academic Writing, English 111, Freshman Composition, or another course with college-level reading. Students will learn and practice a variety of reading strategies they can use to better understand what they read. In addition to strategic reading, emphasis will be on integrating critical thinking with reading, reading comprehension, reading flexibility, and expanding vocabulary. With an instructor facilitating, students will develop existing reading skills in an interactive, collaborative setting. Prerequisites: None Corequisites: ENG 110, 111, or a class with college level reading.

ENG 098C College Reading II 1(1-0)
ENG 098C, College Reading II (1 credit), is designed to develop the strategies, skills, and attitudes necessary for reading college-level texts. Based on reading placement score, completion of the English self-placement quiz, and discussion with an academic advisor, students may enroll in ENG 098 in conjunction with English 110, Introduction to Academic Writing, English 111, Freshman Composition, or another course with college-level reading. Students will learn and practice a variety of reading strategies they can use to better understand what they read. In addition to strategic reading, emphasis will be on integrating critical thinking with reading, reading comprehension, reading flexibility, and expanding vocabulary. With an instructor facilitating, students will develop existing reading skills in an interactive, collaborative setting. Prerequisites: None Corequisites: ENG 110, 111, or a class with college level reading.

ENG 104 Reading and Writing for College 4(4-0)
ENG 104, Reading and Writing for College, is a four credit course that combines instruction in reading and writing and is designed for students who have had little to no preparation for reading and writing at the college level. The kinds of strategies and skills students will practice in ENG 104 should prepare them for the kinds of reading and writing they will do at the college level. Note: Students who assess at a low reading level must begin the composition sequence with ENG 104. Prerequisite: None
ENG 110 Academic Writing 3(3-0)
This course is meant to serve as a companion course to ENG 111, and will utilize the same goals and outcomes. However, ENG 110 is designed to provide incoming students a more gradual and more thorough introduction to the textual practices required in college (such as evidence, critical analysis, considering rival points of view, or synthesizing a new position). This course will focus on how to read, annotate, and respond to academic texts, and will also introduce students to writing strategies designed to make them successful academic writers. Students who perform at an extremely high level throughout ENG 110 may be invited to submit a portfolio for ENG 111 Portfolio Assessment, potentially leading to credit in ENG 111. Prerequisite: ENG 104 with a minimum grade of C, or placement into ENG 110.

ENG 110 Academic Writing 3(3-0)
This course is meant to serve as a companion course to ENG 111, and will utilize the same goals and outcomes. However, ENG 110 is designed to provide incoming students a more gradual and more thorough introduction to the textual practices required in college (such as evidence, critical analysis, considering rival points of view, or synthesizing a new position). This course will focus on how to read, annotate, and respond to academic texts, and will also introduce students to writing strategies designed to make them successful academic writers. Prerequisite: ENG 104 with a minimum grade of C, or placement into ENG 110.

ENG 111 Freshman English Composition 3(3-0)
This course prepares a student for academic writing in the college setting, and concentrates on analyzing and discussing written sources. Emphasis is on writing that shows insight into published discussions of an issue and understanding of the contexts of academic debate (rather than on informational reports or personal expression essays). In addition, research and revision are treated as integral parts of the process of writing an academically acceptable essay. By the end of the course, a student must show ‘competency’ in an academic portfolio of selected essays. Prerequisite: ENG 110 with a minimum grade of C, or placement into ENG 111.

ENG 111B Portfolio Tutorial 0(1-0)
ENG 111B is a one-hour tutorial for students who failed their English 111 portfolio but who otherwise would have been eligible for a minimum grade of C in ENG 111. The tutorial will combine individual conferences, group work, and classroom activities to prepare the student to resubmit their portfolio. Prerequisites: A copy of the 111 portfolio and instructor referral are required.

ENG 112 Introduction to Literature 3(3-0)
This course introduces students to a variety of literature and enhances students competency in critical reading and writing. The course will include introductions to genres of literature and critical theories of reading and responding to literature. Students should have completed ENG 111 and have basic writing skills. Prerequisite: ENG 111.

ENG 201 English Literature I 3(3-0)
A survey of works of major authors of English literature from Beowulf through the 18th century. Prerequisite: ENG 111.

ENG 202 English Literature II 3(3-0)
A continuation of ENG 201 from the late 18th century poets through the writers of the present. Prerequisite: ENG 111.

ENG 205 American Literature to 1870 3(3-0)
A study of our nation's authors and literature from colonial times through the Civil War period. Prerequisite: ENG 111.

ENG 206 American Literature From 1870 3(3-0)
A continuation of ENG 205 from the Reconstruction through mid-20th century works. Prerequisite: ENG 111

ENG 211 Masterpieces of Western Literature I 3(3-0)
An in-depth study of selected major classical literary works of Western civilization.

ENG 212 Masterpieces of Western Literature II 3(3-0)
A comprehensive study of leading authors from the time of the Renaissance through the 19th century.

ENG 213 Contemporary Literature 3(3-0)
Readings in the novel, short story, essay, autobiography, biography, poetry, and drama of the mid-20th century. Prerequisite: ENG 111

ENG 222 Expository Writing & Research 3(3-0)
This course is designed to further develop skills in all phases of the nonfiction writing process with special emphasis on academic writing situations, argumentation, and library research. Writing is approached both as a way of learning and as a form of social behavior that varies according to conventions of aim, audience, and form. Instruction and assignments are partially individualized according to students' educational goals. Prerequisite: Minimum grade of C in ENG 111

ENG 225 Creative Writing 3(3-0)
Introduction to the essentials of narration, characterization, and other components of creative writing. Students are required to submit original poetry and/or one-act plays or short stories.

ENG 281 Children’s Literature 3(3-0)
A review of the rich and diverse field of literature for children from preschool to adolescence. Recommended for students in the elementary teacher education curriculum. Prerequisite: ENG 111

ENG 290 - 299 Selected Topics 3(3-0)
These courses are designed to investigate various topics in English that are not included in current courses. Topics will be announced.
**ENV 210 Environmental Science 4(3-2)**
A survey of the broad field of environmental science. Major topics included are: the scientific method, an introduction to chemistry, ecological principles, types of pollutants, energy principles, population issues, the environmental impact of human choices, and the role of economics, risk perception, and political choices in environmental decision making. Laboratory activities will expose students to a variety of field, survey and laboratory techniques useful in assessing environmental quality. Prerequisite: Recommend BIO 101, GEL 101 or other science courses.

**ENV 220 Environmental Regulations 3(3-0)**
A comprehensive course in environmental law and regulations, agencies such as OSHA, DOT and EPA, and how they affect environmental usage and the individual. The course includes an overview of the history, philosophy and processes germane to environmental regulations and how to work effectively as a team member to address environmental issues and regulatory compliance concerns.

**ENV 230 Environmental Training 5(7-0)**
Basic measurement techniques used by environmental scientists and technologists to evaluate air and water quality, field methods, continuous monitoring techniques, and in-laboratory analysis techniques. Course includes how to properly collect and prepare samples for analysis, use a variety of instruments effectively, and how to appreciate the importance of proper sample custody and record keeping. Course also includes 40-hour personal protection and safety training. Prerequisites: ENV 220, CHM 112

**ENV 290 Environmental Internship 1(1-0)**
This course is the capstone field experience for students in the environmental science or environmental technology curricula. This required course provides each student with opportunities to synthesize and integrate knowledge gained from their academic program through a process of real world experience, problem solving and on-the-job training. This course will allow for a broad range of learning/working experiences for students and relationships with many organizations, including other college and university units, governmental agencies, profit and nonprofit enterprises and professional organizations. Prerequisite: ENV 230

**ENV 291 - 299 Selected Topics 3(3-0)**
These courses are designed to investigate various topics in Environmental Science that are not included in current courses. Topics will be announced.

**FRN 101 Elementary French I 4(4-0)**
This is an elementary course designed for students who have had little or no previous experience in French. It is designed to help students acquire foundational language skills necessary for basic communication in French. The majority of class time will focus on verbal communication, however, reading and writing will be frequently integrated, and selected cultural information will be studied.

**FRN 102 Elementary French II 4(4-0)**
French 102 is a continuation of French 101 and will begin with a brief review of the material covered in FRN 101. Students in French 102 will continue the study of grammar and vocabulary and will use these to communicate utilizing speaking, writing, listening, and reading skills. This course is designed to provide the basis for further study of French at the intermediate level. Prerequisite: FRN 101 or equivalent.

**GEL 101 Physical Geology 4(3-2)**
An introductory study of the processes that shape our world. Topics include minerals, rocks, volcanism, earthquakes, continental drift, erosion and deposition, the ice age, and economic significance of geology to humankind.

**GEL 112 Historical Geology 3(2-2)**
A chronological study of the origin and development of the earth's features, along with development and succession of plant and animal groups as revealed in rock formations and mineral deposits.

**GER 101 Elementary German I 4(4-0)**
This is an elementary course designed for students who have had little or no previous experience in German. It is designed to help students acquire foundational language skills necessary for basic communication in German. The majority of class time will focus on verbal communication, however, reading and writing will be frequently integrated, & selected cultural information will be studied.
GER 102 Elementary German II 4(4-0)
German 102 is a continuation of German 101 and will begin with a brief review of the material covered in GER 101. Students in German 102 will continue the study of grammar and vocabulary and will use these to communicate utilizing speaking, writing, listening, and reading skills. This course is designed to provide the basis for further study of German at the intermediate level. Prerequisite: GER 101 or equivalent.

(HED) HEALTH EDUCATION

HED 115 Stress Management 2(2-0)
This course is designed to give the student an overall knowledge and understanding of the mechanisms of stress as a concept, to provide stress management tools to increase coping, and to provide health/wellness promotion.

HED 130 Introduction to Aromatherapy 1(1-0)
This course is designed to be an introduction to the field of Aromatherapy. Students will learn to understand the proper usage of essential oils. Upon completion of this course, students will be qualified to apply and diffuse the top twenty oils used in aromatherapy.

HED 132 Introduction to Reflexology 1(1-0)
This course is designed to be an introduction to the field of Reflexology. Students will learn the proper techniques for performing reflexology as a stress-reducing therapy. Students will be qualified to teach an introductory 1-hour class on the therapy of reflexology, and be able to perform a half-hour therapy for the purposes of improving circulation, enhancing immunity, and reducing stress.

HED 134 Introduction to Herbology 1(1-0)
This course is designed to be an introduction to the field of Herbology. Students will learn to understand the proper usage of herbal remedies. Upon completion of this course, students will be able to recognize the most commonly used herbs, as well as how and when they should be taken. Additionally, they will be able to educate others about the proper use of herbs.

HED 136 Introduction to Massage 1(1-0)
This course is designed to be an introduction to the field of Massage Therapy. Students will learn how to perform basic massage techniques as well as learn about the professionalism of massage as a therapy. Students will be qualified to perform a one-hour relaxation massage for family and friends.

HED 151 Personal Health and Hygiene 3(3-0)
Intended to develop habits, skills, and attitudes favorable to healthful living and to understand better the normal functioning of the human body. This course encourages understanding of mental, physical, and social well being of the individual and the community.

HED 290 Special Topics 1(1-0)
These courses are designed to investigate various topics in Health Education that are not included in current courses. Topics will be announced.

(HIS) HISTORY

HIS 101 Issues in Western Civilization I 3(3-0)
A survey of the development of Western peoples from ancient times through 1650 A.D. Emphasis is placed upon topics relating to the intellectual, social, religious, political, and economic development of Western peoples.

HIS 102 Issues in Western Civilization II 3(3-0)
This is the second semester continuation of HIS 101. The course emphasizes the development of Western peoples from 1650 to the present. Principle topics examined are the political, intellectual, social, religious, and economic developments, and their impact upon world civilizations.

HIS 211 History of the United States I 3(3-0)
This course examines the developments from exploration of the Americas through Reconstruction. Primary topics of study are exploration of colonization and its characteristics, the American Revolution, the Constitution, democratic developments, rise of States Rights, the Civil War, and Reconstruction.

HIS 212 History of the United States II 3(3-0)
Continuation of HIS 211. This course covers events from the post-reconstruction period to the present. Principle areas of study are economic growth, political activities, diplomacy, and social and intellectual developments.

HIS 223 History of Michigan 3(3-0)
This course examines developments in Michigan from the time of earliest human habitation to the present. Major areas examined are French and British rule and rivalry, Michigan's move to statehood, exploitation of natural resources, and political and social development of the 19th and 20th centuries.

HIS 251 American Studies I: Foundations of 20th 3(3-0)
Along with HIS 252, this two-semester sequence centers on American cultural myths and values, examining their origins, development, and current manifestations (e.g., ideas of equality, the frontier, competition, pursuit of happiness, liberty, destiny, etc.). The approach is historical, using materials from literature, popular culture, and historical studies. This course centers on discussion stemming from assigned readings for which the instructor sets the cultural and historical context. Students desiring humanities credit should register for HUM 251.
HIS 252 American Studies II: Old Myths/New Realities
3(3-0)
Continuation of HIS 251. Students desiring humanities credit should register for HUM 252.

HIS 290 - 299 Selected Topics 3(3-0)
Courses designed to investigate various topics in History not included in current courses. Topics will be announced.

(HIT) HEALTH INFORMATION TECHNOLOGY

HIT 101 Introduction to Health Information Techn 2(2-0)
This course introduces Health Information Technologies and the evolution of medical records management. The class will explore career and employment opportunities, within the Health Information Technology field and the associated educational and/or certification requirements associated with each. Various governing bodies and their role in health information management will be explored. Components that are required of an electronic health record and appropriate applications will be discussed. Prerequisites: Admission to the HIT program, ALH 100 and BIO 135, both with a minimum grade of C

HIT 115 Pharmacology for Health Information Management 3(3-0)
This course is intended to familiarize the student with a variety of pharmacological agents and new drugs. This course will allow the student to identify the medicinal interaction and effects of certain drugs in relation to treatment of specific diseases and/or disorders. Prerequisites: BIO 120 and HIT 101, both with a minimum grade of C

HIT 150 Health Information Technology II 2(2-0)
This course builds upon the concepts and principles established in HIT.101. The student will become familiar with the policies, procedures and practices of health information management. The course will prepare students in the ways that particular policies and procedures are ensured; especially in regards to timeliness, completeness, accuracy and appropriateness of patient care; management, billing, reports, registries and/or data bases. Prerequisites: HIT 101 and ENG 111; both with a minimum grade of C

HIT 200 ICD-9-CM 4(3-2)
The focus of this class is learning the coding guidelines for International Classification of Diseases 9th and 10th editions, (ICD-9 and ICD-10) and then applying the guidelines to appropriately code diagnoses and diseases. Students will identify appropriate ICD codes, complications and comorbidities. Prerequisites: BIO 120 and ALH 100, both with a minimum grade of C; Director Approval required

HIT 205 Health Data Content and Structure 3(3-0)
This course is to familiarize the student collecting and maintaining health care data. It is designed to teach students how to manage, analyze and utilize data that is vital for enhancing patient care. The student will learn how the content and relevancy of the health record assists in continuity of care. Students will learn the importance of collaboration, and the Health Information Technology Professionals role in reference to improved quality of care. Prerequisites: HIT.150 with a minimum grade of C

HIT 215 Current Procedural Terminology 4(3-2)
Current Procedural Terminology (CPT) is coding system to covert widely accepted uniform descriptions of medical, surgical, and diagnostic services rendered by health care providers into numeric codes. Students will learn to accurately classify these services according to AHIMA’s standards of ethical coding. Prerequisites: HIT 115 and HIT 200, both passed with a minimum grade of C

HIT 220 Legal Aspects of Healthcare for Health I 3(3-0)
This course is directed toward assisting students in the health information field, involved in healthcare activities with understanding the legal principles that govern this particular area of healthcare and as a guide to the recognition of legal problems. There is a strong focus on recent and impending legislature and its impact within Health Information Management. Prerequisite: HIT 205 with a minimum grade of C

HIT 225 Healthcare Statistics for Health Information 3(3-0)
This course is constructed to introduce statistical computation at the introductory level for various functions within Health Information Management. Students will identify sources, definitions, collection, reporting and computation of statistical data for analysis. Prerequisites: MAT 105 and HIT 205, both with a minimum grade of C
HIT 230 Revenue Cycle Management 3(2-2)
This is a practical, hands-on approach to develop revenue cycle management techniques. The course is designed to assist the student in mastery of medical insurance concepts and skills, including reimbursement methodologies and resource management. Medical coding tools are utilized to organize and translate written medical documentation into numeric codes and process the information for reimbursement, statistical purposes and office management productivity. This course further prepares students to understand the complexity of healthcare revenue cycles. Prerequisites: HIT 205 and HIT 215, both courses with a minimum grade of C

HIT 235 Medical Coder/Biller Internship 4(1-0)
This is a 150-hour full-time internship, where the student will be assigned to the Health Information Service Department of health care facilities. This will provide the student with an opportunity to practice related functions necessary to effectively manage the medical coding and billing operational of a healthcare facility. It will also allow the student to experience the day-to-day operations of the department and apply all the theory to real-life work situations. Prerequisites: HIT 115, HIT 200, and HIT 215 and instructor consent

HIT 240 Supervisory & Administrative Practice 3(3-0)
Students will have exposure to leadership styles and management roles within a healthcare organization and more specifically in a Health Information Management department. They will gain an understanding of basic supervisory responsibilities. Students will utilize various quality management tools to effectively manage workflow, productivity and strategic planning initiatives. Prerequisites: HIT 205 with a minimum grade of C

HIT 260 Health Information Technology Internship 6(1-0)
This is a 240-hour full-time internship; where students will be assigned to the Health Information Service Department of health care facilities. This will provide the student with an opportunity to experience the many related functions necessary to effectively manage an operational area. It will also give the student an opportunity to work extensively with a primary group of practitioners, and experience the day-to-day operations of the department and apply all the theory to real-life work situations. Prerequisite: Completion of all courses in HIT program. **HUM 200, SSC 200 or SCI 200 may be taken concurrently

(HRA) HEATING/REFRIGERATION/AIR COND

HRA 102 Refrigeration Fundamentals 3(2-2)
As an introductory course to the field of refrigeration service, instruction is given in the handling of refrigerants, application, identification, reclaiming and refrigerant alternatives. Particular attention is paid to the principles, construction, and operation of refrigerating systems. Theory underlying refrigeration principles is covered. Laboratory experience includes cutting, soldering, swaging, and flaring of copper tubing, the evacuation and recharge of refrigeration systems, electrical troubleshooting for basic systems, the diagnosis and repair of the refrigeration system, and testing equipment typically used in the field of refrigeration service.

HRA 104 Residential Refrigeration 3(2-2)
This course studies residential refrigeration systems, to include domestic refrigeration and air conditioning. Included in the instruction are ice makers, defrost controls, diagnostic display panels and typical appliance system problems. Particular attention is paid to the principles, construction, and operation of these systems. Laboratory experience includes residential system electrical troubleshooting and repair, and the diagnosis and repair of the refrigeration system. Prerequisite: HRA 102

HRA 105 Hydronics 3(2-2)
An introduction of the concepts involving fluid system heating devices. Topics will cover: hot water and steam heating units, terminal units, control devices, piping, and diagnosis of hydronic systems. Prerequisite: HRA 106

HRA 106 Heating Fundamentals 3(2-2)
An introductory course into the fundamentals of heating systems and installation practices. Laboratory experience includes furnace installation, steel and copper piping, furnace and control wiring, and flue gas venting.

HRA 108 Heating Systems 3(2-2)
Residential and commercial forced air and hydronic heating systems are covered in this course. The instruction includes the fundamental operation of gas and oil burners, for both standard and high efficiency systems. In addition, system configuration and operation principles are studied for fossil fuel systems and solid fuel burners. Laboratory experiences include the troubleshooting and repair of spark ignition control systems, relay control safeties, hot surface ignition, flue dampers, and efficiency testing of heating systems. Prerequisites: HRA 106, HRA 116
**HRA 115 Plumbing 4(4-0)**
This course covers the design, use, and application of potable and non-potable water systems as they apply to both water supply and waste problems. Students are involved with the practical applications of plumbing systems in a simulated environment like that found in the field.

**HRA 116 Fundamentals of Electricity 3(2-2)**
This course covers the principles of electrical wiring for heating, refrigeration, air conditioning and manufacturing automation. Studies of frequency, phase, resonance and reactance, along with basic resistance, capacitance, inductance, voltage, and power, which govern the fundamentals of all circuits, will be explored. Laboratory work will be used to develop skill in analysis, troubleshooting of basic electronic circuitry, and use of test instruments.

**HRA 175 Solar Heating Systems 3(2-2)**
This course involves the study of various systems utilized to convert solar energy to domestic and commercial heating applications. Design characteristics, efficiency, and cost of various systems are reviewed. Students engage in the design and construction of an operational solar heating system as a part of the course requirements.

**HRA 198 EPA Refrigerant Handler Certification 1(1-0)**
This is a 4 day course specifically designed to teach students the required knowledge necessary to pass the Environmental Protection Agency’s Refrigeration Handler Certification Exam. The specific content areas are; Core - The basic law regarding CFC, HCFC, HFC and other chlorinated refrigerants, containment, disposal, and other certification requirements. Type 1 - This level of certification deals with factory charged refrigeration systems containing less than 5 pounds of refrigerant. Type 2 - This level of certification deals with all other high pressure refrigerant systems with 5 pound of refrigerant or more are custom manufactured. Type 3 - This level of certification deals with low pressure chiller applications. Universal Certification is granted to those who pass all certification levels; the student must pass the Core section to be awarded any certification. The Refrigerant Handler Certification textbook and exam are included. The instructor for this course is an EPA Certified Refrigerant Handler Certification Exam instructor.

**HRA 199 Special Topics 1(1-0)**
A two-day intensive course specifically designed to teach students the required knowledge necessary to pass the Environmental Protection Agency’s Refrigerant Handler Certification Exam. The specific content areas are; Core - the basic law regarding CFC and other chlorinated refrigerants, refrigerant containment, disposal and other certification requirements.

**HRA 204 Light Commercial Refrigeration 3(4-0)**
This course deals with more complex refrigeration systems associated with supermarkets and restaurants. Instruction and laboratory work are geared toward the installation and service of all types of light commercial refrigeration equipment such as walk-ins, reach-ins, water chillers, air-cooled condensers, and water-cooled condensers with cooling towers. Some of the other topics covered include heat controls for both single and three-phase systems. Prerequisite: HRA 102

**HRA 205 Motors and Controls 2(1-2)**
This course in electricity concerns itself with the operation of electric motor-driven systems and devices. Classroom and laboratory experiences will include testing, troubleshooting, and repair of electric motor control systems. Electric motor-driven devices applicable to many different fields are covered, such as heating and air conditioning, machine tool and other electric-driven mechanical devices. Prerequisite: HRA 116.

**HRA 215 HRA Controls 3(2-2)**
A course designed to provide theory of operation, installation, and design of programmable, electric, and pneumatic controls for heating, refrigeration, and air conditioning systems. Laboratory work includes the installation, wiring, and troubleshooting of these control systems. Prerequisite: HRA 116

**HRA 220 Commercial Refrigeration Design 2(2-0)**
Calculations in the sizing and design of refrigeration systems are covered in this course, as well as equipment layout and bid preparation. Topics include: U values, R values, insulation types and their installation, vapor barriers, construction details, and numerous charts, graphs, formulas, and other design material. Corequisite: HRA 204

**HRA 223 Residential HVAC Load Determination 3(3-0)**
A course designed to calculate the winter heat loss, summer heat gain, and the cost of operation for a residential heating and/or air conditioning system. Manual J methods and computer software programs are used. Corequisite: HRA 223.

**HRA 224 Residential HVAC Distribution 3(3-0)**
Calculations in the sizing, location, and design of forced air ducts and hydronic residential heating and air conditioning systems. Manual D methods and computer software programs are used. Corequisite: HRA 223.

**HRA 240 Advanced Commercial Refrigeration 3(4-0)**
This course deals with complex exotic refrigeration systems such as: environmental test chambers, supermarket refrigeration equipment, commercial ice-making equipment and ground source heat pump systems. Also included are various applied control systems and components. Prerequisites: HRA 104, HRA 116, HRA 204
HRA 251 Geothermal Basics 3(3-0)
This is the first course in the Geothermal Program. It covers an in depth look at the basics of geothermal technologies including; system components, controls, troubleshooting, control schematics, system application and domestic hot water production. Prerequisite: HRA 240 or MMCC Heating and Refrigeration Training Credentials or an Associate's Degree in Heating/Refrigeration from an accredited college/university, or lead faculty approval.

HRA 254 Air Source Heat Pumps 3(2-2)
This course concerns itself with the basic understanding of original air source heat pump technology in compliance with Air Conditioning Contractors of America (ACCA). Students will be introduced to system location requirements, components, flow requirements, and the installation and troubleshooting of air source heat pump systems using both theory and hands-on practical instruction. Prerequisite: HRA 251

HRA 261 Geothermal System Design 3(3-0)
This course deals with structure BTU calculation, equipment capacity and air flow requirements to maintain the comfort conditions of the home. Methods used will follow the ACCA J and D Manuals and the Right Suite computer load calculation software. At the completion of this course the student will take the Air Distribution exam of the Industry Competency Exam (ICE). Prerequisite: HRA 251

HRA 262 Geothermal Loop Systems 3(3-0)
This course is preparatory for HRA 263 International Ground Source Heat Pump Association (IGSHPA) Installer Certification workshop. This course will take a detailed look into the various types of underground loops used in geothermal heat transfer specifically; open loop, horizontal loops, slinky loops, pond loops, vertical well loops, and direct exchange loops. As well, the various types of fluids such as water, glycol, brine solutions, refrigerants and emerging technologies used for the exchange of heat in an underground loop will be examined. Application methods used in this course will follow existing data from American Society of Heating Refrigeration Air Conditioning Engineers (ASHRAE). Prerequisite: HRA 251

HRA 263 Closed Loop Ground Source Pump Install 3(3-0)
This course deals with all pertinent topics related to International Ground Source Heat Pump Association (IGSHPA) Closed-Loop Geothermal Installation Certification and IGSHPA's High Density Poly-Ethylene (HDPE) Fusion Welding Exam administered by North American Technician Excellence (NATE) Students who successfully pass the examinations will be certified by those accrediting agencies (IGSHPA, NATE). Prerequisite: HRA 251, or Associate Degree in Applied Science Heating Refrigeration Air Conditioning, or lead faculty approved significant, verifiable field experience in Heating Refrigeration Air Conditioning, or current recent field involvement in geothermal field processes including well drilling, architectural design or HVACR design for geothermal systems.

HRA 265 Geothermal Research and Development 4(2-4)
This course will put geothermal students on the cutting edge of HVAC technology as it relates to geothermal heating and cooling. Students will investigate areas of the complete geothermal system and evaluate possible system changes or potential areas of development. Using experimentation, prospective changes will be designed, constructed, installed and the system will be operated, monitored and evaluated. Potential system design changes will be enhanced and tested in actual field conditions in order to make industry-wide technical improvements. Prerequisite: HRA 251, minimum grade of C

HRA 265 Geothermal Research and Development 4(2-4)
This course will put geothermal students on the cutting edge of HVAC technology as it relates to geothermal heating and cooling. Students will investigate areas of the complete geothermal system and evaluate possible system changes or potential areas of development. Using experimentation, prospective changes will be designed, constructed, installed and the system will be operated, monitored and evaluated. Potential system design changes will be enhanced and tested in actual field conditions in order to make industry-wide technical improvements. Prerequisite: HRA 251, minimum grade of C

HRA 265 Geothermal Research and Development 4(2-4)
This course will put geothermal students on the cutting edge of HVAC technology as it relates to geothermal heating and cooling. Students will investigate areas of the complete geothermal system and evaluate possible system changes or potential areas of development. Using experimentation, prospective changes will be designed, constructed, installed and the system will be operated, monitored and evaluated. Potential system design changes will be enhanced and tested in actual field conditions in order to make industry-wide technical improvements. Prerequisite: HRA 251, minimum grade of C

HRA 282 Insulating Systems 2(2-0)
A study of the various types of insulations currently being used in residential and commercial buildings. Also studied are the methods of installation of the various insulations as well as a comparative study of the costs of insulation, advantages and disadvantages of various insulations, and financing plans available for home and business. A course for anyone interested in energy conservation. This course cannot be used as a substitute for any course on the Heating, Refrigeration & Air Conditioning program.

HRA 283 Independent Study in Heating, Refrigeration & Air Conditioning 3(3-0)
This course is for those students who desire to gain supervised experience in actual on-site situations to enhance their knowledge and experience in the heating, refrigeration, and air conditioning industry.

HRA 285 Co-Op 3(1-0)
HRA Co-op is a course intended to be completed after the student has attained at least 30 credit hours of instruction including prerequisites. The students will be employed in an approved co-op position selected by the college coordinator and will also attend a weekly one hour classroom lecture/discussion. A waiver may be allowed for the work component only with equivalent previous/present work experience as determined by the co-op coordinator. An individual evaluation is made by the coordinator only upon student request. Documentation of the experience will be required. Prerequisites: Minimum of 12 credits in HRA

HRA 295 - 299 Special Topics 3(3-0)
These courses are designed to investigate various topics in Heating, Refrigeration & Air Conditioning that are not included in current courses. Topics will be announced. These courses are offered based on demand.
**HUM 101 World of Creativity I 3(3-0)**

An introduction and exposure to the creative arts. Together, HUM 101 and HUM 102 are designed to give the student a basic understanding of the terminology and concepts of the visual arts, theatre, dance and music. Ideas and philosophies of specific periods are presented as a frame of reference for discussion. Speakers, films, and field trips are arranged to give the student a more distinct involvement with the arts. HUM 101 is taught chronologically and focuses on the Greek and Roman period through the Renaissance.

**HUM 102 World of Creativity II 3(3-0)**

Continuation of HUM 101, HUM 102 begins with the baroque period and ends with the current time.

**HUM 183 Asian and African Cultures 3(3-0)**

An exploration of specific non-Western cultures, past and present. Cultural focus may vary from term to term. The course is an investigation of their religions and artistic traditions, their ideas, their cultural achievements, and their associations with other cultures.

**HUM 200 Modernity and Culture 3(3-0)**

This course is designed to introduce students from a variety of programs to the humanities. This introduction will focus on the way the humanities and their concern with art, ethics, history and culture, impact on the way we construct ourselves and our sense of meaning. This course will stress interaction through writing, collaborative assignments, presentations, and discussions to emphasize the humanities commitment to self-discovery and expression. Prerequisites: Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or SPE 257)

**HUM 205 The History of Rock and Roll: From Its Origins to 1980 3(3-0)**

Develops an interest and respect for the origins and growth of Rock and Roll music in the United States and Europe through the focus on recordings and videos that documented its progress.

**HUM 210 The History of Jazz 3(3-0)**

Course is designed to assist students in developing an interest in and respect for Jazz as an original American art form. Students will trace Jazz history from its theoretical origins to the present time. The focus on the class is on the evolution of the music and the artists who brought about Jazz.

**HUM 213 Contemporary Literature 3(3-0)**

Readings in the novel, short story, essay, autobiography, biography, poetry and drama of the late-20th Century. Prerequisites: ENG 111, ENG 112 or equivalent

**HUM 225 Study Abroad 2(2-0)**

An interdisciplinary study abroad course, offering students a unique insight into what is offered via traditional classroom experience. This class will study different aspects of a specific society. Students will interact directly with the idiosyncrasies of a specific culture and understand aspects such as language, history, food, currency, religion, architecture, and ideas. The course will consist of combinations of lectures, tours, field research, cultural events, interviews, meetings with local experts, and a journal. Prerequisites: Instructors Approval Needed

**HUM 251 American Studies I: Foundation of 20th 3(3-0)**

Along with HUM 252, this two-semester sequence centers on American cultural myths and values, examining their origins, development, and current manifestations (e.g. ideas of equality, the frontier, competition, pursuit of happiness, liberty, destiny, etc.) The approach is historical, using materials from literature, popular culture, and historical studies. The course centers on discussion stemming from assigned readings for which the instructor sets the cultural and historical context. Students desiring social science credit should register for HIS 251.

**HUM 252 American Studies II: Old Myths/New Found 3(3-0)**

Continuation of HUM 251. Students desiring social science credit should register for HIS 252.

**HUM 294 Field Experience in Fine Arts 3(3-0)**

A travel course of an interdisciplinary nature where the world of theatre, music, dance and the visual arts are explored in a metropolitan area. Prerequisites: HUM 102 and/or any other TAI course recommended

**HUM 295 - 299 Current Topics 3(3-0)**

Courses designed to investigate various topics in Humanities not included in current courses. Topics will be announced.

**IND 101 Basic Machine Shop Practices 4(3-2)**

This course is an introduction to machine tool operation and associated processes. Students will become familiar with milling machines, engine lathes, the drill press, grinding machines and bandsaws. Knowledge of machining terminology and concepts such as speeds and feeds, tool geometry, blueprint interpretation as well as skill in the use of precision measuring tools will be developed.
**IND 102 Machine Tool Practices II 4(6-0)**
The second semester Machine Tool lab course in a four-semester sequence. Thread manufacturing, precision grinding, and boring operations are explored. The ability to precisely place and inspect geometric features to determine product conformance is developed in lecture and lab demonstration. Prerequisites: IND 101, minimum grade of C in MAT 104 or equivalent

**IND 113 CNC Machining 2(1-2)**
An introduction to the use of computer numerical control machine tools, this course will develop an understanding of the components, functions, safety concerns and maintenance of CNC milling machines and lathes. The role of the CNC machine operator in establishing the workpiece coordinate system, tool changing and the use of offset functions will be explored.

**IND 116 CNC Programming 4(3-2)**
This course prepares students to program and operate Computer Numerical Control lathes and milling machines. Standard EIA code format, canned cycles, communications, manual data input, machine operation and maintenance are topics of instruction. Students solve cutter location coordinate problems and write CNC programs which they load and run on industrial machines. Prerequisites: IND 101, IND 113, minimum grade of C in MAT 105 or MAT 170 or equivalent

**IND 121 Manufacturing Processes 2(2-0)**
A survey of the processes used to manufacture parts in quantity, this course is focused upon foundry, forming, stamping, metal finishing and joining technologies. Tours of manufacturing facilities augment classroom instruction and develop understanding of the scope of manufacturing enterprise in the local economy.

**IND 140 Metallurgy and Industrial Materials 3(3-0)**
An applied course covering the physical and mechanical properties, classification systems and heat treatment procedures for common ferrous and non-ferrous metals. Lab experiences include quench and temper, carburizing, tensile and hardness testing.

**IND 171 Introduction to CAD/CAM 3(3-0)**
The third course in the associate degree program dealing with Computer Numerical Control of machine tools. This course teaches the student to use the latest graphics-based software to produce CNC programs for the production of complex 3D surfaces. Prerequisites: IND 116, DRF 120 OR Instructor permission

**JOR 120 School Newspaper Publications 3(3-0)**
A basic study of journalism as it relates to the publication of a school newspaper.

**JOR 290 -299 Special Topics 3(3-0)**
Courses designed to investigate various topics in Journalism not included in current courses. Topics will be announced.

**JPN 101 Introductory Japanese 3(3-0)**
This is an introductory course in Japanese language, designed for students with little or no previous knowledge of Japanese. This course introduces the basic structure and vocabulary of modern Japanese, stressing the use of Japanese orthography (the writing system) from the very outset, so the subsequent adjustment to reading ordinary Japanese literature is minimal. Emphasis will be on vocabulary and oral training for conversation with reasonable ease, with an introduction to readings and writing. Familiarity with the sociocultural context in which the modern Japanese language is used will also be stressed.

**JPN 101 Elementary Japanese I 4(4-0)**
This is an introductory course in Japanese language, designed for students with little or no previous knowledge of Japanese. This course introduces the basic structure and vocabulary of modern Japanese, stressing the use of Japanese orthography (the writing system) from the very outset, so the subsequent adjustment to reading ordinary Japanese literature is minimal. Emphasis will be on vocabulary and oral training for conversation with reasonable ease, with an introduction to readings and writing. Familiarity with the sociocultural context in which the modern Japanese language is used will also be stressed. Prerequisites: JPN 101 or previous study of Japanese with instructor approval.

**JPN 102 Elementary Japanese II 4(4-0)**
Students in Japanese 102 will continue to learn the basic language skills covered in 101 with increased emphasis on vocabulary, informal language and quick, natural-sounding speech. Prerequisites: JPN 101 or previous study of Japanese with instructor approval.
MAT 060 Math Study Skills 1.5(1.5-0)
This course will emphasize study skills important for success in mathematics courses. Topics to be covered include note taking, homework issues, how to study math, test taking, how to use the textbook, and anxiety. It is strongly recommended that students take another MAT course concurrently with MAT 060. Credit/no credit only. Prerequisites: None

MAT 101 Basic Mathematics 3(3-0)
A review of basic operations with fractions, decimals, ratios and proportions, percent, taxes and interest. Other topics will include statistics, geometry, and the English and metric measuring systems. Emphasis will be placed on applications that will aid the student in functioning in a technical society. Prerequisite: None. Please note: MAT 101 is also offered as a two-semester sequence and a three-semester sequence, see next.

MAT 101A Basic Mathematics 1 of 3 1(1-0)
These Math Lab courses consist of one-credit modules designed to allow the student to learn at a pace that will help them be successful in Basic Mathematics. MAT 101 includes a review of basic operations with factors, decimals, ratios and proportions, percent, taxes and interest. Other topics will include statistics, geometry, and the English and metric systems. Emphasis will be placed on applications that will aid the student in functioning in a technical society. Prerequisite: None for MAT 101A. Must have a minimum grade of C in MAT 101A to take MAT 101B. Must have a minimum grade of C in MAT 101B to take MAT 101C.

MAT 101B Basic Mathematics 2 of 3 1(1-0)
These Math Lab courses consist of one-credit modules designed to allow the student to learn at a pace that will help them be successful in Basic Mathematics. MAT 101 includes a review of basic operations with factors, decimals, ratios and proportions, percent, taxes and interest. Other topics will include statistics, geometry, and the English and metric systems. Emphasis will be placed on applications that will aid the student in functioning in a technical society. Prerequisite: None for MAT 101A. Must have a minimum grade of C in MAT 101A to take MAT 101B. Must have a minimum grade of C in MAT 101B to take MAT 101C.

MAT 101C Basic Mathematics 3 of 3 1(2-0)
These Math Lab courses consist of one-credit modules designed to allow the student to learn at a pace that will help them be successful in Basic Mathematics. MAT 101 includes a review of basic operations with factors, decimals, ratios and proportions, percent, taxes and interest. Other topics will include statistics, geometry, and the English and metric systems. Emphasis will be placed on applications that will aid the student in functioning in a technical society. Prerequisite: None for MAT 101A. Must have a minimum grade of C in MAT 101A to take MAT 101B. Must have a minimum grade of C in MAT 101B to take MAT 101C.

MAT 101X Basic Mathematics 1.5(1.5-0)
MAT 101X and MAT 101Y comprise a two-semester sequence covering the same material as the traditional classroom version of MAT 101. MAT 101X includes basic operations on whole numbers, fractions, and decimals, as well as using rates, ratios, and proportions. MAT 101Y includes percent applications, descriptive statistics, unit conversions, plane and solid geometry, and the real numbers. Note: Students choosing to take MAT 101 as a sequence must complete either the ABC sequence or the XY sequence to complete MAT 101. Courses from the two sequences cannot be mixed. Prerequisite: None for MAT 101X. Must have a minimum grade of C in MAT 101X to take MAT 101Y.

MAT 101Y Basic Mathematics 1.5(1.5-0)
MAT 101X and MAT 101Y comprise a two-semester sequence covering the same material as the traditional classroom version of MAT 101. MAT 101X includes basic operations on whole numbers, fractions, and decimals, as well as using rates, ratios, and proportions. MAT 101Y includes percent applications, descriptive statistics, unit conversions, plane and solid geometry, and the real numbers. Note: Students choosing to take MAT 101 as a sequence must complete either the ABC sequence or the XY sequence to complete MAT 101. Courses from the two sequences cannot be mixed. Prerequisite: None for MAT 101X. Must have a minimum grade of C in MAT 101X to take MAT 101Y.

MAT 102 Algebraic Concepts 3(3-0)
Algebraic Concepts is a three-credit class designed for the student with little or no previous algebraic background. It will acquaint the student with basic algebraic concepts as well as prepare them to take MAT 104. Also it gives the student the foundation to be successful in the mathematics required in other Mid Michigan Community College programs. Prerequisites: None

MAT 104 Basic Algebra 3(3-0)
Topics include real numbers, first-degree equations and inequalities, special products and factoring, rational expressions, graphs, and linear systems. Prerequisite: Minimum grade of C in MAT 101 OR MAT 102 OR equivalent. Please note: MAT 104 is also offered as a two-semester sequence and a three-semester sequence, see next.
MAT 104A Basic Algebra 1 of 3 1(1-0)
These Math Lab courses consist of one-credit modules designed to allow the student to learn at a pace that will help them be successful in Basic Algebra. MAT 104A includes basic rules, signed numbers, basic equations, and inequalities and applications; MAT 104B includes constructing and interpreting graphs, and working with exponents and polynomials; MAT 104C includes factoring, solving equations, and working with rational expressions. Completions of all three modules are equivalent to MAT 104. Prerequisite: Minimum grade of C in MAT 101 OR MAT 102 OR equivalent to take MAT 104A. Minimum grade of C in MAT 104A to take MAT 104B. Minimum grade of C in MAT 104B to take MAT 104C.

MAT 104B Basic Algebra 2 of 3 1(1-0)
These Math Lab courses consist of one-credit modules designed to allow the student to learn at a pace that will help them be successful in Basic Algebra. MAT 104A includes basic rules, signed numbers, basic equations, and inequalities and applications; MAT 104B includes constructing and interpreting graphs, and working with exponents and polynomials; MAT 104C includes factoring, solving equations, and working with rational expressions. Completions of all three modules are equivalent to MAT 104. Prerequisite: Minimum grade of C in MAT 101 OR MAT 102 OR equivalent to take MAT 104A. Minimum grade of C in MAT 104A to take MAT 104B. Minimum grade of C in MAT 104B to take MAT 104C.

MAT 104C Basic Algebra 3 of 3 1(1-0)
These Math Lab courses consist of one-credit modules designed to allow the student to learn at a pace that will help them be successful in Basic Algebra. MAT 104A includes basic rules, signed numbers, basic equations, and inequalities and applications; MAT 104B includes constructing and interpreting graphs, and working with exponents and polynomials; MAT 104C includes factoring, solving equations, and working with rational expressions. Completions of all three modules are equivalent to MAT 104. Prerequisite: Minimum grade of C in MAT 101 OR MAT 102 OR equivalent to take MAT 104A. Minimum grade of C in MAT 104A to take MAT 104B. Minimum grade of C in MAT 104B to take MAT 104C.

MAT 104X Basic Algebra 1.5(1.5-0)
MAT 104X and MAT 104Y are a two-semester sequence covering the same material as the traditional classroom version of MAT 104. MAT 104X includes algebraic expressions, signed numbers, linear equations, linear inequalities, applications, and linear graphing. MAT 104Y includes integer exponents, polynomials, factoring, solving polynomial equations, rational expressions, and solving rational equations. Note: Students choosing to take MAT 104 as a sequence must complete either the ABC sequence or the XY sequence to complete MAT 104. Courses from the two sequences cannot be mixed. Prerequisites: Minimum grade of C in MAT 101 OR MAT 102 OR equivalent to take MAT 104X. Minimum grade of C in MAT 104X to take MAT 104Y.

MAT 104Y Basic Algebra 1.5(1.5-0)
MAT 104X and MAT 104Y are a two-semester sequence covering the same material as the traditional classroom version of MAT 104. MAT 104X includes algebraic expressions, signed numbers, linear equations, linear inequalities, applications, and linear graphing. MAT 104Y includes integer exponents, polynomials, factoring, solving polynomial equations, rational expressions, and solving rational equations. Note: Students choosing to take MAT 104 as a sequence must complete either the ABC sequence or the XY sequence to complete MAT 104. Courses from the two sequences cannot be mixed. Prerequisites: Minimum grade of C in MAT 101 OR MAT 102 OR equivalent to take MAT 104X. Minimum grade of C in MAT 104X to take MAT 104Y.

MAT 105 Intermediate Algebra 3(3-0)
A continuation of Basic Algebra including an in-depth study of some of the topics covered in MAT 104. Topics include polynomials, rational expressions and equations, radicals, integer and rational exponents, equations of the line, quadratic equations, functions, linear systems, and Cramer’s Rule. Prerequisite: Minimum grade of C in MAT 104 or equivalent. Please Note: MAT 105 is also offered as a two-semester sequence, see next.
MAT 105X Intermediate Algebra Part 1 1.5(1.5-0)
MAT 105X and MAT 105Y are a two-semester sequence covering the same material as the traditional classroom version of MAT 105. MAT 105X includes a brief review of basic algebra before covering functions, function operations, functions of variation, and systems of linear equations in two and three variables. MAT 105Y includes inequalities, absolute value equations and inequalities, radicals and rational exponents, rational equations, and quadratic equations, functions, and graphs. Note: Students choosing to take MAT 105 as a sequence must complete either the ABC sequence or the XY sequence to complete MAT 105. Courses from the two sequences cannot be mixed. Prerequisite: Minimum grade of C in MAT 104 or equivalent to take MAT 105X. Minimum grade of C in MAT 105X to take MAT 105Y.

MAT 105Y Intermediate Algebra Part 2 1.5(1.5-0)
MAT 105X and MAT 105Y are a two-semester sequence covering the same material as the traditional classroom version of MAT 105. MAT 105X includes a brief review of basic algebra before covering functions, function operations, functions of variation, and systems of linear equations in two and three variables. MAT 105Y includes inequalities, absolute value equations and inequalities, radicals and rational exponents, rational equations, and quadratic equations, functions, and graphs. Note: Students choosing to take MAT 105 as a sequence must complete either the ABC sequence or the XY sequence to complete MAT 105. Courses from the two sequences cannot be mixed. Prerequisite: Minimum grade of C in MAT 104 or equivalent to take MAT 105X. Minimum grade of C in MAT 105X to take MAT 105Y.

MAT 126 Calculus I 5(5-0)
The first of a series of four courses for mathematics, engineering, and science students. Topics include limits, continuity, differentiation of algebraic and trigonometric functions, applications of derivatives, fundamental integration, exponential and logarithmic functions. Prerequisite: Minimum grade of C in MAT 124 or equivalent.

MAT 170 Technical Mathematics II 3(3-0)
This applied mathematics course is for students who already have satisfactory arithmetic skills, or who have completed an introductory course, such as MAT 101. The object of the course is to apply geometry and trigonometry to realistic machine tool problems. Many problems will require the student to work with engineering drawings or blueprints. Topics covered will include signed numbers, the Cartesian coordinate system, solving equations, circles and arcs, geometric constructions, and trigonometry. Students are expected to have a scientific calculator. Calculator operations will be covered in class. Prerequisite: MAT 101 or equivalent.

MAT 212 Introduction to Probability and Statistics 3(3-0)
Selected topics from probability, variable, data collection and summarization, distribution, hypothesis testing, regression, and correlation. An interest course for use in teaching, science, business, biology, sociology, psychology, economics and more. Prerequisite: Minimum grade of C in MAT 104 or equivalent.

MAT 216 Business Mathematics II 3(3-0)
This course is a sequence to MAT 116 and covers topics such as exponential and logarithmic functions, derivatives, integration, and applications to business situations. Prerequisites: MAT 116 with a minimum grade of C.

MAT 217 Business Calculus 4(4-0)
A continuation of MAT 116. This course is now four credits, an expansion of the previous three-credit MAT 216 course. Fundamental calculus operations applied to business and financial situations. Topics will include limits, derivatives and their applications, curve sketching and optimization, exponential and logarithmic functions, integration and applications, an introduction to functions of several variables, and the mathematics of finance. Students are required to have a graphing calculator. The Texas Instruments TI-83+ calculator is strongly recommended. Prerequisites: MAT 116 with a minimum grade of C.

MAT 218 Mathematics for Elementary Teachers II 3(3-0)
Continuation of MAT 118 to include decimals, percent, ratio-proportion, geometry, probability, statistics, introduction to algebra and microcomputer use. Prerequisite: Minimum grade of C in MAT 118.
MAT 225 Calculus II 4(4-0)
Topics include indeterminate forms, methods and applications of integration, improper integrals, parametric equations, polar coordinates, and infinite series. Prerequisite: Minimum grade of C in MAT 126 or equivalent

MAT 226 Calculus III 4(4-0)
Topics covered include: functions of n-variables, partial differentiation, multiple integration, solid analytic geometry, 3-space vectors, and Greens Theorem. Prerequisite: Minimum grade of C in MAT 225 or equivalent

MAT 230 Introduction to Linear Algebra 3(3-0)
This course acquaints students with the theory and elementary application of vectors and matrices. Topics include linear systems, matrices, vectors, vector spaces, and linear transformations. Prerequisite: Minimum grade of C in MAT 126 or equivalent

MAT 290 -299 Selected Topics 3(3-0)
Courses designed to investigate various topics in Mathematics not included in current courses. Topics will be announced.

(MID) PERSONAL DEVELOPMENT

MID 101 Strategies for Success in College 2(2-0)
This course is designed for first time and returning college students. To develop the attitudes and behaviors of successful college students, the course covers topics such as learning styles, critical thinking, reading and comprehension strategies, as well as note taking, test taking, and time management strategies. Students will discuss and practice various techniques. By becoming familiar with the various styles of learning, studying, reading, and test taking, students will identify the ways that work best for them. Prerequisites: None

MID 102 Career Exploration and Development 1(1-0)
Career Exploration and Development is an 8-week, one credit course for new and returning students. This course will focus on assisting students in identifying their career goals through self-assessment of interests, aptitudes, and world of work preferences. Students will also learn resume and cover letter development, interview techniques, and job search strategies. Prerequisites: None Corequisite: This course must be taken in conjunction with at least one other course, not PED.

MID 103 Human Relations 3(3-0)
This is an applied social science course. Focus will be on theory and research from the social sciences (primarily psychology) that apply to an individual’s personal and professional development. This course is not intended solely for psychology or other social science majors, but for any student who is interested in improving psychological well-being.

MID 104 First Year Experience 2(2-0)
This course encourages academic and social interaction with peers, faculty and staff, and other members of the MMCC community. The students will learn to have an active role in their education. Participation in the course facilitates improvement of creative and critical reasoning, study habits and preparation skills, information literacy, and presentation skills. This course provides the groundwork for independent and self-motivated learning and introduces or reintroduces students to skills and abilities that will allow them to thrive in a changing college environment. Prerequisites: None

(MUS) MUSIC

MUS 131 Music for Elementary Teachers 3(3-0)
This course will prepare elementary teachers for uses and applications of music in the elementary classroom.

MUS 275 Music Appreciation 3(3-0)
This course will promote general musical understanding through active listening.

(NAL) NATIVE AMERICAN LANGUAGE

NAL 101 Ojibwe Language I 3(3-0)
The primary purpose is to introduce the student to the Ojibwe language and to begin to have an understanding of the beauty of the language. This course is designed to acquaint the student with basic words and phrases and stress oral learning. A system of writing will be introduced.
NUR 121 Fundamentals of Nursing 6(6-0)
This is the basic course in the nursing curriculum that provides the beginning nursing students with the foundation upon which other courses build and expand. The course expands on the role of the nurse in the exploration of concepts of communication skills, nursing process, nutrition, wellness and adaptation, and scientific principles and skills of basic nursing practice as applied to common physical and psychosocial manifestations of illness. In addition, the legal and ethical aspects of nursing are discussed. Includes practice of skills in the college laboratory. Prerequisite: Admission to Level I of the Program Corequisites: NUR 124, NUR 150

NUR 124 Nursing Clinical I 5(0-15)
A clinical course that consists of guided learning clinical experience in selected health care facilities. Emphasis is placed on application of principles & techniques of basic nursing theory common to the institutionalized patient. Prerequisite: Admission to Level I of the Program Corequisite: NUR 121, NUR 150

NUR 125 Care of Adult I 5(0-15)
This course focuses on care of the adult medical-surgical patient with common, well defined, non-complex stressors. The course uses selected adaptive problems of chronic disease, rehabilitation and aging. Includes use of the three nursing roles (Direct Care Giver, Communicator, and Manager) and nursing process in planning care. Clinical practice in health agencies is included. Prerequisites: NUR 121, NUR 124, NUR 150 Corequisite: NUR 128

NUR 127 Maternal-Child Nursing 4(3-2)
This course provides concepts of normal growth and development from conception through adolescence focusing on care provided to the mother, infant, child and adolescent with common, well-defined, non-complex nursing diagnoses in a structured setting. The lab portion of this course consists of observational experiences, self-study and in-lab clinical simulations. Emphasis is placed on use of nursing skills, patient plan of care and communication techniques with patients throughout the life span for adaptation. Focus is on expansion of knowledge and skills acquired in Nursing 124 to include growth and development, nutrition, drug therapy and variations from normal. Selected adaptive problems are utilized to emphasize the role of the nurse in direct care provision, communication and management of care through the use of the nursing process. Prerequisites: NUR 121, NUR 124, NUR 150 Corequisites: NUR 125, NUR 128

NUR 128 Nursing Clinical II 4(0-12)
A clinical course that consists of guided learning experiences in selected health care agencies. Emphasis is placed on use of nursing skills, patient plan of care and communication techniques with patients throughout the life span for adaptation. Focus is on expansion of knowledge and skills acquired in NUR 124 to include growth and development, nutrition, drug therapy and variations from normal. Prerequisites: NUR 121, NUR 124, NUR 150 Corequisites: NUR 125

NUR 130 Nursing Clinical III 3(0-9)
This clinical course focuses on the care of groups of patients with common, well defined, non-complex nursing diagnoses in structured settings. Included is administration of medication to assigned patients, excluding intravenous initiation and intravenous push medications. Prerequisites: NUR 125, NUR 128

NUR 132 Clinical Practicum 1(0-3)
Additional experience in clinical nursing arranged on an individual basis for students returning to Level I of the Program after having withdrawn.

NUR 133 Transition for Advanced Standing 1(1-0)
This course is designed for the non-MMCC LPN and MMCC LPN who graduated more than 2 years ago to assist in the adaptation to MMCC’s Nursing Process Worksheet (NPW) and evaluation process. Class focuses on the use of the nursing process and communication techniques. Prerequisite: Admission to Level II of the Program with advanced standing status.

NUR 134 Trends in Leadership 1(1-0)
This course is designed to prepare the Level I graduate to meet the needs of a group of patients by organizing, selecting priorities and delegating nursing responsibilities to unlicensed personnel. The historical perspective to present-day challenges of the nursing role will be discussed. Seeking and maintaining employment as a health care professional will be highlighted, including licensure requirements. Prerequisites: NUR 125, NUR 128 Corequisites: NUR127, NUR 130

NUR 150 Pharmacology 3(3-0)
This course consists of theory and techniques used for legal and safe administration of a variety of types of medication preparations. It includes dosage calculation, understanding of medical abbreviations and nursing interventions used in medication administration. This course identifies prototype medications in each of the major classifications. Emphasis is placed on drug reaction, common usage, major side effects, assessment, administrations, and responsibilities for the safe and accurate administration of medications. Prerequisite: Admission to Level I of the Program Corequisites: First semester Level I Nursing courses unless previously passed.
NUR 151 Assessment in Nursing 0.5(0.5-1)
This course is designed as a hands-on lab to introduce the nursing student to the knowledge and skills required to perform a systematic physical assessment of a healthy adult and to record the findings appropriately. The course emphasizes a holistic approach to assessment while encompassing the growth and development of neonates through geriatrics. Prerequisite: Admission to the Nursing Program Corequisites: NUR 121, NUR 124, NUR 150

NUR 152 Nutrition Across the Lifespan 1(1-0)
This course is designed to introduce the nursing student to the fundamentals of nutrition across the lifespan. This course will define the role of nutrients in the human body, as well as family nutrition. Emphasis will be placed on essential nutrients and their primary functions; the processes of digestion, absorption and metabolism; and disease conditions associated with imbalanced nutrition. The student will develop an understanding for therapeutic application of dietary principles and the nurse's role and responsibility in this facet of client care. Prerequisite: NUR 121, NUR 124, NUR 150, NUR 151 Corequisites: NUR 125 and NUR 128

NUR 221 Family Centered 2.5(2.5-0)
This course is a continuation of maternal/child nursing in which planning care for patients in relation to concepts of family and child development from conception through adolescence in normal and common disease states is studied. Focuses on the use of principles of bio-psycho-social, spiritual, & developmental and needs theories in planning care for well & ill maternity & pediatric patients. Prerequisite: Admission to Level II of the Program Corequisite: NUR 222

NUR 222 Family Centered: Clinical IV 2.5(0-7.5)
This clinical course focuses on the use of the nursing process in planning and implementing care for patients in relation to concepts of family and child development from conception through adolescence. Selected health care agencies are utilized for this course. Prerequisite: Admission to Level II of the Program Corequisite: NUR 221

NUR 223 Mental Health 2.5(2.5-0)
This course focuses on selected mental illnesses & mental health interventions including recognition of defense mechanisms, the dynamics of human behavior & therapeutic communications. Students gain further knowledge in relating to patients & increased understanding of their own behavior. Prerequisite: Admission to Level II of the Program Corequisite: NUR 224

NUR 224 Mental Health Clinical IV 2.5(0-7.5)
This clinical course focuses on the use of the nursing process in planning and implementing care for individuals with mental illness, substance abuse or other mental disabilities. Included is use of communication skills and knowledge of mental health interventions in supporting positive coping behavior. Selected health care agencies are utilized for this course. Prerequisite: Admission to Level II of the Program Corequisite: NUR 223

NUR 225 Care of Adult II 5(5-0)
This course concentrates on acute medical-surgical problems of adult patients in the structured health care setting. Focus is on development of nursing care plans including nutritional therapy, drug therapy, nursing diagnosis & interventions, psychosocial needs, teaching, and referrals. Prerequisite: Admission to Level II of the Program Corequisite: NUR 226

NUR 226 Clinical V 5(0-15)
This clinical course is a continuation of NUR 130 dealing with adult medical-surgical patients with acute disease condition. Focus is on the development and implementation of the nursing process. Clinical practice is in selected structured health care agencies with observational experience in home care, emergency room, critical care units, cardiac rehabilitation, and hemodialysis. Prerequisite: Admission to Level II of the Program Corequisite: NUR 225

NUR 227 Leadership 2(2-0)
This course provides the basics of leadership and management techniques to enable students to provide care to groups of patients. Focus is on the use of the nursing process in planning care for groups. Legal and ethical problems in nursing are explored. Includes concept of role transition from student to graduate and stress management techniques. Students must be enrolled in a clinical concurrently with this class. Prerequisite: Completion of Semester 1 of Level II of the Program

NUR 228 Preceptorship: Clinical VI 3(0-9)
The clinical portion of the leadership course, the preceptorship is a structured experience that is part of the educational program. The primary goal is to facilitate the role transition of student nurse to graduate nurse. The student nurse, under the guidance of a selected staff, preceptor, with faculty as a resource, applies theory to practice in real-life work situations. Prerequisites: NUR 221, NUR 222, NUR 223, NUR 224, NUR 225, NUR 226, NUR 227, HUM 200, and SSC 200 (2nd Level Gen Ed)
(PED) PHYSICAL EDUCATION

PED 103 Body Mechanics/Aerobics 1(0-1)
Exercise through choreographed dancing. The course includes an understanding of aerobic exercise, the proper approach to physical fitness, and its effect on tension and better health.

PED 109 Beginning Dance Exercise 1.5(0-1.5)
This course utilizes aspects of the following: modern dance, jazz dance, Duncan Dance, martial arts, yoga, and the Alexander Technique. Students will become familiar with their own inner rhythm and dance of fitness. The classes will stimulate, condition and prepare the body through the use of movement forms. This course will utilize the Nia Technique to combine the components listed above, primarily through dance/exercise routines, with very brief periods of verbal instruction.

PED 110 Beginning Body Dynamics 1(0-1)
This course combines elements of cardiovascular and strength training, martial arts movement, pilates, yoga, and dance into an integrated exercise routine. Through verbal instruction, students will perform movements designed to increase basic physical fitness. Knowledge of life-long fitness practices will also be gained.

PED 118 Beginning Tennis 1(0-1)
This course is designed to introduce the student to the game of tennis. Major emphasis is on basic strokes, scoring, etiquette, and selection of equipment.

PED 119 Beginning Golf 1(0-1)
This course is designed to introduce students to the basic principles of golf. In addition to learning and practicing the golf swing, rules and etiquette of the game are discussed. Students may use their own equipment or rent from the golf facility where the class is held.

PED 121 Introductory Scuba Diving 2(1-2)
Introductory SCUBA is designed to introduce students to SCUBA diving, SCUBA equipment, water safety and the joys of diving. This course is designed for students to learn the necessary skills and knowledge to prepare for open water SCUBA certification as a SCUBA schools international (SSI) open water diver. Students will complete the academic and pool portions of the basic three-part SCUBA certification in this class. The third part of certification entails the open water certification dive that would be completed independently at a later date. It is important to note that completion of the first two parts of this class will not allow a student to dive with most companies until they have completed part three, which is not included in this course. Please contact the instructor if you have questions. Prerequisites: None, but students should be good swimmers, understand that this is a gear intensive sport and that there is a degree of physical fitness necessary to become a SCUBA diver. Medical clearance may be required prior to any water work. Students must be capable of continuously swimming 200 yards and treading water/ floating for a period of 10 minutes by the end of the course.

PED 124 Beginning Skiing 1(0-1)
This course is designed to introduce students to basic downhill skiing on an established ski resort hill. Students may use their own equipment or rent from the ski resort.

PED 126 Beginning Bowling 1(0-1)
This course is designed to introduce students to the basic game of bowling. Open to all students; a fee is charged for rental of bowling facilities. Students may use their own equipment or rent from the bowling alley where the class is held.

PED 132 Beginning Karate 1(0-1)
This course has been designed to help the participating student understand the art of karate, not only as a method of self-defense but as a 2,000 year old art developed to better-coordinate the body and mind. Emphasis is placed on physical fitness, history of the art, self-discipline, and self-defense. Involved are body-movement principles, a progressive exercise program, and other desirable health and mental aspects of the art of karate.

PED 145 Beginning Snowboarding 1(0-1)
This is a course in basic snowboarding. The course includes instruction in the proper use of equipment, safety considerations, and the basic skills required to snowboard.
PED 203 Intermediate Body Mechanics/Aerobics 1(0-1)
A continuation of PED 103 with emphasis on developing increased cardiovascular fitness. Prerequisite: PED 103 or permission of the Instructor

PED 207 Intermediate Kardio Kickboxing 1(0-1)
This course is a continuation of PED 107. Prerequisite: PED 107 or PED 108

PED 208 Intermediate Kardio-Kickboxing 1.5(0-1.5)
This course is a continuation of PED 108. Prerequisites: PED 107 or PED 108

PED 209 Intermediate Body Dynamics 1(0-1)
This is the second in a series of courses combine elements of cardiovascular and strength training, martial arts movement, pilates, yoga, and dance into an integrated exercise routine. Through verbal instruction, students will perform movements designed to increase basic physical fitness. Knowledge of lifelong fitness practices will also be gained. Prerequisite: PED 110

PED 218 Intermediate Tennis 1(0-1)
This course is a continuation of PED 118 with major emphasis shifting to singles and doubles play.

PED 219 Intermediate Golf 1(0-1)
A continuation of PED 119 with emphasis on the use of specific clubs and types of shots, e.g. woods, short irons, chipping, etc.

PED 224 Intermediate Skiing 1(0-1)
Students begin upper/lower body separation leading to steered turns and matching of skis before the fall line is emphasized.

PED 226 Intermediate Bowling 1(0-1)
A continuation of PED 126 with emphasis on spot bowling, consistency, and accuracy.

PED 232 Intermediate Karate 1(0-1)
The purpose of this course is to provide students already knowledgeable in the rudiments of the art with the opportunity to gain more substantial expertise in specific aspects of the art. These include self-defense, sport fighting, philosophy, and history.

PED 246 Advanced Bowling 1(0-1)
A continuation of PED 226 with emphasis on adjusting the game to alley conditions, changing lines and spots, etc.

PED 248 Advanced Tennis 1(0-1)
This course is designed primarily to improve a players court strategy. The volley net is emphasized.

PED 249 Advanced Golf 1(0-1)
A continuation of PED 219 with emphasis on accuracy, shot placement, selecting the right club, etc.

PED 250 Advanced Body Dynamics 1(0-1)
This is the third in a series of courses that combine elements of cardiovascular and strength training, martial arts movement, pilates, yoga, and dance into an integrated exercise routine. Through verbal instruction, students will perform movements designed to increase basic physical fitness. Knowledge of lifelong fitness practices will also be gained. Prerequisites: PED 110, PED 210

PED 252 Advanced Karate 1(0-1)
This course is designed for the student who has completed PED 232 or who can perform the basic techniques of Moo Duk Kwan Tang Soo Do. Upon completion of the course the student should be prepared to earn an eighth gup purple belt under requirements set forth by the Karate Institute. Emphasis is on forms, hand and foot techniques, one-step sparring, and class sparring.

PED 255 Physical Training 3(3-0)
This course is designed to help students pass the M.C.O.L.E.S. physical training requirements. The objective is to teach the student to become physically and mentally fit to become a police officer.

(Phl) Philosophy

PHL 201 Introductory Philosophy 3(3-0)
A problem approach organized to introduce the student to some of the thinkers, systems, and problems of philosophy facing humanity from ancient times to the present.

PHL 205 Practical Reasoning and Argumentation 3(3-0)
This course develops reasoning skills & equips students to recognize & analyze arguments as they occur in a variety of contexts (ie: editorials, critical discussions, quarrels, advertisements, speeches, academic inquiries, negotiations, legal deliberations, ethical debates, etc.). Study will focus on the features of good arguments, different types of arguments, ways arguments can go wrong, & techniques for criticizing & constructing effective arguments. Emphasis is not on theories but on developing tools for successful thinking in dialogue with others.
PHL 210 Social Philosophy: Ideals & Realities 3(3-0)
This course is an inquiry aimed at discovering which questions are the right ones to ask when evaluating a social system or when designing it. It covers several major social philosophies, as reflected in utopian and dystopian writings, and focuses on issues such as human nature, freedom, rights, and obligations, and the relationship between individual and community.

PHL 220 Ethical Issues 3(3-0)
A study of ethical principles, reasoning and practice as it occurs in such areas as business, law, medicine, ecology, and government. A brief review of the historical development of ethical theory together with case studies will be the primary focus of the course. The main objective is to provide students with the intellectual tools for recognizing and analyzing such ethical issues as confront members of our society.

PHL 250 Chinese Philosophies 3(3-0)
This course surveys three branches of traditional Chinese philosophy—Confucianism, Daoism, and Buddhism—and includes comparisons with Western thought. Readings include translations of founding thinkers plus later commentaries. Emphasis will be on the relevance of these philosophies for thinking about how we should live. Prerequisites: One philosophy course recommended, but not required.

PHL 290 - 299 Selected Topics 3(3-0)
These courses are designed to investigate various topics in Philosophy that are not included in current courses. Topics will be announced.

(PHT) PHARMACY TECHNOLOGY

PHT 104 Orientation to Pharmacy Technician and Drug Preparations 4(4-0)
This course presents an orientation to the work of pharmacy technicians and the context in which technicians’ work is performed. The concept of direct patient care and the technicians’ general role in delivery with particular emphasis on the complementary roles of pharmacists and technicians is presented. Corequisites: ALH 100, PHT 105, PHT 106

PHT 105 Pharmacy Law 3(3-0)
This course presents information on the influence that medication laws, standards, and regulations have on pharmacy practice. Federal and State regulations that govern medicine use and standards of practice presented. Laws, regulations and standards which govern the preparation of non-compounded, cytotoxic, and other hazardous medication products is emphasized. Corequisites: ALH 100, PHT 104, PHT 106

PHT 106 Pharmaceutical Calculations 3(3-0)
This course will present applications of pharmaceutical dosage calculations using various systems of measurements including conversions and applications of equations. This course also introduces basic business math skills, such as calculating inventory, purchasing, and profit margins. Corequisites: ALH 100, PHT 104, PHT 105

PHT 113 Institution & Community Pharmacy 3(3-0)
This course presents information on how to assist the pharmacist in institutional and retail pharmacies on the collection, organization, and evaluation of information for direct patient care, medication use review, and departmental management. Communication skills and confidentiality issues are emphasized. Prerequisites: PHT 104, PHT 105, PHT 106 Corequisite: PHT 114, SPE 101 or SPE 257

PHT 114 Pharmacology for Pharmacy Technicians 4(4-0)
This course presents information on the use and side effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases affecting the body systems. Students learn the brand and generic names, standard pronunciations, dosage forms, and routes of administration for medications. Prerequisites: PHT 104, PHT 105, PHT 106 Corequisite: PHT 113, SPE 101 or SPE 257

PHT 115 Pharmacy Technician Clinical 7.5(0-15)
Skills and knowledge acquired during the first two semesters of the Pharmacy Technician program are applied in community and institutional pharmacy settings. All internship experience is under the supervision of a registered pharmacist. 160 hours will be completed in a community pharmacy setting and 160 hours will be completed in an institutional pharmacy setting for a total of 320 hours of internship experience. Prerequisites: PHT 113, PHT 114, SPE 101 or SPE 257

(PHY) PHYSICS

PHY 101 Introductory Physics (non-Lab) 3(3-0)
A general non-mathematical physics presentation stressing a conceptual as opposed to laboratory approach. Some topics of discussion are mechanics, sound, heat, electricity, light, nuclear concepts, and everyday encounter of principles governing these topics. (Not recommended for students majoring in science.)

PHY 103 Applied Physics 4(3-2)
This course is designed for students enrolled in technical education programs. The purpose of the course is to provide an understanding of physical principles and their application to industry. The course content includes a study of precision measurements; properties of solids, liquids, and gases; force and motion; work energy and power; vectors; analysis of basic machines; temperatures and heat. Corequisite: MAT 104 or MAT 170
PHY 105 Introductory College Physics I 5(4-2)
This course focuses on the study of motion, forces, energy, sound, wave motion and heat. Students should have had or be currently taking a class in trigonometry. Corequisite: MAT 124 or equivalent

PHY 106 Introductory College Physics II 5(4-2)
Continuation of PHY 105. Topics studied include optics, electricity and magnetism, atomic and nuclear theory and relativity. Prerequisite: PHY 105

PHY 211 General Physics I 5(4-2)
This course covers mechanics, sound, and heat. It is a mathematical treatment of problems of force, motion, and energy designed for pre-engineering students and physics or mathematics majors. Not open to students with credit in PHY 105 or PHY 106. Corequisite: MAT 126 or equivalent

PHY 212 General Physics II 5(4-2)
Electricity, magnetism, light, relativity, and nuclear structure are discussed. Designed for pre-engineering students and physics majors. Not open to students with credit in PHY 105 or PHY 106. Prerequisite: PHY 211

(POL) POLITICAL SCIENCE

POL 100 Current Political Issues 1(1-0)
The purpose of this course is to examine contemporary political issues of local, state, national, or international concern. Typical issues might include: reform of the United States election system; income versus property taxes; local zoning laws; the role of government in the economy; pax Americana.

POL 201 Introduction to American Government 3(3-0)
The emphasis of this course is the structure and function of our national government, understanding the processes of decision-making, and assessing the political importance and role of the individual citizen. The student is also introduced to some political theory as applicable to the American experience.

POL 250 International Relations 3(3-0)
A study of the nature of the international community and the forces that produce cooperation and conflict. Particular attention is given to analyzing power in terms of its acquisition and uses.

POL 290 - 299 Selected Topics 3(3-0)
These courses are designed to investigate various topics in Political Science that are not included in current courses. Topics will be announced.

(PSC) PHYSICAL SCIENCE

PSC 101 Introductory Astronomy 4(3-2)
An introduction to astronomy for students who desire a basic understanding of the solar system and the universe. Topics include: historical astronomy, exploration of space, stellar evolution, solar system, galaxies, and the universe. Laboratory work includes individual student use of a telescope.

PSC 102 Introductory Physical Science 4(3-2)
A general course for non-science majors. Selected topics for students interested in energy, meteorology, geology, physics, and chemistry and their interrelationships as they affect the physical environment of persons. Prerequisite: MAT 104 or equivalent

(PSY) PSYCHOLOGY

PSY 101 Introduction to General Psychology 3(3-0)
This class introduces students to the specific discipline of psychology. This course will include a comprehensive coverage of basic concepts and principles, terminology, important trends in psychological research, and the application of this research. Emphasis will be placed on contemporary perspectives of psychology, including biological, learning, cognitive, sociocultural, psychodynamic, and humanistic perspectives in understanding normal and abnormal behavior and mental processes.

PSY 205 Abnormal Psychology 3(3-0)
This course introduces students to abnormal psychology issues, including the criteria, nature, development, classification and causes of mental disorders. Perspectives from each of the major contemporary perspectives in psychology will be included. In addition, major theories, significant research, and methods of treatment associated with each of these approaches are presented. Prerequisite: PSY 101.

PSY 212 Developmental Psychology 3(3-0)
This course introduces students to the description and explanation of changes in an individuals behavior that are a result of maturation and experiences that fall within the life span concept; e.g. behavior-genetics, critical periods, learning cognition, and abnormal development. In addition, this course provides the student with an introduction into methodological research. Prerequisite: PSY 101.

PSY 220 Introduction to Psychological Testing 3(3-0)
This course is designed to introduce the student to the basic principles of psychological testing. The course will cover the history of psychological testing, assessment in a variety of areas including intelligence testing, personality assessment, neurological assessment, and vocational assessment, and issues relating to test development and review. Prerequisite: PSY 101.
PSY 240 Theories of Personality 3(3-0)
This course presents issues in the measurement & research of personality. Historical & contemporary theories and theorists from each of the major domains of psychology will be critically examined regarding each of the domains' emphasis on development and assessment of personality. Application of course material will be emphasized. Prerequisite: PSY 101

PSY 250 Clinical Interviewing and Counseling 3(3-0)
This course is an introduction to theories of counseling as well as the techniques and processes of client and counselor communication. Students explore attitudes, values, and motivation for counseling. Emphasis is placed on the role of the counselor in various agency capacities as well as the development of empathetic and listening skills. Prerequisite: PSY 101 or permission of the Instructor

PSY 281 Behavior Modification 3(3-0)
This course is an introduction into a survey of developments in behavior alteration. Specifically, emphasis is on behavior modification techniques in the areas of motivation, elimination of undesirable behaviors, an increase of desirable behaviors, and the promotion of academic and social participation in education and other environments. Prerequisite: PSY 101

PSY 285 Research Methods 3(3-0)
This course provides an introduction to research methods in the social sciences. Research designs, data collection methods, basic statistical procedures, and ethical issues in research will be included. An APA-style research proposal will be completed. Prerequisite: PSY 101, MAT 212

PSY 290 - 299 Selected Topics 3(3-0)
These courses are designed to investigate various topics in Psychology that are not included in current courses. Topics will be announced.

PTA 101 Orientation to Physical Therapy 1(1-0)
This introductory course provides an overview of the profession of physical therapy and focuses upon the role of the physical therapist assistant. Standards of Practice and core values of professionalism are emphasized. Communication skills are enhanced to better serve a multicultural health care environment.

PTA 105 Modalities I 1(1-0)
This course includes instruction in the principles, indications, contraindications, precautions and techniques of physical agents and massage. Prerequisite: Admission into the Program Corequisite: PTA 106, PTA 110, PTA 111, PTA 115, PTA 116

PTA 106 Modalities I Lab 2(0-6)
This lab is coordinated with the lectures and demonstrations presented in Modalities I. Guided practice with physical agents is provided. Students gain hands-on experience with heat and cold treatments, hydrotherapy, aquatic therapy, ultrasound, massage, traction, and other modalities. Basic documentation skills are introduced. Prerequisites: Admission into the Program Corequisites: PTA 105, 110, 111, 115 & 116

PTA 110 Therapeutic Exercise 1(1-0)
Basic exercise theory is presented. Concepts of flexibility, strength and coordination are emphasized. Other topics include transfers, documentation, gait training with ambulation equipment and monitoring a patient/client during an exercise or gait training program. Prerequisites: Admission into the Program Corequisites: 105, 106, 110, 115 & 116

PTA 111 Therapeutic Exercise Lab 2(0-6)
In a lab setting, students practice basic therapeutic exercise techniques. They implement flexibility, strength and coordination programs. Progress note writing is also required. Prerequisites: Admission into the program Corequisites: PTA 105, 106, 110, 115 & 116

PTA 115 Clinical Kinesiology 1.5(1-0)
This course provides a review of surface and functional anatomy with an emphasis on the muscles, bones and joints. Students develop an understanding of normal posture, movement patterns and gait. Prerequisites: Admission into the Program Corequisites: PTA 105, 106, 110, 111 & 116

PTA 116 Clinical Kinesiology Lab 1(0-3)
This lab course accompanies Clinical Kinesiology and provides practical observation, palpation and identification skills of basic anatomical landmarks, especially bones, joints and muscles. Normal posture, movement patterns and gait characteristics are included. Prerequisites: Admission into the Program Corequisites: PTA 105, 106, 110, 111 & 115

PTA 125 Measurement Techniques 1(1-0)
Students are presented with the assessment techniques most commonly used in physical therapy. Treatment plans are based upon the objective findings of this data collection. Techniques of goniometry, muscle testing, sensory assessments, gait/posture analysis and coordination testing are presented. Prerequisites: PTA 105, 106, 110, 111, 115, & 116 Corequisites: PTA 126, 130, 131, & 140

PTA 126 Measurement Techniques Lab 2(0-6)
Lab practice is the follow-up to Measurement Techniques. Students received guided practice with the assessment techniques of goniometry, muscle testing, sensory evaluations, gait/posture analysis and coordination testing. Prerequisites: PTA 105, 106, 110, 111, 115 & 116 Corequisites: PTA 125, 130, 131, & 140
PTA 130 Advanced Therapeutic Exercise 2(2-0)
This course presents the principles and guidelines for treating musculoskeletal conditions (surgical and non-surgical) of the upper and lower extremities, neck trunk, pelvic floor, and back. Other therapeutic exercises will be provided for vascular disorders and faulty posture. Prerequisites: PTA 105, 106, 110, 111, 115 & 116 Corequisites: PTA 125, 126, 131, & 140

PTA 131 Advanced Therapeutic Exercise Lab 2(0-6)
This lab course reinforces the principles and guidelines for treating musculoskeletal conditions (surgical and non-surgical) of the upper and lower extremities, neck and back. Students are guided in implementing therapeutic exercises for those conditions as well as additional exercises for vascular disorders and faulty posture. Previous course information about basic therapeutic exercise and modalities is integrated into lab sessions. Prerequisites: PTA 125, 126, 130, 131 & 140 Corequisites: PTA 125, 126, 130, & 140

PTA 140 Clinic I 5.3(0.3-15)
Full-time (40 hours/week) for five weeks of clinical practice offers students opportunities to observe, assist with and implement treatment techniques which have been introduced in prior lecture courses and practiced in lab. Clinical instructors facilitate learning and supervise. Clinical placements occur in hospitals, outpatient clinics, rehabilitation centers, nursing homes, home care or schools. Prerequisites: PTA 105, 106, 110, 111, 115,116, all with a minimum grade of B- and obtain/keep a current First Aid Certificate and CPR Certificate for the Professional Rescuer. Corequisites: PTA 125, 126, 130, & 131

PTA 205 Modalities II 2(2-0)
The basic concepts, terminology and physiology of electrical stimulation are introduced. The course guides the student in understanding treatment parameters/protocols and the safe management of equipment for pain control, edema/swelling reduction, muscle spasm relief and strengthening. Prerequisites: PTA 125, 126, 130, 131 & 140 Corequisites: PTA 206, 207, & 208

PTA 206 Modalities II Lab 1.33(0-4)
This lab provides practice in the safe and effective delivery of electrical stimulation. The students use a variety of modalities for decreasing pain, increasing strength, reducing edema/swelling, and improving tissue repair. Documentation skills are reinforced. Prerequisites: PTA 125, 126, 130, 131 & 140 Corequisites: PTA 205, 207 & 208

PTA 207 Rehab of Pathological/Neurological Cond. 2(2-0)
The signs, symptoms, etiology, prognosis and medical treatment of diseases and conditions are presented. The focus is upon diagnoses commonly seen in physical therapy. Prerequisites: PTA 125, 126, 130, 131 & 140 Corequisites: PTA 205, 206 & 208

PTA 208 Rehabilitation Techniques Lab 2(0-6)
Rehabilitation treatments are practiced for common pathological and neurological conditions. Students also gain hands-on experience with orthotics, prosthetics, adaptive equipment and custom fitted wheelchairs. Prerequisites: PTA 125, 126, 130, 131 & 140 Corequisites: PTA 205, 206 & 207

PTA 210 Clinical Forum 3(3-0)
This seminar course offers networking with classmates and instructors to solve clinical problems, improve communication skills, and reinforce professional behavior. Emphasis is on evidence-based clinical decision making, ethical practice, planning for future employment, and professional growth. Prerequisites: PTA 205, 206, 207 & 208 Corequisites: PTA 240

PTA 240 Clinic II 9(0-15)
Full-time clinical assignments provide a broad range of practice opportunities with patient/clients. Students will be assigned to hospitals, out-patient centers, nursing homes, schools or rehabilitation centers for 40 hours/week for 13 weeks. The students are under the direct supervision of a clinical instructor (physical therapist or physical therapist assistant). Prerequisites: PTA 205, 206, 207, 208, all with a minimum grade of B- and obtain/keep a current First Aid Certificate and CPR Certificate for the Health Care Provider or an AED/CPR Certificate for the Professional Rescuer. Corequisites: PTA 210

RAD 100 Introduction to Radiologic Technology 3(2-2)
This course is an introduction to the radiologic technology profession. Areas of study include the history of medicine, development of the practice of radiology and radiologic technology, medical relationships and ethics, principles of radiographic exposure, fundamentals of x-ray production, and principles of x-ray film processing. Practice in the fundamentals of equipment operation and film processing in the Campus x-ray lab provide the basis for developing initial psychomotor skills necessary to function as a radiologic technologist. Prerequisite: Admission to the Program

RAD 110 Radiation Physics 3(2-2)
This course correlates the basic concepts and principles of physics with the production, control, and application of x-radiation. The focus is on the study of the structure of matter, mechanical principles, electricity, and magnetism as related to the development and application of x-ray machinery. The measurement and detection of radiation and laboratory exercises in electrodynamics supplement the principles and concepts. Prerequisite: Admission to the Program
**RAD 115 Principles of Radiographic Exposure 3(2-2)**

A study of the prime factors in radiographic techniques determination, the geometric and photographic basis of radiographic image formation, and how these relate to radiographic quality. Methods of technical conversions for adjusting radiographic technique to maintain radiographic quality are studied. An overview of the different systems of radiographic techniques is presented and students learn how to formulate a radiographic technique system. Prerequisite: Successful completion of the first semester RAD courses.

**RAD 130 Radiographic Positioning I & II 4(2.5-2.5)**

Introduction to radiographic positioning fundamentals, terminology and procedures. The fundamentals of patient care are integrated with the study of the basic radiographic procedures of the thorax, abdomen, upper and lower extremities, shoulder, pelvis, and spinal column. Practice of the basic skills required in these procedures is done in the Campus x-ray lab. Corequisite: RAD 115

**RAD 175 Radiographic Positioning III 3(1-5)**

A continuation of the fundamentals of radiographic positioning procedures and patient care. Principles of the use of contrast media in radiology are correlated with positioning procedures of the gastrointestinal, urinary, and biliary systems. Adaptation of routine radiographic procedures to mobile and operative radiographic situations is introduced. Practice in the x-ray and nursing labs permit the development of basic skills needed to perform the procedures. A one day a week clinical laboratory schedule orients the student to the hospital and the radiology department operations. Prerequisite: Successful completion of all 2nd semester RAD and Science courses.

**RAD 200 Clinical Education I 8(0-15)**

The first phase of clinical practicum in the hospital environment. The students review the hospital organization and operation, become familiar with hospital policies and procedures and are introduced to and integrated into the Radiology Department operations. Opportunity to develop and perfect the initial skills needed to function as a radiologic technologist is scheduled, and the basic radiographic procedures are practiced and assessed. Student film conferences are conducted and pertinent clinical issues are discussed. This course will meet for 19 weeks. Prerequisite: Successful completion of all first-year requirements. Corequisites: RAD 201, RAD 215

**RAD 201 Clinical Issues in Radiography I 2(2-0)**

This course is the first in a series of courses intended to augment first year introductory courses and complement clinical education. Topics covered are medical legal issues, medical ethics, communication in radiology, and critical thinking/problem solving in radiography. In addition, students evaluate selected radiographs taken during clinical education. A semester project integrating didactic concepts with clinical education is conducted. Review is begun for the American Registry of Radiologic Technologists examination. Prerequisite: RAD 175 Corequisite: RAD 200

**RAD 215 Radiologic Techniques I 1(2-0)**

Advanced study of the application of radiation and its effects. Areas of concentration are on biological effects of ionizing radiation, principles of radiation protection, and practical applications of radiation protection in the clinical situation. Laboratory exercises and experiments utilizing low-level radiation sources, radiation-measuring instruments and biological specimens in the microbiology lab provide the student observable evidence of ionizing radiation effects. Prerequisite: RAD 175 Corequisite: RAD 200

**RAD 217 Radiographic Techniques II 2(2-0)**

A continuation of advanced study in radiologic technology. Radiographic procedures and imaging methods used to demonstrate special anatomical areas or systems are investigated. The pathological processes that necessitate radiological investigation are introduced and correlated with their diagnostic manifestation on the imaging format utilized. Prerequisites: RAD 200, RAD 201, RAD 215 Corequisites: RAD 220, RAD 221

**RAD 220 Clinical Education II 9(0-15)**

The second phase of clinical practicum in the hospital environment provides the opportunity for the student radiologic technologist to develop and perfect the skills to function as a radiologic technologist. Additional radiographic procedures are practiced and assessed. Student film conferences are again conducted. This course will meet for 20 weeks. Prerequisite: RAD 215

**RAD 221 Clinical Issues in Radiography II 1(1-0)**

This course is the second in a series of courses that augment clinical education. In addition to film conference and registry review, topics covered are medical ethics, career planning, and resume writing. A semester project related to clinical education is assigned. Prerequisites: RAD 200, RAD 201 Corequisites: RAD 220, RAD 217
RAD 225 Clinical Education III 5(0-15)
The final phase of clinical practicum in the hospital environment designed to perfect the basic skills and develop the fundamental skills in more technically exacting procedures. Remaining entry-level procedures are assessed, and student film conferences are conducted. This course will meet for 12 weeks. Prerequisites: RAD 220, RAD 221 Corequisite: RAD 225

RAD 226 Clinical Issues in Radiography III 1(1-0)
This course is a third in a series designed to augment clinical education. Included in this course is a capstone component that requires successfully completing a simulated registry examination. Other topics include interviewing skills and continuing education professional requirements. Prerequisites: RAD 220, RAD 221 Corequisite: RAD 225

RAD 227 Radiography Review Series Capstone 1(1-0)
This course is part of a series to be offered on an independent study basis for students who have previously completed a Radiography Program accredited by the Joint Review Committee on Education in Radiologic Technology. Students taking this course require a refresher or remedial course of study in order to re-qualify for the American Registry of Radiologic Technologists examination. The course primarily provides a review of all basic concepts on Radiography, as contained in the primary textbook. Other topics covered are preparation for review, American Registry of Radiologic Technologists examination procedure, and test-taking skills. As a capstone feature, students are required to take two simulated registry examinations, and must pass (75%) at least one of them. Prerequisites: RAD 101, RAD 111, RAD 116, RAD 176 Corequisite: RAD 214

RAD 230 Radiographic Quality Assurance 1(1.5-0)
The course introduces the student to the principles, concepts, instrumentation, and testing methods used in radiology departments for quality control of the radiographic imaging system(s). Practice in the fundamentals of quality-control testing methods on the imaging system components is done in the Campus x-ray lab. Elements of a department wide quality assurance program are discussed. Prerequisite: RAD 220 Corequisite: RAD 225

RAD 240 Radiographic Review and Refresher 1(1-0)
A review and/or update course for practicing radiographers or for those who have not been practicing for a period of time. The content is mutually agreed upon by the individual students and program coordinator. The design and methods of implementation of the course are developed by the program coordinator and a contract is drawn up specifying the content, objective, time frame, credit hours, and requirements. The emphasis of the content is tailored to the needs of the individuals with emphasis placed on effective allocation and utilization of available resources to achieve the objectives established.

REL 111 Intro to Academic Study of Religion 3(3-0)
Major forms of world religions, religious activity, and experience studied as an essential element of human life. Dimensions of the academic study of religion covered include myth, meaning, ritual, symbolism, traditions, religious social institutions, comparative religious study, the sacred, civil religion, religious art, and the social creation of moral ideologies. Prerequisites: none

REL 290 Special Topics: Death & Dying 3(3-0)
These courses are designed to investigate various topics in Religion that are not included in current courses. Topics will be announced.

SCI 200 Science, Technology, & Society 3(2-2)
This course is designed to introduce students from a variety of programs to the sciences. This introduction will focus on the way science and technology impacts each person's everyday life and their particular role in the environment. Knowledge will be gained for individuals to achieve scientific literacy sufficient to understand public issues. The course will stress interaction through student presentations and student-led discussions. Prerequisites: Level I General Education courses (CIS 100, ENG 111, MAT, SPE 101 or SPE 257)

SCI 290 -299 Selected Topics 5(7-0)
These courses are designed to investigate various topics in Science that are not included in current courses. Topics will be announced.

SOC 101 Principles of Sociology 3(3-0)
This course discusses the principles governing relationships among human beings & the organization of human societies. Primary emphasis on contemporary American society with integration of classical theories of sociology.

SOC 200 Contemporary Social Problems 3(3-0)
This course identifies the factors and issues in humanity's quest of a high quality of life in a changing technological society. The nature, extent, and consequences of major social problems are examined in terms of underlying social processes as well as specific factors. Prerequisite: SOC 101 recommended.
SOC 202 Social Psychology 3(3-0)
This course examines the relationship between the individual and society. Contemporary theory and research are applied to areas such as symbol interaction, self, socialization, conformity, aggression and violence, group behavior, the social construction of reality, etc. Students are also introduced to the basic methods in social psychology and their application in everyday life. Prerequisite: SOC 101 recommended.

SOC 220 Sexuality and Society 3(3-0)
This course analyzes the impact of society on sex and sexuality. Emphasis is on interpersonal relationships and factual information necessary to enable students to understand better their own sexuality. Topics including sex roles, sexual interaction, sexual physiology, and public issues related to sex are discussed utilizing contemporary research and cultural definitions. Prerequisite: SOC 101 recommended.

SOC 222 Juvenile Delinquency 3(3-0)
This course provides the student with a concentrated overview of theory and research in the field of juvenile delinquency. Students will review research findings on various aspects of juvenile delinquency, of the characteristics of young offenders, and of the results of different forms of judicial and therapeutic interventions designed to prevent or control delinquent activities. Prerequisite: SOC 101

SOC 250 The American Family 3(3-0)
This course analyzes the development of the family as a contemporary social-institution. Factors which influence the makeup, stability, and the cultural and interpersonal contributions of the modern American family are discussed.

SOC 289 Gender Studies 3(3-0)
This course is an analysis of the impact of gender throughout the social world. The impact of gender in social institutions, cultural definitions, & interpersonal relationships will be explored. Gender inequality & its reproduction will be a focus. Emphasis will be on the relationship of gender to other aspects of social location and diversity. Prerequisite: SOC 101 recommended

SOC 290 - 299 Current Topics in Sociology 3(3-0)
Courses designed to investigate current topics of sociological relevance not included in courses currently listed. Topics will be announced.

SPE 101 Fundamentals of Communications 3(3-0)
A basic course in interpersonal communication & public speaking. Through observation, presentation, games, role play, valuing, & personal encounter, the student learns to encode & receive messages, verbal & nonverbal, with confidence & empathy. Skills in perception & concentration are emphasized.

SPE 105 Basic American Sign Language I 3(3-0)
This course is designed to give students a basic introduction to American Sign Language which includes signing and finger spelling, expressive and receptive, and information about deaf culture and different sign systems.

SPE 121 Listening Skills 2(2-0)
A course designed for study and practice in the development of effective listening skills.

SPE 195 Intercultural Communication 3(3-0)
This course introduces the student to the field of intercultural communication, emphasizing the way in which culture influences perception of your self and others and the manner in which it affects communication behaviors and expectations. In addition, this course provides an opportunity to explore other cultures, heighten cultural awareness and sensitivity, and develop communication skills to successfully negotiate through diverse cultural experiences. In that culture refers not only to national differences, but also to differences of all types (e.g., values, gender, race, communication patterns), this course will focus on the way we can manage the differences between ourselves and others in a mutually satisfying manner.

SPE 205 Basic American Sign Language II 3(3-0)
Continuation of SPE 105. This course increases the student’s receptive and expressive skills while continuing to provide information and knowledge of deaf culture. Prerequisite: SPE 105 or permission of the instructor

SPE 215 Basic American Sign Language III 3(4-0)
This course continues to increase students sign vocabulary and knowledge of the grammatical structure of American Sign Language (ASL). English and ASL idioms are explored, as well as additional uses of classifiers. Students will begin to develop skills in changing English text to ASL.

SPE 225 Basic American Sign Language IV 3(4-0)
This course will build upon previously learned American Sign Language (ASL) vocabulary, grammar, and structure. Students will continue to increase their understanding of and correct use of ASL. Special emphasis will be placed on developing skills in signing English texts in ASL. Prerequisite: SPE 215
SPE 251 Foundations of Communication 3(3-0)

This course concerns itself with theories and research in the field of human communication. There will be three segments to this course. The first will consider preliminary issues of definitions of communication and theory and broad theoretical approaches to communication. The second will consider theories specific to elements of the communication process (such as persuasive outcomes and verbal/nonverbal behaviors). The final segment will focus on context-specific theories. Prerequisite: 9 hours of SPE completed.

SPE 253 Small Group Communication 3(3-0)

This course examines the major concepts, principles, and theories associated with human communication behavior in small groups and provides practice with effective group communication skills. This course will enable you to be better able to analyze and evaluate your own participation in groups and to engage in competent communication practices in the group context. Since both interpersonal processes and problem-solving features of groups are important determinants of the groups overall effectiveness, this course will focus on both these areas.

SPE 257 Public Speaking 3(3-0)

This course is designed to build and refine the students overall communication skills, with special emphasis given to public speaking contexts. Students will examine theories and techniques for creating public speaking and apply these principles in class activities.

SPE 261 Interpersonal Communication 3(3-0)

This course is designed to build and refine the student's interpersonal communication skills. Special emphasis will be given to understanding how relationships form and the role of communication in initiating, maintaining, and terminating relationships. Students will examine and develop skills in interpersonal communication for both personal and professional contexts. Although the central theme of the course will remain consistent for all students, assignments and communication activities will be adapted to each student's chosen professional emphasis.

SPE 263 Professional Interviewing 3(3-0)

This course is designed to build and refine the students overall communication skills, with special emphasis given to various professional interviewing situations (employment, counseling, etc.). Students will examine the concepts and theories relevant to interview communication practices, apply these principles to communication issues and problems encountered in interview situations, and, through continued practice, set and achieve goals essential to preparing for and conducting successful interviews. Although the central theme of the course will remain consistent for all students, assignments and communication activities will be adapted to each student's chosen professional emphasis.

SPE 264 Organizational Communication 3(3-0)

This course is designed to introduce the student to the current theories and practices relevant to the management of communication systems in formal organizations and provide the student with a practical understanding of organizational communication.

SPE 265 Theories of Persuasion 3(3-0)

This course is structured to give the student an understanding of persuasion theory and how it functions within society. Specifically, this course will focus on the principles of attitude formation and change, its relationship to behavioral outcomes, and the role of communication in actuating those outcomes.

SPE 267 Nonverbal Communication 3(3-0)

This course is designed to increase awareness of the different concepts and theories associated with nonverbal communication and to allow the student to improve skills in this area of communication. Throughout the course, students will examine the different elements that make up the nonverbal message system and, within each area, talk about some of the current social and communication issues relevant to today's world.

SPE 270 - 279 Special Topics in Communication 3(3-0)

Variable topics/credit course designed to address special issues and/or employ innovative teaching techniques in the study of communication. Prerequisite: Permission of the Instructor.

SPE 285 Directed Activities in Forensics 3(3-3)

This course is designed to build and refine the student's overall communication skills, with special emphasis given to public speaking contexts and interactions that go beyond those traditionally available in a classroom setting. Students may choose to compete (at the local, state, and/or national level) in debate, individual events (persuasive speaking, impromptu speaking, etc.), or both. Students will participate in forensics activities as part of the Central Michigan University Forensics Team. Prerequisite: Permission of the Instructor.

SPE 290 Internship in Communication Studies 1(1-0)

This course is designed to provide the student with real world experience in which to apply the knowledge and skills he/she has developed in studying communication. With an advisor, the student will arrange to work with an organization for college credit. The student will be expected to participate and process his/her experience with both the college advisor and the organizational supervisor. Students must obtain application forms and internship guidelines from the Chair of the Communication Studies program. Prerequisite: Permission of Chair of the Communication Studies program.
**SPN 101 Elementary Spanish I 4(4-0)**

This course is designed to introduce students to basic conversational Spanish. It emphasizes essential grammar and touches on Hispanic culture since culture is an essential part in learning a new language. Student should, upon course completion, have the ability to speak, write, and understand basic Spanish conversation.

**SPN 102 Elementary Spanish II 4(4-0)**

SPN 102 is a continuation of SPN 101; therefore, it will begin with a review of the material covered in SPN 101. Students in SPN 102 will continue the study of grammar and vocabulary and will use these to communicate utilizing speaking, writing, listening, and reading skills. The course is designed to provide the basis for further study of Spanish at an intermediate level. Students are expected to study the material outside of class and come to class prepared to participate. Prerequisite: SPN 101 or equivalent or 1 year of high school Spanish.

**SPN 201 Intermediate Spanish I 4(4-0)**

SPN 201 is a course designed to help students in the acquisition of language skills necessary for verbal communication, grammar, reading, and writing at the intermediate level in Spanish. Cultural themes of the Hispanic world will be discussed in order to have a better cultural understanding. Prerequisite: SPN 102 or equivalent course, or 2 years of High School Spanish.

**SSC 111 Intro to the Academic Study of Religion 3(3-0)**

Major forms of world religions, religious activity, and experience studied as an essential element of human life. Dimensions of the academic study of religion covered include myth, meaning, ritual, symbolism, traditions, religious social institutions, comparative religious study, the sacred, civil religion, religious art, and the social creation of moral ideologies. Prerequisites: none

**SSC 190 - 199 Special Topics 3(3-0)**

Special Topics is a course designed to present various topics in Social Science that are not included in current courses. Topics will be announced. This course is offered based on demand and does not satisfy Group III requirements for graduation.

**SSC 200 The Social Sciences & Contemporary America 3(3-0)**

This course will introduce each of the various social sciences and demonstrate their respective and unique perspectives on the human experience. It will also endeavor to help the student to understand the scientific method of inquiry and its advantages, as well as other ways of knowing. Finally, through a thematic approach, the student will seek to apply the various social science perspectives to illuminate understanding of his/her world. Prerequisites: Level I General Education courses (CIS 100, MAT, ENG 111, SPE 101 or SPE 257)

**TAI 204 Theatre-Musical 3(3-0)**

Discussion of musical theatre including all aspects of a production. A musical production is included as part of the course.

**TAI 205 Children’s Theatre 3(3-0)**

Discussion of theatre for children including all aspects of a production. A children’s theatre production is included as part of the course.

**TAI 206 Theatre-Mystery 3(3-0)**

Discussion of mystery as a form of theatre including all aspects of a production. A mystery production is included as part of the course.

**TAI 207 Theatre - Comedy 3(3-0)**

Discussion of comedy theatre including all aspects of a production. A comedy production is included as part of the course.

**TAI 208 Theatre-Serious Drama 3(3-0)**

Discussion of serious drama including all forms of tragedy. A serious dramatic production is included as part of the course.

**TAI 275 Appreciation of the Theatre 3(3-0)**

A survey of theatre history and an introduction to basic types of plays; concepts of professional and amateur; and principles of play selection, casting, and promotion are covered in this course.

**TAI 277 Stagecraft and Stagelighting 4(4-0)**

This course includes the basic principles of scenery construction and the theory and practice of stage lighting.
TAI 287 Costuming 3(3-0)
This course is a survey of costume history, Egyptian to the present, and includes an introduction to design and construction techniques.

(WLD) WELDING TECHNOLOGY

WLD 125 Basic Industrial Welding 6(4-4)
Fundamentals of oxy-acetylene cutting, oxy-acetylene brazing and welding, ARC welding, MIG welding, and TIG welding, and manual plasma cutting, and safety procedures are included in this course. Emphasis is placed on penetration welds and out-of-position welds.

WLD 126 Basic Welding I 3(2-2)
Fundamentals of oxyacetylene brazing, oxyacetylene cutting, oxyacetylene welding, arc welding, MIG welding, and TIG welding are included in this course. Emphasis is placed on penetration welds in the flat position.

WLD 127 Basic Welding II 3(2-2)
Fundamentals of oxyacetylene brazing, cutting, arc welding, and MIG welding are included in this course. Emphasis is placed on penetration welds and out-of-position welds. Prerequisite: WLD 126 or permission of the Instructor

WLD 130 Metal Fabrication 3(2-2)
Fundamentals of metal fabrication procedures and metal layout procedures are covered in this course. Pipe layout and procedures are also covered. Prerequisites: WLD 125 or WLD 127, and DRF 101

WLD 150 Non-Destructive Testing I 3(3-0)
A course to familiarize the student with the theory, technique, and equipment used for magnetic particle and liquid penetrant test methods as they are applied to inspection and nondestructive testing in the metal fabrication industry for quality control.

WLD 225 Advanced Welding 8(4-8)
Multi-position welding will be emphasized. The use of arc, TIG, and MIG welding equipment and weld-testing devices are covered. Reading of welding prints and use of A.W.S. welding symbols are also included. This course prepares students to pass A.W.S. structural code welding tests on plate. Prerequisite: WLD 125 or WLD 127

WLD 226 Industrial Welding 8(4-8)
This course builds further proficiency in manual welding processes along with the associated welding theories. The welding processes in this course include submerged arc welding, TIG, MIG, SMAW, and pattern layout; and operation of multi-oxy-acetylene electric-eye cutting torches. Prerequisite: WLD 225

WLD 227 Advanced Industrial Welding 8(4-8)
A further study of destructive and nondestructive testing, study and operation of plasma-arc welding (PAW) and plasma-arc cutting (PAC) are included in the course. The students also become more proficient in their chosen areas of manual welding processes. Prerequisite: WLD 226

WLD 245 Pipe Welding 3(2-2)
This course is designed to prepare students to meet the requirements of the A.W.S. D1.1-79 (American Welding Society) and A.S.M.E. Section 9 code (American Society of Mechanical Engineers) for power piping. This course includes safety in welding and cutting; pipe beveling; preparation of beveled or branch pipe; electrode selection; butt weld-vertical fixed position 2G; butt weld-horizontal fixed position 5G; and pipe layout. Prerequisite: WLD 125 or WLD 127

WLD 246 Advanced TIG Pipe Welding 3(2-2)
This course is designed for the individual who is interested in becoming proficient in the TIG process in all welding positions for pipe welding. Students weld ferrous and nonferrous piping in horizontal and vertical fixed positions as required of A.W.S. D1.1-79 (American Welding Society), A.S.M.E. Section 9 code (American Society of Mechanical Engineers), and A.P.I. Standard 1104, 15th Edition (American Petroleum Institute). Prerequisite: WLD 245

WLD 249 Beginning Robotics 3(2-2)
This course will enable students to set-up and teach the robot to weld parts or assemblies in an efficient manner. Students will learn the appropriate safety techniques required to operate and maintain the robot. Students will learn to write and copy various programs utilizing the World Coordinate System, and they will edit and test these programs. Prerequisites: WLD 125 or WLD 127 with a minimum grade of C

WLD 281 Spec Projects - Welding I 2(1-2)
Students engage in intensive practice in a chosen welding technique or process such as MIG or TIG welding. Prerequisite: WLD 125 or WLD 127 or equivalent experience as determined by the Instructor

WLD 282 Spec Projects - Welding II 2(1-0)
Continuation of WLD 281. Prerequisite: WLD 281

WLD 290 Special Topics: Begin. Metal Sculpture 3(2-2)
This course is designed to introduce students to the art of shaping and joining various types of metal to create works of art. They will learn how to gas weld, braze, solder, and arc weld many types of metals to create class projects. They will also learn how to fabricate, cut, bend and roll all types of metals. This course will also prepare students to continue in a specific area of concentration or interest in Advanced Metal Sculpture II.
Business & Industry Development Center

Customized Workforce Training

Mid Michigan Community College's MTEC staff are committed to providing highly effective training solutions for business and industry throughout the Mid Michigan area. We will help your organization to develop a training plan, identify highly qualified practitioners with industry experience and training expertise to meet your specific needs. We provide training that is available when and where you need it – day or night- either on-site at your facility or at one of our two location campuses.

A sampling of the requested courses:
- Computer Software Applications
- Blueprint Reading
- Lean Systems
- Customer Service
- Team-building
- Supervisory/Leadership
- Welding
- Heating, Air Conditioning
- Computer Assisted Design

Continuing Education/Professional Development

We offer a wide range of classes and programs designed to meet the ever-changing needs of our community members. Whether you are looking for personal or professional learning opportunities, we can assist you with:
- Computer Skills Workshops
- Management Workshops
- 250 Clarity Online Courses

Short-Term Health Care Programs

Phlebotomy (193 Hours): This 8.5 week program will prepare students to function as phlebotomists whose responsibilities include; venipuncture and blood draw micro-collection techniques. The procedures are performed on patients of all ages at clinics, hospital labs, outpatient care centers and nursing homes.

Certified Nurse Aide (112 Hours): This 6 week program is divided into two parts, and includes classroom activities, skill practice time in the laboratory, and supervised clinical practice at an area health care agency.

PART ONE (60 Hours): Classroom education at the Harrison or Mt. Pleasant Campus of Mid Michigan Community College.

PART TWO (52 Hours): Clinical/Lab “hands on” training at a local health care facility. The training is designed to prepare the individual to fulfill the role of direct care giver/nurse aide in a health care setting. The CNA program introduces scientific principles and skills which will optimize the client's functional independence and support, and promote their individual rights.

Medical Clerk (200 Hours): This 12 week program will prepare students with the skills necessary to apply for positions in the medical clerical fields.

PART ONE (120 Hours): Classroom and computer instruction at the Harrison Campus of Mid Michigan Community College.

PART TWO (80 Hours):
- Externship at an approved site.

Dialysis Technician (60 Hours)
- This 5 week program will provide students with the knowledge and skills necessary to perform the duties required of Dialysis Technicians. Dialysis Technicians operate kidney dialysis machines, which filter normal water products and excess fluids from the blood of patients whose kidneys can no longer perform this function. The technicians are responsible for direct patient care. Under the direction of senior technicians, nurses, and doctors, the Dialysis Technician plays a vital role as part of the dialysis team. The class consists of 40 hours of classroom instruction and 20 hours of laboratory experience. There is no clinical experience included during this class.

Visit us on the web at:
http://www.midmich.edu/mtec

M-TEC Customers and Partners

- Advanced Engineering
- Alro Steel
- AVT
- Bandit Industries
- Beaverton Schools
- Brown Machine
- Central Michigan Community Hospital
- Clare County Housing
- CME/Mitsuba
- CMI Equipment & Engineering
- Delfield Company, The
- DeShano Construction
- Dow Chemical
- FED Corporation
- Federal Broach
- Filcon
- Forward Corporation
- Future Mold
- General Agency
- Gladwin County Council on Aging
- Hillsdale Tool
- Huhtamaki
- Integrity Machine Services
- Isabella County Medical Care Facility
- JD Metalworks
- Kyle Manufacturing
- Lear Corporation
- Lyle Industries
- Melling Products
- Michael Engineering
- Michigan Rural Water Association
- Mid Michigan Industries
- MidMichigan Health
- Morbark Industries
- North Woods Nursing Center
- Packaging Direct
- Pittsburg Plate Glass
- Prescott Products
- Renosol Corporation
- Roll-Rite
- Robotic Welded Parts
- Saginaw Chippewa Indian Tribe
- Saint-Gobain Performance Plastics
- StageRight Inc.
- T. B. Woods
- Unified Brands
- Vantage Plastics
- Wolfe Enterprises
The Michigan Small Business & Technology Development Center (MI-SBTDC) enhances Michigan’s economic well-being by providing counseling, training, research and advocacy for new ventures, existing small businesses and innovative technology companies. With offices statewide, the MI-SBTDC positively impacts the economy by strengthening existing companies, creating new jobs, retaining existing jobs, and assisting companies in defining their path to success.

**ONE-ON-ONE COUNSEL**

When you contact the MI-SBTDC, you will receive counseling services from a well-trained business consultant who will coach you throughout the various stages of business operation; including both starting your business and challenges and opportunities faced by existing ventures.

Common areas that a business consultant may provide assistance:

- Business Planning
- Business Plan Development
- Licensing Information
- Linkage to Sources of Capital
- Financial Statement Preparation
- Strategic Planning
- Financial Management Assistance
- Marketing Plan Development
- Human Resources
- Operations
- Information Technology
- Referrals to Public and Private Sector Resources

*The MI-SBTDC provides advice, tools, guidance, information and critiquing services related to the subject matter above. The MI-SBTDC does not write business plans on behalf of our clients.*

**BUSINESS EDUCATION TRAINING**

The MI-SBTDC offers a comprehensive selection of trainings statewide for entrepreneurs. The Entrepreneurial Series consists of five fundamentals or basic workshops, 2 to 3 hours each, designed for those starting a business:

- Fundamentals of Starting a Business
- Fundamentals of Writing a Business Plan
- Fundamentals of Marketing Your Business
- Fundamentals of Financial Management
- Fundamentals of Business Legal Issues

Advanced Training is available for Entrepreneurs who are already in business and looking for ways to improve and enhance their success. These include:

- Selling in the 21st Century
- E-Commerce - Introduction to Online Selling
- Tax Time: How to Avoid Business Tax Panic
- Basics of Exporting
- Fiscal Fitness
- Social Media
- The Retail Survival Guide

*To find out about more MI-SBTDC workshops and when they are offered, please visit www.misbtdc.org/training*

**MARKET RESEARCH CAPABILITIES**

In addition to local resources, the MI-SBTDC provides a full range of information services through the State Headquarters.

- Industry Reports, including trends
- Industry-Specific Financial Ratios
- Consumer Expenditure Trends
- Demographic Information
- Census Trends and Projections
- Federal Statistics
- Lifestyle Market Analyst Reports
The Michigan Small Business & Technology Development Center (MI-SBTDC) is ready to serve your small business. Whether you’re a technology based company looking for commercialization assistance, an existing company working through growth strategies or a manufacturing business needing to analyze your financials, the MI-SBTDC is ready to work with you to grow your business.

**TECHNOLOGY COMPANIES**

The MI-SBTDC Tech Team is a state funded initiative that enables entrepreneurs to bridge the gap between technology development and commercialization. Our statewide team consists of ten consultants with proven track records of technology commercialization.

We focus our efforts in three key areas:

- Access to capital
- Access to resources
- Strategic planning and execution

**GROWING COMPANIES**

The MI-SBTDC Growth Group (G2) was formed to prepare companies for the next stage of growth. The experienced group of professionals guides management in the evaluation and selection of strategies using a set of comprehensive business tools. G2 is ideal for, but not limited to, companies with a desire to grow and over one million dollars in annual revenue.

The G2 Specialists select tools to assist management teams of growth companies, which include the following:

- Strategic needs assessment
- Financial analysis - Fiscal Fitness
- Strategic actioning
- Process mapping
- Marketing plan analysis

**MANUFACTURING COMPANIES**

As viable, established manufacturing companies assess how to diversify and grow, their management team may need assistance from experienced consultants. Owners committed to diversification and change work with the Manufacturing Assistance Team (MAT) to assist them through the planning process.

MAT offers no-cost consulting to small and medium sized manufacturers, including expertise in the following:

- Financial analysis
- Access to capital
- Strategic actioning

For more information, call us at 989.317.4623 or visit us at www.misbtdc.org/midmichigan
ADVANCED CREDIT

Advanced credit indicates that credit will be received without enrolling in the course provided the student demonstrates expertise as evidenced by successful completion of an equivalent high school course and/or applicable exam. A recording fee may be charged at the time of transferring the advanced credit, please contact the Office of Enrollment Services for more information on applicable fees.

ADVANCED PLACEMENT PROGRAM

College course credit will be granted to students who participate in the Advanced Placement Program (AP) and pass the Advanced Placement examinations with a score of 3 (qualified), 4 (well qualified), and 5 (extremely well qualified) in College approved AP exams. Only those AP courses approved by MMCC faculty will transfer in as MMCC credit. AP exam scores should be sent directly to the Office of Enrollment Services.

The AP exams measure the college level learning experience that takes place in a high school AP course, honors class, an intensive regular course, or an independent study. Grade comparability studies in various AP subject examinations have compared to college student’s performance in similar courses.

ARTICULATION

Articulation is a term used to describe the process that facilitates the transition of a student from one educational institution to another, or from one level of education to the next with minimum duplication of coursework. High school students successfully completing career/technical training may receive college credit through articulation. For more information please contact the Admissions Office.

CREDIT BY EXAMINATION

A registered student who has had experience or background comparable to a course offered at Mid Michigan Community College may wish to receive credit for the course through the Credit by Examination procedure. The procedure should be initiated with The Library Learning Services in Room 219 on the Harrison Campus or in Room 135 on the Mt. Pleasant Campus to complete the Credit by Examination permission form. It is recommended to see an advisor if the Credit by Examination process is an option for the specific program.

The student will then pay the cashier a set fee ($15.00 per credit for general education courses and $20.00 per credit for non-general education courses) to cover testing costs. The LLS will make the necessary arrangements for the examination. It should be clearly understood that the student will receive credit upon successful completion of the exam and not a grade for the class in which the examination is taken. Students should be advised that MMCC Credit by Examination is unlikely to transfer to another college.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

The College Level Examination Program (CLEP) sponsored by the College Board affords students the opportunity to demonstrate their academic proficiency in specific subjects. After completing the CLEP exam(s), students should have their scores sent directly to the Office of Enrollment Services for evaluation.

Policies concerning the use of CLEP examinations at MMCC are developed and controlled by the Office of Enrollment Services. The minimum scores for CLEP subject examinations are determined by the department authorizing credit for the subject. Credit will be awarded for German Level 2 with a score of 63, for French Level 2 with a score of 52 and for all other approved exams with a score of 50 or above. See the Office of Enrollment Services for a detailed list of CLEP subject exams accepted for credit, as well as their critical cut scores.

To be eligible for credit for CLEP scores, a student must have been granted regular admissions at MMCC and an official score report must be sent directly from the College Board. CLEP examination credit may not be used to repeat any course(s) previously taken. Grades for the CLEP examination(s), where credit is granted, will be recorded as credit (CR) on a student’s transcript. MMCC currently does not proctor the CLEP examination. See the College Board website (www.collegeboard.com) for a list of testing centers.

MILITARY TRAINING CREDIT

Veterans are eligible to receive academic credit for their military experience. To have military experience evaluated for credit, veterans should send their certified DD 214 to the American Council on Education (www.acenet.edu). MMCC will follow the American Council on Education’s recommendations for evaluating credits. In addition, MMCC will grant veterans HED 151 and 2 physical education elective credits (PED XXX). Veterans planning to transfer from MMCC should be aware that other colleges/universities may not accept the credit for military training given by MMCC.

NON-TRADITIONAL CREDIT

Students possessing education experiences or skills gained through non-traditional sources (i.e. work experience, life experience, etc.) may request such experiences be evaluated for credit. Students may obtain a Non-Traditional Credit Application in the Office of Enrollment Services. The completed Application should be returned to the Office of Enrollment Services with any and all supporting documentation for evaluation. If credit is granted, a $20 per credit hour fee will be charged at the time the non-traditional credit is recorded. Students should be aware that non-traditional credit typically does not transfer to other colleges/universities.
TRANSFER CREDIT
Mid Michigan Community College will accept transfer credit from other accredited institutions within the following guidelines:

An evaluation will only be done from an official transcript. An official transcript bears the appropriate signatures and seals and is sent directly to MMCC from the issuing institution. Transcripts not sent directly from an issuing institution will be considered unofficial and will not be evaluated.

Credits are transferred for courses with a minimum grade of "C" or better. Grades from transfer courses are not calculated in the Mid Michigan Community College cumulative grade point average.

Transfer credits will be shown on the student's academic record.

A minimum of one-half of the student's credits toward a program must be taken at MMCC to be eligible to graduate from MMCC with honors.

Students who transfer to MMCC after completing a degree at an accredited institution will be given the following exemptions from MMCC's General Education requirements:

1. From a Two-Year Institution: Students transferring to MMCC with a two-year degree from an accredited institution will be exempt from 100 Level General Education requirements with the exception of math. 200 Level requirements will be determined in the transcript evaluation process.

2. From a Four-Year Institution: Students transferring to MMCC with a four-year degree from an accredited institution will be exempt from both the 100 and 200 Level General Education requirements with the exception of math.

Normally, evaluation of transcripts takes four to six weeks after the transcript is received by the Registrar; therefore, students planning to transfer into Mid Michigan Community College should have transcripts from other institutions sent to the College well in advance of the first semester of attendance.

ADVISING/CAREER PLANNING/COUNSELING

ACADEMIC ADVISING
Academic advisors are available to students throughout the academic year and between sessions. Advisors are trained to assist students on a one-to-one basis with career selection, program planning, course scheduling, and to provide assistance for students who are experiencing academic difficulties. Appointments to see an advisor may be made by calling (989) 386-6622, extension 100 or (989) 773-6622, extension 100.

The following students are required to see an advisor prior to registration:
1. First time students at MMCC;
2. All students who have accumulated less than 12 MMCC credits (as displayed on the transcript);
3. All students who are on academic probation or who are reentering academically dismissed students.

Students transferring into MMCC may meet with an academic advisor, but are not required to do so to register for courses.

MMCC is committed to helping all students with academic advising needs. Any student who needs assistance or has a question is encouraged to see an academic advisor.

Students will need to have completed an application; have taken the Accuplacer Assessment or provided documentation of ACT scores of at least 21; and have Financial Aid and loans in place prior to an appointment with an Advisor.

CAREER EXPLORATION AND PLANNING
Career planning activities are designed to assist students who are undecided at the time of registration or who are considering changing career plans during their enrollment period. Students may meet with the Career Coordinator and/or participate in career exploration workshops.

PERSONAL COUNSELING
Personal counseling is available on a limited basis. The College maintains a list for referral to local crisis centers and mental health clinics qualified and available for personal counseling.
**DISABILITY SERVICES OFFICE**

Mid Michigan Community College is committed to making accommodations and providing services to students with documented disabilities, which interfere with the learning process. Accommodations will vary and depend on the specific disability. Services may include: readers, note-takers, interpreters, books on CD’s, adaptive equipment, assistive technology, alternative testing methods, assistance with accessibility and referrals to college and community resources.

Students must provide written verification of their disability before accommodations can be made. In addition, students must register for services and reapply each semester for continued support. To inquire about these services, please contact Disability Services Office at 989.386.6636.

**VOCATIONAL EDUCATION ASSISTANCE PROGRAM (VEAP)**

The Carl D Perkins Grant is a federal program designed to help MMCC students who are enrolled in a two year state approved occupational programs. Special population students must qualify under one or more of the following categories: single parent, displaced homemaker, non-traditional career choice, documented disability, limited English or economically disadvantaged.

Students who are eligible must apply for financial aid (Pell) and have an unmet need as defined by financial aid. Assistance may be in the form of: academic and career counseling, college and community agency referrals, registration assistance and financial assistance - which may include help with transportation, child care, books and tuition. Assistance is limited and interested students are required to submit an application each semester by the application deadline to be considered. For additional information please contact the Vocational Educational Assistance Coordinator at (989) 386-6622, ext. 394.

**ENROLLMENT SERVICES**

**REGISTRATION**

Returning Students

- Students who have at least 12 credit hours recorded on their transcript and are in good academic standing may register in person or on MidWeb. All others must see an advisor.
- Pay tuition in full, enroll in the NBS (Nelnet Business Solutions) Tuition Management Plan, or have sufficient Financial Aid awarded by the Tuition due date. A non-refundable enrollment fee ($50 or $25) is included in the tuition and fees.

New & First Time Students

1. Complete an application in Admissions. (Admissions Application available online at www.midmich.edu)
2. Schedule an Assessment for English and Math
3. Pay tuition in full, enroll in the NBS (Nelnet Business Solutions) Tuition Management Plan, or have sufficient Financial Aid awarded by the Tuition due date. A non-refundable enrollment fee ($50 or $25) is included in the tuition and fees.

Guest Students

Guest students are those attending other colleges who wish to take courses at MMCC for transfer credit. Note: Financial aid is not available to guest students. Guest students should follow these easy steps for admission and registration:

- Apply for admissions: can be completed online or in person.
- Complete our Accuplacer assessment if you intend on taking a Math or English course for the first time in college.
- Verify MMCC prerequisites through your institution's unofficial transcript. See Enrollment Services website (www.midmich.edu/enrollment) for more information.
- Pay your tuition by the tuition due date. A nonrefundable enrollment fee is included in the fees.

**ADDING COURSES**

Students may add courses to their schedule during the schedule adjustment period by completing the Drop/Add form obtained in the Office of Enrollment Services or by utilizing the MidWeb system (if eligible to do so).

**DROPPING COURSES**

Students may drop courses from their schedule by completing the Drop/Add form obtained in the Office of Enrollment Services or by utilizing the MidWeb system (if eligible to do so). Refund of tuition will be based on the Tuition and Fee Refund Schedule. Courses that are dropped after the schedule adjustment period will be assigned a grade of "W" with no grade point average penalty. Students will not be allowed to drop courses after the posted last day to drop date.

**INSTITUTIONAL DROP**

MMCC can drop a student who has never attended any classes, or has quit attending classes during a semester. Institutional considerations, including reporting requirements, will guide the utilization of this policy. If a student feels they have been identified in error, contact the Office of Enrollment Services.

**AUDITING A COURSE**

A course in which a student enrolls for no grade and no credit is regarded as an Audit. Student must pay the regular tuition and fees. Audited courses are not computed into the GPA and do not count toward graduation. A course cannot be changed.
from audit to credit or from credit to audit after the official schedule adjustment period is over.

**REPEATING A COURSE**

When a course is repeated for the purpose of improving a grade, the lower grade with its credit hours and points will be removed from the existing grade point average (GPA); the higher grade with its credit hours and honor points will be computed into the GPA. The Grade Point Average (GPA) is found by dividing the total honor points earned by the GPA hours. Credit cannot be earned more than once for any given course. An equivalent course taken at another institution will not remove the MMCC equivalent from the MMCC transcript.

**SAME COURSE RE-ENROLLMENT**

In an effort to avoid potential same course re-enrollment abuse, the following conditions apply:

1. Regardless of grade(s) earned in a course(s) previously, a student will be allowed to re-enroll for this same course for a second time without conditions unless it is in a restricted enrollment program which requires written approval to re-enroll by the program director.

2. Regardless of grade(s) earned in course(s) previously, a student will be allowed to re-enroll for a course for a third time but must complete a Same Course Enrollment Form in consultation with an advisor prior to registering.

3. For a student to re-enroll in a course for a fourth time or more, the student must make a request in writing and receive approval from the Dean or Associate Dean of Student and Academic Support Services plus agree, in writing, to pay the complete course cost and an additional $50 per contact hour fee.

   * The purpose for requiring this fee is to ensure the student pays the total course cost thus, freeing the local and state taxpayers of any financial contribution.

**WITHDRAWING FROM COLLEGE**

Students who withdraw totally from the College must initiate formal withdrawal procedures with the Office of Enrollment Services to avoid the posting of failing grades for all courses not completed.

Students who receive Title IV Federal Student Aid funds and withdraw totally prior to completion of 60% of a semester or session may have to repay a portion of the aid they received. Please see Return of Title IV Funds Policy.

The normal credit hour load for a full-time student consists of 15-17 semester credit hours. A student may not elect more than 18 semester credit hours without special permission from the Associate Dean of Student and Academic Support Services. Students wishing to enroll in more than 20 semester credit hours must receive special permission from the Vice President of Academic Services.

Students earning 0 through 23.9 credit hours are designated as “freshmen”; students earning 24 through 62 credit hours are designated as “sophomores”; students earning 63 or more credit hours are designated as “other”.

**HONORS SECTION**

Students with a minimum of a 3.0 GPA may elect to register for a course in the honors section. Honors classes are intended to challenge highly motivated and academically talented students. Permission of instructor is required.

**HONORS OPTION**

Students may apply to take a course with an honors option. The student meets with the instructor one additional hour per week in addition to the regularly scheduled class. The student and the instructor will develop an extra project together. Such options will also be marked “Honors” on the student’s transcript. Only a minimum number of honors options will be permitted each year. Students interested in this option should contact both the individual instructor and the Instructional Administrator, and must apply and be approved prior to the beginning of the semester the honors option will be taken.

**INDEPENDENT STUDY COURSE WORK**

A student may, at the discretion of the instructor, register for course work independently. All independent study course work must be approved by the appropriate Instructional Administrator.

**CHANGE OF PROGRAM**

At the time of application, the student is required to declare a program and is given a student program guide to follow, which outlines all courses required for completion of the degree or certificate. If a student decides to change his/her program of study, the Office of Enrollment Services must be notified and a new student program guide should be picked up to assure that the student completes the necessary courses required on the new program.
**Grades**

**Grading System**

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<tr>
<th>Grade</th>
<th>Significance</th>
<th>Points Per Semester Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Superior</td>
<td>4.0</td>
</tr>
<tr>
<td>A−</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>Above Average</td>
<td>3.0</td>
</tr>
<tr>
<td>B−</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2.0</td>
</tr>
<tr>
<td>C−</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>Below Average</td>
<td>1.0</td>
</tr>
<tr>
<td>D−</td>
<td></td>
<td>0.7</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0.0</td>
</tr>
</tbody>
</table>

I: Incomplete  
Z: Deferred Grade  
AU: Audit  
W: Withdrawal  
CR/NC: CR="C" or better, NC="C−" or below

CR: Transfer credit, Advanced credit, Articulation credit, Credit by Examination and Non-Traditional credit

The Grade Point Average (GPA) is found by dividing the total honor points earned by the GPA hours.

Instructors may choose whether or not to use the +/- option for their students.

**Incomplete Grades**

In order to qualify for an incomplete contract the student must have completed at least 75% of the course work. It is at the discretion of the instructor to grant an incomplete grade (I).

Upon completion of the course requirements, said instructor will change the student’s grade from an “I” (Incomplete) to the regular letter grade earned by the student in the course. Failure of the student to comply with these requirements by the due date will result in an automatic change of the incomplete grade to a grade of “F” (Failure).

The following is the maximum timeline for completing an incomplete contract. If the incomplete is for the Fall semester, all course requirements must be completed by the end of the next Winter Semester. An incomplete for Winter semester, must be completed by the end of the next Fall semester. An incomplete for the Spring/Summer semester must be completed by the end of the next Fall semester.

**Credit / No Credit**

A student may take courses on a Credit/No Credit basis subject to regulations summarized here. The option is elected (or removed) by submitting a Credit/No Credit Request on a Drop/Add form to the Office of Enrollment Services during the official schedule adjustment period for a semester.

The instructor is not notified when a course is taken credit/no credit and assigns the student a letter grade. The grade is converted to credit or no credit according to the following guidelines. The student earns credit (CR) for the course and credit toward graduation when a grade of "C" or better is assigned. No credit (NC) is recorded when the assigned grade is a "C-" or below. The course appears on the student’s permanent records with the CR or NC grade, but the grade has no effect on the grade point average.

Departments designate which of their courses may be taken on a credit/no credit basis. A department may offer certain courses exclusively on a credit/no credit basis after approval by the appropriate curricular authorities and noted on MidWeb.

A maximum of 12 semester hours of credit earned under the credit/no credit option may be applied toward a degree. Courses exclusively offered on this basis are not included in the 12-hour restriction.

A student who officially elects the credit/no credit option for a course may not change the registration to a letter grade designation after the deadline.

**Grade Reports**

Grade reports can be obtained on MidWeb which can be accessed through Mid Michigan Community College’s website at www.midmich.edu.

Grade reports will not be released for students who have outstanding bills in the Business Office or who have overdue books in the Media Center.

**Grade Change and Review Procedures**

Responsibility for resolving grade disputes is shared among the instructor, the student, the appropriate Academic Administrator, and the Vice President of Academic Services.

Under Mid Michigan Community College policy, it is the instructor’s prerogative to determine student grades. If a student has a question about a grade, the student must first discuss the matter with the instructor. The instructor should discuss the matter willingly and provide clear evidence for the basis of the grade issued. In turn, the student should provide a valid basis for grieving the grade.

If the instructor agrees at this point to make a grade change, a Change of Grade form must be completed by the instructor, approved by the appropriate Academic Dean, and submitted to the Registrar.
If the instructor determines the grade should remain unchanged, and the student believes there is valid justification for a grade grievance, the student should contact the appropriate Academic Administrator. This would typically be the Associate Dean having responsibility for the course in which the disputed grade occurred. The Academic Administrator shall arrange an informal conference with the instructor and the student for purposes of resolving the conflict.

If, after such a conference, the student still believes there is valid justification for a grade grievance, the student must write a formal letter of grievance to the Vice President of Academic Services fully explaining the rationale for the grievance along with all relevant information pertaining to the matter. Upon receipt of the letter from the student, the Vice President of Academic Services will review the facts presented and make a determination of whether the case warrants a formal hearing. This step of the procedure may include a conference between the student and the Vice President of Academic Services. If the Vice President determines there is no valid justification for the grievance, he/she will inform the student that the grade issued will stand unchanged. If the Vice President determines there is valid justification for the grievance, he/she will call the Grade Review Committee into session. This committee is composed of three faculty members, the Dean of Student Services or his/her representative, and the appropriate Academic Administrator. The Vice President of Academic Services shall chair the committee and appoint a recording secretary.

The grievance session shall be informal in nature with all the relevant facts being presented by the instructor and the student. After presentation of the facts, the Grade Review Committee will deliberate in closed session with the Vice President. The Vice President shall consider the assessment of the Grade Review Committee in rendering a decision to maintain or change the grade in question.

Prior to informing the student of the decision, the Vice President of Academic Services shall review the details of the grade grievance with the President or his/her designee. Within seven days of the conclusion of the hearing, the student shall be notified in writing of the decision. This written decision provided to the student is the final disposition of any grade grievance. No additional appeals are available.

Grade grievances must be initiated within 60 days after the last day of the class in which the grade was received.

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### ACADEMIC PROBATION AND DISMISSAL POLICY

Academic Probation or Academic Dismissal occurs when a student’s cumulative grade point average falls below the following scale:

<table>
<thead>
<tr>
<th>Attempted GPA Hours</th>
<th>Academic Probation</th>
<th>Dismissal Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 - 17</td>
<td>0.00 - 1.99</td>
<td>less than 1.0</td>
</tr>
<tr>
<td>18 - 37</td>
<td>1.00 - 1.99</td>
<td>less than 1.5</td>
</tr>
<tr>
<td>38 - 50</td>
<td>1.50 - 1.99</td>
<td>less than 1.6</td>
</tr>
<tr>
<td>51 - 63</td>
<td>1.60 - 1.99</td>
<td>less than 1.7</td>
</tr>
<tr>
<td>64 or more</td>
<td>1.70 - 1.99</td>
<td>less than 1.7</td>
</tr>
</tbody>
</table>

Students who are on Academic Probation will be required to see their Academic Advisor for assistance and must follow the prescribed procedure(s) prepared by their Academic Advisor. It is the intent of MMCC to provide assistance and support to those students with unique academic needs. If students choose not to participate or fail to make academic progress, they can no longer expect the institution to provide them with educational and support resources. A student will be subject to academic dismissal if there is scholastic evidence that he/she can no longer benefit from or successfully work toward the completion of a program at MMCC. When this happens, they will be dematriculated for a minimum of one enrollment period (not counting spring/summer semesters) or until such time as they demonstrate a willingness to participate in activities that are designed to improve their academic records.

### ACADEMIC PROBATION & DISMISSAL PROCEDURES

1. Academic Probation/Dismissal notification letters are mailed to students after grades are submitted. Students are prevented from registering or making schedule adjustments until contact is made with an Advisor.

2. The procedure(s) for working with students on Academic Probation are:

   If a student is placed on probation their Academic Advisor will, in consultation with the student, identify specific activities designed to assist academic progress. These activities are not limited to, but may include:

   1) additional assessment

   2) registering for a specific class
3) repeating courses
4) reducing credit hour load
5) career exploration
6) program change
7) workshops
8) tutoring

3. Students on academic probation who fall below the dismissal level as stated will be dismissed and will not be allowed to register for a minimum of one enrollment period.

4. Students who are dismissed may appeal the decision. The appeal must be initiated by the student prior to the start of the next semester.

5. Students who continue on academic probation can re-enroll, but will be required to meet with an advisor or counselor.

6. A dematriculated student who wishes to register for any future semester(s) must first meet with a counselor or advisor.

**ACADEMIC HONESTY**

Students have an obligation to abide by accepted standards of academic honesty which dictate that all scholastic work shall be original in nature.

**MMCC POLICY ON ACADEMIC DISHONESTY AND PLAGIARISM**

**Academic Dishonesty**: No student shall:
1. Share or obtain exam questions or material not authorized by the instructor.
2. Complete exams or performance elements of a course for another student or have someone else complete it for them.

**Plagiarism**: Plagiarism is using another’s ideas as one’s own. Plagiarism has two forms, unintentional and intentional. Unintentional plagiarism is usually the result of students being unfamiliar with the academic conventions of citation and documentation. Intentional plagiarism is the result of students knowingly submitting the work of others as their own. This includes, but is not limited to:
1. Copying someone else’s work.
2. Using exact quotations without proper citation.
3. Buying papers (e.g. on the internet).
4. Including paraphrased material without acknowledging its source.

All acts of plagiarism and academic dishonesty will first be dealt with by the instructor. Penalties may range from revision to failing the assignment or the course. Instructors must report all acts of intentional dishonesty or plagiarism, or any penalty resulting in a failure of the course, to the Associate Dean of Student and Academic Support Services. Repeated violations may result in further discipline, up to and including dismissal.

Students may appeal any grade affected by a charge of academic dishonesty or plagiarism through the Grade Grievance Procedure.

**ACADEMIC AMNESTY**

Mid Michigan Community College understands that a student may “get off to a bad start” due to circumstances beyond his/her own control. Academic Amnesty is an action of forgiveness provided to certain students who have experienced poor academic performance at MMCC. Through Academic Amnesty, a student will be awarded a “second opportunity” to achieve success at MMCC by removing the negative impact of less than “C” grade courses on the student’s academic transcript.

To be eligible for Academic Amnesty, a student must have:
1. A cumulative grade point average (GPA) of less than 2.0 for the period in question.
2. Recently completed at least 6 credit hours or more and have maintained a current 2.00 GPA or higher.
3. Allowed five (5) years to lapse between the poor academic performance and requirement number 2 listed above.

Once eligible, a student may petition the Academic Amnesty Committee by submitting a completed Application for Academic Amnesty form to the Office of Enrollment Services.

The Academic Amnesty Committee will review all requests. If Academic Amnesty is granted by the Committee it must be for one continuous enrollment period in a program at MMCC, as indicated by the courses taken by the student that are directly attributable to that program.

Once Amnesty has been approved by the committee and applied by the Associate Dean of Student and Academic Support Services to the student’s (petitioner’s) transcript, the student will not be permitted to rescind the application of Amnesty on his/her academic record. Other conditions include:
1. No course work will be removed from the transcript.
2. A special notation explaining Amnesty approval will be placed on the student’s transcript.
3. Honor points and credit hours attempted during the amnesty period will be subtracted from the current cumulative honor points and credit hours attempted. A new cumulative grade point average will then be established.
4. Courses successfully completed with a grade of “C” or better during the amnesty period can be used toward the student’s certificate or degree requirements.
5. A student receiving Academic Amnesty will not be allowed to graduate with honors.

6. Academic Amnesty, when granted, applies only to Mid Michigan Community College courses. There is no guarantee, expressed or implied, that Academic Amnesty will be recognized by any other college or university.

7. Courses previously counted to fulfill degree requirements on a completed degree cannot be considered for Academic Amnesty.

8. Academic Amnesty can be granted only once to any student.

The Dean of Student and Academic Support Services has the responsibility of implementing Amnesty as stated in the Academic Amnesty Policy when it is granted to a student.

GRADUATION REQUIREMENTS

Graduation requirements for a certificate or associates degree are based on the regulations and requirements printed in the Mid Michigan Community College catalog in effect at the time of a student’s initial registration. A catalog published after initial registration may be chosen by the student when it is to his or her advantage, provided that the student has attended at least 1 semester per academic year. If a student stops out for a period of one year or more, the student will need to follow the catalog in effect at the time they reenter the college. For students with continual enrollment, there is a seven year time limitation on the use of a selected catalog; the time limitation on this is so that no student may graduate under the requirements of a catalog published more than seven calendar years prior to the date of graduation. Graduation requirements for certificate or associate degrees in limited seat programs are based on the regulations and requirements printed in the MMCC catalog in effect at the time the student is officially accepted into the program of study and is in effect for two years from that date. This time line is in effect because of the rapidly changing requirements in these specialized programs for job placement. Candidates for degrees or certificates must meet all of the following requirements to be eligible for graduation:

1. Apply for graduation prior to registration for your last semester. Students should apply by October 1 for Winter graduation (May) and March 1 for Spring/Summer/Fall graduation. Only students applying for Associate Degrees or Certificates of Achievement can participate in Commencement.

2. Earn a minimum of 12 credit hours at MMCC for an Associate’s Degree and 6 credits for a Certificate of Achievement or Training Credential.

3. Complete the number of credit hours required for each degree. A minimum of 62 is required for an Associate’s Degree and 31 for a Certificate of Achievement.

4. Maintain a 2.0 GPA or higher. Some programs require students to get a minimum grades in many or all of their courses. Students are expected to be aware of program specific grade requirements.

5. Courses numbered below 100 do not count toward graduation.

6. For each additional Associate Degree, a student must take an additional 12 credits at MMCC. For each additional Certificate of Achievement, a student must take an additional 6 credits at MMCC.

7. If a student has taken classes from another college, the transcript must be received by MMCC within six weeks after the scheduled gradation date in order to allow the student to graduate in said semester.

MMCC reserves the right to make changes in academic programs, graduation requirements, or grading policy at any time.

GRADUATING WITH HONORS OR HIGH HONORS

Graduation with honors or high honors is determined by the student’s cumulative GPA at the end of the last semester prior to graduation.

A student must have a cumulative GPA of 3.5 through 3.89 to graduate with Honors and cumulative GPA of 3.9 through 4.0 to graduate with High Honors.

Students who transfer credit into Mid Michigan Community College should note that a minimum of one-half of the student’s credits toward a program should be taken at MMCC to be eligible to graduate with honors.

COURSE SUBSTITUTIONS

Students are expected to take the required courses prescribed on the program of study they have declared. Occasionally, however, circumstances necessitate a substitution. If this should become necessary, the student should obtain a Waiver/Substitution form from the Office of Enrollment Services. This form should be completed by the student in consultation with the Department Chair, giving the required course to be waived, the course to be substituted, and the rationale for such an action. This substitution must then be approved by the Instructional Dean, and by the Registrar. If any of the three disapproves the action, it will be necessary for the student to take the required course.

Substitutions are not encouraged and should be considered only under the most unusual circumstances. Students should be aware that course substitutions may not transfer to another institution. Students planning to transfer are strongly encouraged to consult with the transfer receiving institution for specific course requirements.

SUPPLEMENTAL SERVICES

CAMPUS BOOKSTORES

MMCC currently owns and operates three bookstores, one at the Pickard Campus (Mt. Pleasant) one at the Harrison Campus,
and one at the Doan Center. The Pickard Campus Bookstore
stocks basic supplies and a wide variety of snacks, beverages
and prepackaged sandwiches. Textbooks are available at the
Harrison Campus Bookstore and Doan Center Bookstore. The
Doan Center Bookstore features a concession area that includes
specialty coffee drinks, beverages, snacks and many food items.
The Bookstore’s web site is www.bookstore.midmich.edu. Information regarding hours of operation, textbook info and
bookstore announcements can be found on this website. You
may also call 989-386-6640 to reach the Harrison Bookstore or
989-317-4620 to reach the Doan Center Bookstore.

The MMCC Bookstores stock required textbooks and supplies
for college courses. In addition, the Bookstores carry a variety
of items including MMCC printed clothing, supplies, and gifts.
The Bookstore sells many office supply items such as pens,
pencils, folders, paper, computer flash drives and calculators.
Backpacks and specialty book totes are stocked year-round.
Many snack items including candy, chips, gum, and pop are
available at both campus bookstores.

BOOKS & BEANS ESPRESSO CAFÉ
Books & Beans Espresso Café is located on the Harrison Campus
in the Library. Specialty coffee drinks, iced smoothie drinks,
bottled soft drinks, juices and waters are available. Also available
are quick snacks including: prepackaged sandwiches, muffins,
bagels and yogurt. Please check the information sign located
outside the library regarding Books & Bean’s hours of operation.

MMCC’S CAMPUS DINING
The Campus Dining Center is located on the south end of the
Harrison Campus. It serves a large variety of menu items and
features a full grill. Soups, sandwiches and luncheon specials
are available daily during the Fall and Winter Semesters for students, staff
and visitors. It offers a comfortable place to relax and enjoy a
break. The Campus Dining Center is closed during the summer
months.

Catering service is available for groups using MMCC facilities. Please call (989) 386-6688 for any questions regarding MMCC’s
Campus Dining Catering Service.

COMPUTER LABORATORIES
All enrolled students have free access to an open computer lab for academic pursuits.

MEDIA CENTER
The Charles A. Amble Library/Media Center at Mid Michigan
Community College provides services that are designed to
meet the academic, general and technical needs for students,
faculty, and administration at MMCC. In addition to servicing
the college’s academic community, the library is proud to offer
information services and programs to members of the general
public as well.

The Harrison campus library contains a collection of informa-
tional material. All of the information that is housed in the
library is cataloged under the Library of Congress Classifica-
tion System. Other resource holdings include a collection of
numerous periodicals and newspaper subscriptions, along with
an audio and video collection that is approaching 2,000 titles.
The library staff at both campus locations can provide upon
request, bibliographic instruction, library tours, and research
tutorials for instructional purposes. In addition to this, staff
members strive to satisfy any other informational needs for
members of our academic and non-academic community.

Both campus library locations provide the most up to date
technology and services. Some of the technical services include,
free wireless internet, check-out laptops for both in house and
take-home use, viewing facilities for students who need to watch
a DVD for course related purposes, and desktop computers for
both student and community member use.

In order to meet the research needs of our student population,
an array of online academic databases are available. Some of
the academic databases that can be found at both campus
locations are JSTOR, ProQuest, EBSCO, ECO, The Gale Reference
Library, Info Trac, MEDLINE, and the NetLibrary. Other online
services include the Oxford Dictionary Online, The Routledge
Encyclopedia Online, online tutorials for all of the academic
styles of writing, tutorials on how to effectively avoid plagiarism,
and interactive research tutorials.

MMCC’s Charles A. Amble Library is a member of the Michigan
Electronic Library (MEL) and the Valley Library Consortium.
These partnerships give both students and community mem-
ers InterLibrary Loan (ILL) access to the majority of college,
university, and public libraries around the state of Michigan.
This computerized resource sharing system allows users to
navigate the databases of over 1 million items held by these
various libraries by author, title, subject and keyword searches.
All of MMCC’s ILL and online services are available for on or off
campus users. (Note: off campus access is restricted to library
card holders).

Hours for the Harrison campus library location are Monday
through Thursday from 8:00 a.m. until 8:00 p.m., Friday from
8:00 a.m. until 4:30 p.m., during the academic year. Library
hours between academic sessions and summer are 8:00 a.m.
until 4:30 p.m. Monday through Friday. Hours for the Mt. Pleas-
ant library service desk are Monday through Friday 8:00 a.m.
until 4:30 p.m.

CONTINUING EDUCATION NON-CREDIT COURSES
In an effort to meet special interests and needs of the non-
academic and academic community, MMCC provides an array
of continuing education classes, lectures, and special events.
Courses and events falling under the following major headings – professional development and personal interest are offered
each enrollment period at both campus locations.

LIBRARY LEARNING SERVICES (LLS)
The Library Learning Services (LLS) is available to all MMCC
students for a host of success-oriented services. LLS classes
give students the option of taking entry-level Math and Eng-
lish in a more personalized and collaborative environment. In addition, if students are having difficulty in a class, they may take advantage of our additional support services. LLS writing and reading assistance is designed to help students with their writing and reading needs in any class. Whatever stage of the writing process a student may be at (ideas, drafts, finals), he/she may set up an appointment for consultation. Students can also get help with academic and textbook reading.

Any MMCC student may use all Math Lab services, multimedia, and self-instructional materials, even if he/she is not enrolled in an LLS Math course. Videotapes with lectures are available for Math 101, 104, and 105. They may be viewed in the lab or at home. Also, students from any math class may go to the lab for assistance with assignments from lecture classes; simply bring an assignment and textbook for help.

Peer tutoring and Supplemental Instruction (free services to students) are also set up through the The Library Learning Services. If students are falling behind in their course work, they are encouraged to talk to their instructors first. Instructors are usually very eager to help students. At peak times, tutoring is provided on a first-come/first-serve basis, but our goal is to provide assistance to all students needing help. If we cannot provide you with a tutor, please talk to the LLS staff for other types of assistance.

In addition to these services, the The Library Learning Services is also the testing center for assessment testing, make-up and Internet classes, Credit by Exam classes, and the media site for research.

**ASSESSMENT**

Mid Michigan Community College uses Accuplacer as an Advising tool. Accuplacer is not an admissions test. It is an assessment that helps students identify their present strengths and needs information that is necessary for accurate placement in the basic areas of language usage, reading, and numerical skills.

Students must complete Placement Testing if they are seeking any MMCC degree, certificate, or MACRAO stamp. The only individuals who would not have to complete Placement Testing are those who have successfully completed Mathematics and English Composition at other institutions or who have taken the ACT within the past 3 years and attained a score of 21 or higher for Reading and Math. Walk-in testing may be available, but it is preferable to schedule an appointment for testing.

**ACCESS TO CAMPUS FACILITIES**

The College will post its official hours for its buildings each enrollment period. Students and non-College employees shall have access to the building only during these hours, unless an approved (by the Vice President of Finance and Administrative Services or his/her designee) written exception is in effect.

During times when the College is not officially open, employees or individuals entering the facility should ensure that all entries are secured.

**HEALTH CARE SERVICES**

At present, Mid Michigan Community College does not provide or operate any health care services. The student’s responsibility is to maintain their own health care support services. Health care services are limited to Basic First Aid.

**HOUSING**

Mid Michigan Community College does not maintain housing for students on the campus.

**STUDENT ACTIVITIES**

**STUDENT IDENTIFICATION CARDS**

Student ID cards are issued for students who are registered for any MMCC class. Your original ID card is free but you can get a replacement card for only $5.

**MID’S CAMPUS COUNCIL (MC²)**

MC² functions as an advisory body to provide activities and services to students of the college. It is also the student council and programming board of MMCC. The council is composed of an executive board and any student who wishes to participate is eligible to attend. The Board strives to offer student activities that meet a variety of interests. It also funds and supports student groups and club sports. Announcements of meetings are posted. Students and groups may present proposals requesting funding or council support for activities on campus. All proposals will be reviewed and voted on by the council. Students interested in being elected to MC² should contact the advisor at 989-386-6634 or a council member. Elections take place yearly or as needed to fill vacancies.

**PHI THETA KAPPA INTERNATIONAL HONOR SOCIETY ALPHAOMICRONOMICRON CHAPTER**

Phi Theta Kappa is the international honor society of the two-year college. Phi Theta Kappa has recognized academic excellence since 1918 and has become the largest, and one of the most prestigious, honor societies in higher education. More than 2.5 million members have been inducted at 1,250 colleges. Distinguished alumni include businessman H. Ross Perot, former UN Ambassador Jeanne Kirkpatrick, Apollo 13 Astronaut Fred Haise, Grammy-winning entertainer Rudy Gatlin and Emmy Award-winning actress Sela Ward.

Membership is primarily based upon academic achievement. Invitations to membership are extended twice a year to MMCC students who have completed at least twelve hours of coursework at MMCC and have a GPA of 3.5 or better.

Involvement with Mid’s Phi Theta Kappa chapter offers a myriad of opportunities for intellectual enrichment, fellowship, community service, personal development and development of leadership skills. In addition, members are eligible for scholarships on the campuses of most four-year colleges and universities.
MMCC’s Phi Theta Kappa chapter is an extremely active one that is committed to the society’s four Hallmarks: Scholarship, Leadership, Service and Fellowship, and to serving the college and surrounding communities.

**CAMPUS CRIME PREVENTION AND SECURITY REGULATIONS**

Mid Michigan Community College pledges to comply with the regulations as specified by the Crime Awareness and Campus Security Act of 1990, as amended by Public Law 105-244 under the Department of Education’s Student Assistance General Provisions 34 CFR Part 668.

**CRIME PREVENTION**

Mid Michigan Community College asks that students consider campus crime prevention as a shared responsibility between the College and its campus community members.

**CAMPUS LAW ENFORCEMENT**

Campus law enforcement is provided by STT Security.

**CRIME REPORTING AND EMERGENCY PROCEDURES**

If you are a victim of a crime or suspect a crime, notify the campus security officer located in room 252 on the Harrison Campus, at the main office on the Mt. Pleasant Pickard Campus or the front office at the Mt. Pleasant Herbert D. Doan Center. If they are not available call 989-339-4204 (Harrison Campus), 989-339-0877 (Mt. Pleasant Pickard Campus), 989-339-7323 (Herbert D. Doan Center), or call the local police department at 989-539-7166 (Clare County) or 989-773-1000 (Isabella County).

**DISCIPLINARY ACTION**

Mid Michigan Community College abides by all Local, State, and Federal laws and will ask an appropriate agency to impose any necessary sanctions should a violation occur. Students are expected to respect the laws governing the community, as well as the MMCC rules and regulations governing student conduct as set forth in this catalog and other policy manuals. All rules and regulations apply on all College property and at all College sponsored events.

**SUBSTANCE ABUSE POLICY AND PROCEDURE**

The following information is presented in accordance with the Drug-free Schools and Communities Act Amendments of 1989.

**STANDARDS OF CONDUCT**

The Mid Michigan Community College (MMCC) Board of Trustees prohibits the possession, use, distribution, and unlawful manufacture of illegal drugs, narcotics or controlled substances on MMCC’s campuses. Alcohol is prohibited on campus except when a written exception request is submitted to, and approved by MMCC’s Board of Trustees for consideration.

**LEGAL SANCTIONS**

MMCC abides by all local, State and Federal laws and will ask an appropriate agency to impose any necessary sanctions should a violation of any stated law take place on MMCC campuses. Any person who illegally sells, provides, transports, possesses or consumes alcoholic beverages or controlled substances on college property may face immediate arrest and prosecution under applicable federal, state and local laws. Penalties under these laws may include fines, imprisonment or both. More information is available at www.dea.gov/agency/penalties.htm

**HEALTH RISKS**

Various health risks are associated with the use of illicit drugs, the misuse of prescription drugs and/or and the abuse of alcohol. Addiction to alcohol or other drugs is a progressive disease which, if untreated, may be fatal. Health risks of alcohol and drug abuse have a wide range of consequences including but not limited to liver damage and disease, psychosis, brain damage, and heart disease. The physical consequences of such abuse are serious and can be life threatening.

The psychological and social consequences of substance use and abuse can be equally devastating. Loss of friends, loss of job, divorce, and the creation of a dysfunctional family system...
are common consequences of substance abuse. Substance abusers often experience feelings of depression, anxiety, low self-esteem, guilt and loneliness. Additional information about the physical and psychological consequences of substance abuse is available in the MMCC library and through the Substance Abuse Contact Counselor as well as various Substance Abuse Agencies.

**AVAILABLE COUNSELING AND TREATMENT PROGRAMS**

All MMCC students will have access to substance abuse awareness literature at the college. A student or employee who voluntarily seeks assistance to overcome substance abuse problems will be referred to a community agency for assessment, prescribed treatment, and follow-up.

Local Assistance is available from:
Ten Sixteen, Inc. (989) 631-0241 or (989) 773-9655 or (989) 802-0742 or (989) 426-8886

Students and employees participating in counseling or a prescribed program are not exempt from college policies, procedures or rules.

**DISCIPLINARY SANCTIONS**

Students and employees who illegally use alcoholic beverages or controlled substances on college property face disciplinary action, suspension from the college, and/or prosecution under the law.

**SMOKING POLICY**

To promote the health and well-being of its students, faculty and staff, the College has established a smoke-free environment in all its facilities and college-owned vehicles. Smoking is not permitted within fifty feet from doorways so marked; nor within ten feet of unmarked doorways, nor within any college building or college vehicle.

**STUDENT CODE OF CONDUCT**

As a member of this academic community, each student enjoys the right to learn. Mid Michigan Community College has a duty to promote this learning. The student, in turn, has duties and responsibilities to other members of the Mid Michigan Community College community. The most important is to refrain from interfering with the rights and responsibilities of others to learn, teach, and effectively manage the institution.

Students are expected to act in a responsible manner that promotes the environment for learning. The three forms of misconduct subject to disciplinary action are 1) violations of civil/criminal law, 2) disruption of the educational process, and 3) violation of College rules, regulations and policies.

Act No 26, Public Acts of 1970, approved by the Governor June 2, 1970 and effective August 1, 1970, provides penalties for certain conduct at public institutions of higher education. If a student’s conduct on campus is improper and deemed a potential threat to the College or its students, employees, or visitors, the College reserves the right to take any action that is appropriate including immediate and permanent dismissal from the College.

Administrative implementation of the disciplinary action procedures involving students is the responsibility of the Dean of Student and Academic Support Services and/or the Associate Dean of Student and Academic Support Services unless there is a conflict of interest. In these cases, the Vice President of Academic Services will designate a hearing officer.

The following represent but are not limitations of examples that would constitute unacceptable student behavior and could result in disciplinary action:

1. Willful destruction, injury, or disruption of College property or operations.

For Non-Instructor problems contact the Associate Dean of Student and Academic Support Services at (989) 773-6622, ext. 230. The Associate Dean of Student and Academic Support Services will direct your call to the appropriate department.

For Registration problems contact the Associate Dean of Student and Academic Support Services Office at (989) 773-6622 ext. 230. Sexual Harassment: Human Resources Department (989) 386-6621.

**STUDENT COMPLAINT POLICY**

Mid Michigan Community College is committed to helping students. Should a student have a concern/complaint, he/she is encouraged to discuss it with appropriate MMCC personnel. No retaliation of any kind shall be taken against a student for participation in a complaint or grievance.

If you have a concern, here are the numbers to contact:
- Billing Office: (989) 386-6611
- Distance Education: (989) 317-4602
- Equal Opportunity/Affirmative Action: Human Resources Department (989) 386-6621
- Financial Aid Office: (989) 386-6664

If you have a complaint or concern regarding an instructor you should first discuss the matter with the instructor. If you do not feel comfortable discussing the issue with the instructor, please contact the appropriate Academic Administrator.
- Math & Sciences: (989) 317-4629
- Nursing & Health Sciences: (989) 386-6645
- Occupational Studies: (989) 317-4607
- Liberal Arts: (989) 386-6658
- Technical Studies and M-TEC (989) 386-6624
2. Possession of alcoholic beverages, illegal drugs, or being under the influence of these substances on campus.
3. Smoking in unapproved areas.
4. Possession of firearms, knives, or other weapons on campus.
5. Academic dishonesty, plagiarism, and cheating.
6. Sexual harassment as defined by the Michigan Civil Rights Act.
7. Discrimination on the basis of race, creed, color, sex, national origin, age, height, weight, physical characteristics, or marital status.
8. Aggressive, hostile and/or disruptive behavior directed toward any College employee, student, or guest.
9. Behavior that substantially interferes with the student’s or employee’s class or work environment or creates an intimidating, hostile or offensive work environment.
10. Violation of the acceptable use policy in regard to on campus computers.

**STUDENT DISCIPLINE**

The following principles and procedures shall govern cases in which a student is alleged to have violated any college policies, rules, or regulations.

**I. Procedural Due Process**

Procedural due process appropriate to the specific case must be followed prior to the imposition of discipline for violation of any college policies, rules, or regulations listed in MMCC catalog. Some elements of due process, such as timely and specific notice of charges, are almost always appropriate regardless of the gravity of the violation alleged. Other elements, such as a written transcript of the hearing, are only appropriate in cases where the discipline is severe (dismissal from the College and criminal charges, for example). Prior to a hearing, the student shall be informed of the elements of due process to be followed in the case. Among the elements of due process that may be provided are:

- **A.** Timely and specific notice of the charges
- **B.** Right to a hearing before the Dean of Student and Academic Support Services
- **C.** Right to appeal the decision of the Dean of Student and Academic Support Services to the Judicial Board
- **D.** Right to present evidence on the student’s behalf
- **E.** Right to rebut adverse testimony
- **F.** Right to a written transcript of the hearing (at the student’s expense)

Other procedural safeguards may be followed as required by the circumstances.

**II. Burden and Standard of Proof**

The burden shall be on the College to show by a preponderance of the evidence that the student violated any college policies, rules, or regulations.

**III. Status of Student Pending Hearing**

A student’s status shall not be changed prior to a hearing unless there is reasonable cause to believe that the student’s status (for example, his or her continued presence in the classroom or on campus) poses a danger to persons or property or will disrupt the educational process. The decision to alter a student’s status pending hearing will be made by the Dean of Student and Academic Support Services or his/her designee.

**IV. Forms of Discipline**

Disciplinary action must be proportionate to the violation, and depending on the nature of the violation, may take the form of a reprimand; restrictions on activities or privileges; restitution; temporary or permanent suspension from a class or program. Depending upon the severity of the violation, permanent expulsion from MMCC may be an appropriate disciplinary measure determined by the Dean of Student and Academic Support Services, which would follow the same appeal process as any other determination.

**V. Procedures for Classroom Misconduct**

The following procedures shall govern cases wherein violation of any rule or regulation regarding classroom conduct is alleged.

**Immediate Removal From Class**

If misconduct warrants an immediate removal from the class for the remainder of the class period, the instructor may do so without a prior hearing. If the student resists, the instructor may ask for assistance from campus security or contact law enforcement by calling 911. The instructor shall, as soon as practical, provide written certification to the Dean of Student and Academic Support Services and/or the Associate Dean of Student and Academic Support Services that the student has violated any college policies, rules, or regulations and has refused to leave the classroom.

**Additional or Different Discipline**

If an instructor believes misconduct warrants additional or different discipline, the instructor may consult with their Instructional Administrator first, then the Dean of Student and Academic Support Services and/or the Associate Dean of Student and Academic Support Services or his/her designee who may elect to:

- Take no action;

**OR**

- Change the student’s status pending a meeting with the student; AND
- Notify the student in a timely fashion of his/her change of status, the specific charges, and the due process to be
afforded under the circumstances; AND do one of the following:

- Meet with the student and contact the instructor and other appropriate persons to explore and adopt non-disciplinary solutions, including the establishment of guidelines for returning the student into class;

OR

- Meet with the student and contact the instructor and other persons appropriate to the case, make a written determination of the facts, take disciplinary action if such action is warranted, and notify the student of his/her decision and the right to appeal to the Judicial Board.

VI. Procedures for Other Misconduct

Violations of any rule or regulation, except those regarding classroom conduct, may be reported to the Dean of Student and Academic Support Services and/or the Associate Dean of Student and Academic Support Services, who may elect to:

- Take no action;

OR

- Change the student’s status, if appropriate, pending a meeting with the student; AND

- Notify the student in a timely fashion of any change of his/her status, the specific charges, and the due process to be afforded under the circumstances; AND do one of the following:

  - Meet with the student and contact other appropriate persons to explore and adopt non-disciplinary solutions;

OR

  - Meet with the student and contact other persons appropriate to the case, make a written determination of the facts, take disciplinary action if such action is warranted, and notify the student of his/her decision and the right to appeal to the Judicial Board.

VII. Appeal

The student, instructor, or charging party may appeal the decision of the Dean of Student and Academic Support Services to the Judicial Board. Written Notice of Appeal shall be filed with the Dean of Student and Academic Support Services within 15 calendar days of the decision. The Notice of Appeal shall state with specificity why the Dean’s decision should not stand.

Upon receipt of a timely filed Notice of Appeal, the Dean of Student and Academic Support Services shall schedule the appeal for hearing before the Judicial Board and notify the student of the date, time and place of the hearing and of the due process to be afforded in the appellate process. The hearing may be adjourned at the request of any party for good cause.

The Judicial Board may affirm, modify or reverse the decision of the Dean of Student and Academic Support Services. The decision of the Judicial Board shall be final.

VIII. Judicial Board

The Judicial Board shall be composed of the Vice President of Academic Services or his/her designee, an Instructional Administrator or his/her designee, and a faculty member appointed by Mid Michigan Community College Faculty Senate.

IX. Timelines

Disciplinary action, if any, should be imposed within 30 days of the date the student receives notice of the charge(s); notice of appeal should be filed with the Dean of Student and Academic Support Services and/or the Associate Dean of Student and Academic Support Services within 15 days of the date disciplinary action is imposed; and the final decision of the Judicial Board should be made within 30 days of the date Notice of Appeal is filed with the Associate Dean of Student and Academic Support Services and/or Registrar. These timelines are intended as guidelines and may be extended by the Judicial Board if the circumstances of the case justify an extension.

ACCESS TO RECORDS

Mid Michigan Community College policy grants access by students to their educational records under conditions which conform to the Family Education Rights and Privacy Act of 1974 as amended, regulated by the appropriate federal guidelines. A copy of this policy may be obtained upon request from the Office of Enrollment Services.

Directory information will be routinely released unless a student informs the Office of Enrollment Services in writing that any or all items should not be released without the student’s prior consent. Directory information includes name, address, telephone number, date and place of birth, major field of study, participation in officially-recognized activities and sports, dates of attendance, degrees and awards received, and most recent previous educational agency or institution attended.

MMCC also reserves the right to release information without prior student consent under the following conditions:

1. Requests from faculty and staff who have a legitimate education interest on a "need to know" basis, including student employees or agents of the institution, if necessary to conduct official business, as authorized by the Registrar. See below for additional information on what constitutes legitimate educational interest. Legitimate educational interest includes performing a task related to the regular duties of the employee or agent, the student’s education, the discipline of a student, a service or benefit for the student, or maintaining safety and security of the campus.

2. Requests in compliance with a lawful subpoena or judicial order.
3. Requests in connection with a student’s application for or receipt of financial aid.

4. Requests by state authorities and agencies specifically exempted from the prior consent requirements by the Act—organizations conducting studies on behalf of the university, if such studies do not permit the personal identification of students to any persons other than to representatives of such organizations and if the personal identification data is destroyed when no longer needed.

5. Information submitted to accrediting organizations.

6. Requests by parents of a dependent student, as defined in Section 152 of the Internal Revenue Code of 1954.

7. In the case of emergencies, MMCC may release information from education records to appropriate persons in connection with an emergency, if the knowledge of such information is necessary to protect the health or safety of a student or other persons.

8. To authorized federal officials who have need to audit and evaluate federally-supported programs.

9. The results of any disciplinary proceeding conducted by the university against an alleged perpetrator of a crime of violence to the alleged victim of that crime.

10. To verify the accuracy of any information contained in what purports to be an official college document (e.g. a transcript or diploma) or is provided to a third party.

THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student’s education records within 45 days of the day that MMCC receives a request for access.

   Students should submit to the Registrar written requests that identify the record(s) they wish to inspect. The Associate Dean of Student and Academic Support Services will make arrangements for access and notify the student of the time and place where the records may be inspected. Such requests should be sent to:
   
   Associate Dean of Student and Academic Support Services
   Mid Michigan Community College
   5805 East Pickard
   Mt. Pleasant, MI 48858

2. The right to request the amendment of the student’s education records that the student believes is inaccurate or misleading.

   Student/parents may ask the college to amend a record that they believe is inaccurate or misleading. They should write the Registrar; clearly identifying the part of the record they want changed, and specify why it is inaccurate or misleading.

   If the college decides not to amend the record as requested by the student/parent, the college will notify the student/parent 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.

3. The right to consent to disclosures of personally identifiable information contained in the student’s education 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 or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the college has contracted (such as an attorney, auditor, or collection agent); 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 education record in order to fulfill his or her professional responsibility.

   Upon request, the college discloses education records without consent to officials of another school in which a student seeks or intends to enroll. (NOTE: FERPA requires an institution to make a reasonable attempt to notify the student of the records request unless the institution states in its annual notification that it intends to forward records on request.)

4. Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by MMCC 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
   600 Independence Avenue, SW
   Washington, DC 20202-4605
SOCIAL SECURITY NUMBER DISCLOSURE STATEMENT

Federal law recognized the student’s Social Security Number (SSN) as personally identifiable information under the Family Education Rights and Privacy Act of 1974 (FERPA). However, the law allows Mid Michigan Community College to require and to use this information in compliance with state and federal guidelines. While you are not required to provide you SSN to be considered for admission to Mid Michigan Community College, you are strongly encouraged to do so, if you have one. Providing a SSN will speed up matching material such as transcripts and test scores with your application. A SSN is required if you are applying for financial aid or federal tax benefits, or for employment; it may be required for other purposes. The information may be disclosed only under certain circumstances, including the following:

• To other institutional officials
• To representatives of state and local educational authorities
• In connection with financial aid

• For research purposes to improve instruction
• To collection agents in connection with university-related businesses
• Pursuant to an order from the court of law
• Other circumstances are required by state or federal law

Mid Michigan Community College is committed to ensuring the privacy and confidentiality of student records.

VOTER REGISTRATION

Applications are available on both the Harrison campus and Mt. Pleasant Pickard location in the Office of Enrollment Services.
MISSION STATEMENT

The purpose of Mid Michigan Community College is to provide educational and community leadership for the development of human ability. To this end the College provides post-secondary education and services to enable students and the community to achieve success in a global society.

COLLEGE GOALS

Enduring Goal #1: Enabling Student Success

The success of MMCC is tied inexorably to the success of our students. To accurately assess our students’ success, we must recognize that students choose MMCC for a wide variety of reasons; consequently, we must first accurately identify individual student’s goals and then facilitate each student’s ability to attain those goals. To that end, we must provide relevant, high quality instruction, programming, and services that adapt to diverse learning styles, that enhance students’ ability to perform in a global society, that support career advancement, and/or that facilitate successful transfer to a senior institution. To maintain both efficiency and a student-centered learning environment, MMCC must thoughtfully balance a high tech/high touch approach.

Enduring Goal #2: Enhancing Employee Success

The success of MMCC depends on our employees. We must provide effective leaders who value and support high standards of performance using clear direction and open, honest com-
munication. We must work collaboratively to create, nurture, and sustain a culture of mutual support and service. To do so, we must align and support employees in positions that most effectively utilize, develop, and challenge their talents.

**Enduring Goal #3: Engaging the Community**
The success of MMCC depends on the support of the communities we serve. Consequently, we must continuously and deliberately develop and maintain mutually beneficial relationships with our multiple communities. At the same time, we must provide leadership in unifying our communities by positioning MMCC as a regional service provider. We must identify and prioritize the most significant needs of our communities, assuring that our activities align closely with our mission.

**Enduring Goal #4: Improving Institutional Effectiveness**
The success of MMCC depends on the way we work. In an unstable state and national environment, we must create our own stability yet be agile to serve the needs of both our internal and external customers. In times of economic uncertainty, we must develop and use our precious human, financial, and physical resources prudently and efficiently. We must ensure that our means of making decisions, communicating, and planning are streamlined yet inclusive. We must put the principles of the Academic Quality Improvement Program at the center of our operations, using data to guide our constant pursuit of excellence.

**PROFILE OF MID MICHIGAN COMMUNITY COLLEGE STUDENTS**

As a community college, we are committed to assisting each student meet his/her unique goals. As illustrated by the Fall 2011 profile, our student body is diverse:

**Student Credit Hour Load**
- Male Full Time ................................................. 21%
- Female Full Time ............................................. 24%
- Male Part Time .................................................. 20%
- Female Part Time ............................................. 35%

**Student Age Distribution**
- Under 18 ............................................................ 9%
- 18-25 ................................................................. 59%
- 26-45 ................................................................. 23%
- 46-60 ................................................................. 9%

**Geographical Residence**
- Clare County ................................................... 21%
- Gladwin County ............................................... 11%
- Isabella County ............................................ 33%
- Gratiot County ............................................... 8%
- Other Counties ............................................ 27%

**Gender of Students**
- Female ......................................................... 59%
- Male ............................................................. 41%

**Declared Program Choices**
- General .......................................................... 48%
- Business & Public Service ............................. 24%
- Trade, Industrial & Technical ..................... 4%
- Health Occupations ..................................... 22%
- Human Development .................................... 1%

*Figures based on academic classes only

**MMCC HISTORY**

The earliest activity in providing a community college to serve the Clare County/Gladwin County area began in 1962. Two years later the concept of the College was endorsed by the two local intermediate districts and the five local school districts within the two counties. As a result of the acceptance of this basic concept, a Citizens Advisory Council was formed to determine the feasibility of establishing a community college. The report of the Council, completed in 1965, recommended the formation of a local community college to serve the residents of the two-county area. The study report was then submitted to the Michigan Department of Public Instruction and notification of approval for the College was received in July, 1965.

In September, 1965, a special election was held to obtain community authorization for establishment of the College, to elect a governing Board of Trustees, and to approve construction and operating millage of 1.5 mills to be levied against the assessed property valuation in the voting district. The favorable response of the voters resulted in official approval by the Michigan State Board of Education to establish Michigan’s 25th community college.

During 1966-67, an administrative staff was employed to develop the initial planning for the Campus and for the instructional program. At the same time, the architect was developing a master plan for building construction and development of the entire 560-acre site. Construction of the initial $1.5 million instructional facility began in May, 1968.

In the fall of 1968, the first university parallel and the non-technical classes began in temporary facilities in the Clare County Building in Harrison. The Practical Nursing Program was started at the Central Michigan Community Hospital in Mt. Pleasant and the vocational and technical courses were conducted at the Area Vocational School in Mt. Pleasant. Temporary facilities for the library and audio-visual materials were obtained from the Harrison Public Library. On September 15, 1969, the first classes moved to the present Campus location and on November 24, 1969, all of the remaining classes were moved. Meanwhile, classes continued to be held at the Mt. Pleasant locations.

Construction of the Food Service/Student Center was completed in 1972; the Goldberg Orientation Center, which originally housed the College’s child care facilities, and a small engine
repair building were added in 1973; the allied health facilities and the Automotive Technology Center were completed in 1976; and the Climate Control Center was constructed in 1979. Technical Trades Center opened for classes in the fall of 1983.

In December of 1993, the College purchased a three-story modern office building in Mt. Pleasant. The building was converted to a striking campus facility on an attractive site during 1994. The Mt. Pleasant Campus also serves the Isabella County area.

In the fall of 1998, the College opened an extensive expansion with improvements on the Harrison Campus, adding new science and health education facilities.

In the fall of 1999, MMCC was granted funding for a Michigan Technical Education Center (M-TEC) to serve business, industry and the community. The Center was completed in 2001 and provides open-entry training for employees and potential employees of industrial and construction trades.

One of the main goals of the College is to better serve students, thus helping them achieve success. This goal was recently achieved with the addition of the Student Orientation and Academic Readiness (SOAR) Center which opened in August 2004. This Center consolidated student services and academic support in one building to provide more comprehensive, coordinated service centered on student needs. Students now have easier access to all services in an inviting atmosphere. Consolidation of services also provides more efficient utilization of human resources and for the first time exhibits an obvious front door for the College.

Recognizing the growing need for skilled healthcare professionals, MMCC opened the Herbert D. Doan Center for Science and Health Technologies in the Spring of 2008. Located on 44 acres in Mt. Pleasant, the Doan Center is a vital part of MMCC’s effort to expand its highly respected nursing program and establish new health science programs. The Center doubled MMCC’s available space in Mt. Pleasant and provided additional science labs, classrooms, and computer labs.

Further expansion is ongoing at the site of the Doan Center. An addition to house student services (built on the same concepts as the Harrison Campus SOAR Center) was completed in March 2011. An academic and business services facility is in development to replace the Pickard Campus in 2013. Once complete, students will be able to receive a full range of services at either location - Harrison or Mt. Pleasant.

Since the College opened its doors to 196 students in the fall of 1968, it has experienced a pattern of constant growth and is now serving more than 6,000 students annually on both a fulltime and part-time basis.

**ACCREDITATION**

Mid Michigan Community College is approved by the Department of Education of the State of Michigan and is Accredited by the Higher Learning Commission and a member of the North Central Association, 30 North LaSalle Street, Suite 2400, Chicago, Illinois 60602-2504, 1 (800) 621-7440, www.ncahighered.org

The College also holds membership in:
- American Association for Higher Education
- American Association of Community Colleges
- Association of Community College Trustees
- Community College Consortium, U. of M.
- Consortium Eight (Northern Michigan Community Colleges)
- Council of North Central Community Jr. Colleges
- Michigan Community College Association

To view or obtain copies of MMCC accreditation and licensing documents, contact the Office of the Vice President of Academic Services at (989) 386-6607. Written requests may be mailed to 1375 S. Clare Avenue, Harrison, MI 48625.

A number of MMCC’s programs are also accredited by other organizations. These include:
- The Associate in Applied Science: Health Information Technology program accreditation is accredited through CAHIIM – The Commission on Accreditation for Health Informatics and Information Management.
- The Associate in Applied Science: Medical Assistant program is accredited through CAAHEP - Committee on Accreditation of Allied Health Education Programs and (CRB-AAMAE) – The Curriculum Review Board of the American Association of Medical Assistants Endowment. Accreditation for this program was obtained on April 30th, 1999.
- The Training Credential: Pharmacy Technician program accreditation process is currently under way through ASHP – Associate Society of Health-System Pharmacists.
- The Associate in Applied Science: Physical Therapy Assistant program at Mid Michigan Community College has been granted Accreditation by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (1111 North Fairfax Street, Alexandria, VA 22314; phone (703) 706-3245; accreditation@apta.org).
- The Associate in Applied Science: Radiography program is accredited through the Joint Review Committee on Education in Radiologic Technology.
Mid Michigan Community College affirms its commitment to the principles of equal employment and educational opportunity, and of non-discrimination in the provision of services to the public, through its compliance with the provisions of Title VI of the Civil Rights Act, Title IX of the Education Amendments, Section 504 of the Rehabilitation Act, the American with Disabilities Act, the Age Discrimination Act, the Elliot-Larsen Civil Rights Act, and the Persons with Disabilities Civil Rights Act.

Mid Michigan Community College will not discriminate in employment or educational opportunities, or exclude participation in the services provided as an institution, because of race, religion, color, national origin, age, sex, family or marital status, height, weight, disability or any other status protected by law.

Any applicant, employee, government agency, or any other person who has a complaint or concern about any type of discrimination is required to report this conduct in writing to the Human Resources Department. Complaints against or by a student must be made in writing and referred to the Dean of Student and Academic Support Services.

Upon receipt of the complaint, the appropriate college representative will conduct an investigation that is appropriate and warranted based on the circumstances. After conducting an investigation, the college representative will issue a written determination to the complainant.

Inquiries and complaints may also be directed at any time to the Michigan Department of Civil Rights in Lansing, Michigan, or the Office of Civil Rights in Washington, D.C.
STRATEGIC COUNCIL MEMBERS
Carol Churchill ................................................................. President
Kim Barnes ................................................................. Executive Dean of Student Services
Anthony Freds ............................................................... CIO
Lillian Frick .................................................................. Dean of Instruction
Michael Jankoviak ....................................................... Executive Director of Econ. & Workforce Development
Sherry Kyle ................................................................. Executive Assistant to the President & Board of Trustees
Matt Miller ................................................................. Vice President of Student & Community Relations
Gail Nunamaker .......................................................... Executive Director of Human Resources

ASSOCIATE DEANS
Maggie Magoon .......................................................... Associate Dean of Health Sciences
Scott Mertes ............................................................... Associate Dean of Student Services/Registrar
Shawn Troy ................................................................. Associate Dean of Liberal Arts
Peter Velguth ............................................................... Associate Dean of Math & Science

ADMINISTRATIVE COUNCIL MEMBERS
Tammy Alvaro ............................................................... Student Advancement Coordinator
Mary Battaglia ............................................................ Human Resources Consultant
Charles Bryan ............................................................. Transcript Coordinator
Jennifer Cooper .......................................................... Associate Director of Financial Aid
Lori Cortez ................................................................. Title III Coordinator
Gale Crandell .............................................................. Director of Financial Aid
Carol Darlington ........................................................ SBTDC Consultant
Tricia Farrell .............................................................. Retention Coordinator
Julie Fortino ............................................................... Recruiter
Anthony Fox .............................................................. Regional Director of MI-SBTDC
Christy Gary ............................................................... Nursing Clinical Coordinator
Ron Gepford .............................................................. Facilities Manager, Harrison
Corey Goethe ............................................................ Director of Library & Learning Services
Robin Gooch ............................................................... Human Resources Coordinator
Jessica Gordon .......................................................... Director of Marketing & Admissions
Gregory Gunther ........................................................ Graphic Design Coordinator
Candace Henry-Schroder .......................................... Financial Aid Loan Officer
Jeremy Hoover .......................................................... Web Technology Programmer
Corrine Howdyshell .................................................. Clinical Simulation Center Coordinator
Royce Humm ............................................................ Information Technology Operations Coordinator
Jonathan Kappa .......................................................... Accountant
Brandon Kish ............................................................ Learning Management System Administrator
Karry Kiste ............................................................... Academic Coordinator-Talent Search Grant
Chris Kliewoneit ........................................................ Information Technology Systems Manager
Kelly Koch ................................................................. Director of Auxiliary Services
Barney Ledford .......................................................... Criminal Justice System Coordinator
Karen Lee ................................................................. Early Childhood Education Coordinator
Kirk Lehr ................................................................. Director of Information Technology

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PERSONNEL DIRECTORY

Galen Miller .......................................................................................................................... Radiography Clinical Coordinator
Brent Mishler .......................................................................................................................... Director of Talent Search Project
Brad Osantoski .................................................................................................................. Multimedia Coordinator
Crystal Parker ...................................................................................................................... Physical Therapist Assistant Program Clinical Coordinator
Chris Pellerito ..................................................................................................................... Recruiter/Advisor
Jeff Punches .......................................................................................................................... Purchasing Manager
Gene Schmidt ...................................................................................................................... Science/Biology
Douglas Brotherton .............................................................................................................. Men’s Basketball Coach
Martin Eltzroth ................................................................................................................... Science/Chemistry
Carol Shannon ..................................................................................................................... Director of Academic Advising, Title III
John Skinner .......................................................................................................................... Director of Radiography
Richard Smith ..................................................................................................................... Off Campus Program Coordinator
Don Stabenow ..................................................................................................................... Career Coordinator
Robert Tefft ........................................................................................................................ Instructional Technology Coordinator, Title III
Dawn Tesner .......................................................................................................................... Director of Pharmacy Tech. Program
Edgar VanAvery .................................................................................................................. Associate Director of Technical Trades
Anita West ............................................................................................................................. Financial Aid Officer
Bill Whitman ....................................................................................................................... Director of Facilities
Jessica Wicks ......................................................................................................................... Director of ITG and Distance Education
Barbara Wieszciecinski ....................................................................................................... Director of Nursing
Amanda Wismer ................................................................................................................... Director of Physical Therapist Assistant Program
Heather Zemanek ................................................................................................................ Financial Aid Officer

ATHLETIC PROGRAM

Douglas Brotherton .............................................................................................................. Men’s Basketball Coach
Ashley Brown ....................................................................................................................... Women’s Basketball Assistant Coach
Ed Casebeer ........................................................................................................................ Bus Driver
Bradley Henry ...................................................................................................................... Women’s Basketball Coach
Joel Machota ....................................................................................................................... Men’s Basketball Assistant Coach
Chris Pellerito ................................................................................................................... Women’s Soccer Coach
James Szymanski ............................................................................................................... Bus Driver
Dion Wilson ......................................................................................................................... Strength and Conditioning Coach
Joseph Zavaglia ................................................................................................................ Men’s Soccer Coach
Teresa Szur ........................................................................................................................ Athletics Director

INSTRUCTIONAL UNITS

MATH & SCIENCE

Jan Ackerman, ....................................................................................................................... Science/Biology
Deborah Claypool, .............................................................................................................. Biology
Robert Elmore ..................................................................................................................... Mathematics
Rodney Elmore .................................................................................................................. Mathematics
Martin Eltzroth .................................................................................................................. Science/Chemistry
David Kedrowski ............................................................................................................. Mathematics
Jeff Percha ......................................................................................................................... Biology/Chemistry
Lori Recker ......................................................................................................................... Mathematics
Kerrie Spinney .................................................................................................................. Temporary FT Mathematics
Laura Vosejpek ................................................................................................................ Physical Sciences
Jeremiah Wagner ............................................................................................................... Biology
Jordan Webster .................................................................................................................. Mathematics
Peter Velguth ....................................................................................................................... Associate Dean of Math & Science
Chris Goffnett .................................................................................................................... Dean of Instruction

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HEALTH SCIENCE PROGRAMS

Christi Beck ................................................................. Director of Health Information Technology (HIT) Program
Mary Bosman ............................................................... Nursing Education
Gail Dunham ............................................................... Nursing Education
Grace Eisen ............................................................... Nursing Education
Janet Grimm ............................................................... Nursing Education
Sheri Loubert ............................................................ Nursing Education
Jan Noteboom ............................................................ Faculty Coordinator of Allied Health
Teri Paradise ............................................................... Nursing Education
John B. Skinner .......................................................... Director of Radiography
Jennifer Swartz ......................................................... Nursing Education
Dawn Tesner .............................................................. Pharmacy Tech Program Director
Amanda Wismer .......................................................... Physical Therapist Assistant Program Director
Aileen Wernert ............................................................ Nursing Education
Barbara Wieszczyk ..................................................... Director of Nursing

Maggie Magoon .......................................................... Associate Dean of Health Sciences
Chris Goffnett ............................................................ Dean of Instruction

BUSINESS & LIBERAL ARTS

Bernard Alford .......................................................... English/Humanities
Luzdelys Andarcia ....................................................... Foreign Language
Ronald Balch ............................................................. Computer Information Systems
Patricia Block ............................................................ Art
Charles Bowden ........................................................ Sociology
Kelli Butler .............................................................. Business Information Systems
Sallie Butler .............................................................. English/Composition
Eric Chamberlin ....................................................... English
Carlos Cruz .............................................................. Computer Information Systems
Lucia Elden ............................................................... English/Humanities
Kelley Eltzroth .......................................................... Psychology
Bud Kanyo ............................................................... English/Composition
William Mathews .................................................... Social Sciences
Karen L. McGuire .................................................... Temporary FT Faculty, Accounting
Svetlana Overbaugh ................................................. Business
William Reader .......................................................... English/Humanities
Richard Thomas ....................................................... Speech Communications
James VanderMey ..................................................... English/Humanities
Bruce Yuille ............................................................. Business

Shawn Troy .............................................................. Associate Dean of Business & Liberal Arts
Chris Goffnett ............................................................ Dean of Instruction

OCCUPATIONAL STUDIES

David Demski ............................................................ Automotive Technology
Mark Jewell .............................................................. Welding Technology
Eric Sander ............................................................. Drafting
Mark Todd .............................................................. Heating/Refrigeration/Air Conditioning Technology

L. Scott Govitz ............................................................. Executive Director of Econ. & Workforce Development
COUNSELORS
Linda Jensen ................................................................................................................................................................Transfer Counselor
Carol Santini ............................................................................................................................................................................Special Needs Counselor
Linda Jensen  ......................................................................................................................................................................................Transfer Counselor
Colin Alton ......................................................................................................................................Mathematics/Computer Information Systems
John Ade .....................................................................................................................................................................................................Criminal Justice
Iliana Miller .................................................................................................................................................................................................................English
Linda Voelker..............................................................................................................................................................Computer Information Systems
Elizabeth Kindermann ............................................................................................................................................................................................Speech
Stefan Britt ..................................................................................................................................................................................................................English
Linda Voelker..............................................................................................................................................................Computer Information Systems
Iliana Miller .................................................................................................................................................................................................................English
Jade Woodcock .................................................................................................................................................................................................................English

LECTURESHPIS
Aaron Blodgett.........................................................................................................................................................................................Mathematics
Stefan Britt .........................................................................................................................................................................................English
Eve Elden .................................................................................................................................................................................................................English
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Iliana Miller .........................................................................................................................................................................................English
Linda Voelker..............................................................................................................................................................Computer Information Systems
Jade Woodcock .................................................................................................................................................................................................................English

ADJUNCT INSTRUCTORS
Kelly Abbott.................................................................................................................................................................................................................Health Education/Allied Health
Darren Acton.................................................................................................................................................................................................................Physical Education
John Ade.................................................................................................................................................................................................................Criminal Justice
Kevin Allen.................................................................................................................................................................................................................Biology
Colin Alton .................................................................................................................................................................................................................Biology
Michelle Ambrick .................................................................................................................................................................................................................Mathematics/Computer Information Systems
Mary Ash .................................................................................................................................................................................................................Nursing
Lisa Awrey .................................................................................................................................................................................................................Nursing
Margaret Bailey .................................................................................................................................................................................................................Early Childhood Education
Scott Barnhart .................................................................................................................................................................................................................Mathematics
Mary Battaglia .................................................................................................................................................................................................................Business Information Systems
Brenda Bennett .................................................................................................................................................................................................................Nursing
Kelly Bennett .................................................................................................................................................................................................................Health Information Technology
Beth Birgy .................................................................................................................................................................................................................Nursing
Amy Bond .................................................................................................................................................................................................................Personal Development
Jeremy Bond .................................................................................................................................................................................................................Business Information Systems/Computer Information Systems
Mary Booms .................................................................................................................................................................................................................Health Education
Dominic Borowiak .................................................................................................................................................................................................................English
Steven Boyer .................................................................................................................................................................................................................Mathematics
John Bradac .................................................................................................................................................................................................................Criminal Justice System
Julie Briggs .................................................................................................................................................................................................................Nursing
Jared Bruner .................................................................................................................................................................................................................Computer Information Systems
Larry Burdick .................................................................................................................................................................................................................Business/Political Science
Daniel Byerley .................................................................................................................................................................................................................Business
Amanda Byler .................................................................................................................................................................................................................Nursing
Custer Carland .................................................................................................................................................................................................................History/Political Science
Julie Christensen .................................................................................................................................................................................................................Spanish
Joshua Chulski .................................................................................................................................................................................................................Allied Health/Biology
Brian Clark .................................................................................................................................................................................................................Mathematics
James Clark .................................................................................................................................................................................................................Welding
Jennifer Collison .................................................................................................................................................................................................................Social Science/English
Kelly Combs .................................................................................................................................................................................................................Psychology
Hernan Cortez .................................................................................................................................................................................................................Social Science
Richard Cronk .................................................................................................................................................................................................................Sociology
Karen Crowley .................................................................................................................................................................................................................Allied Health
Julie Cunningham .................................................................................................................................................................................................................Biology
Kendra Curtiss-Tomaski .................................................................................................................................................................................................................Early Childhood Education
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PERSONNEL DIRECTORY

Amy Howard ......................................................................................................................... Health Education
Ian Humphres .......................................................................................................................... Art
Donna Hynes ............................................................................................................................ Nursing
Doris Johnson .......................................................................................................................... Allied Health
Michael Johnston ..................................................................................................................... Humanities
Pinneniece Joshua .................................................................................................................. Social Sciences
Karen Juday ........................................................................................................................... Computer Information Systems
Yvette Keast .......................................................................................................................... Theater
Ann Kedrowski ......................................................................................................................... English
Brandon Kish .......................................................................................................................... Computer Information Systems
Marcy Klaus .......................................................................................................................... Criminal Justice System
Chris Kliewoneit ..................................................................................................................... Computer Information Systems
AnneMarie Koelblie ................................................................................................................ Speech
Jessica Kutschman .................................................................................................................... Sociology
Dorota Lagida-Ostling .............................................................................................................. Art
James Langley ........................................................................................................................... Computer Information Systems
Lesley Larson ........................................................................................................................... Nursing
Barney Ledford ......................................................................................................................... Nursing
Karen Lee ................................................................................................................................... Criminal Justice
Rebekah Lombardo .................................................................................................................. Early Childhood Education
Shaelynn Long-Kish ................................................................................................................ English
Gerald Longnecker ................................................................................................................... Psychology/Speech
Matthew Loos ......................................................................................................................... Heating/Refrigeration/Air Conditioning
Lauralee Lowe .......................................................................................................................... Mathematics
Steven Lowrence ..................................................................................................................... Psychology
Andrea Lundin .......................................................................................................................... Science
Valarie Marsden ....................................................................................................................... English
Sheryl McCowen ....................................................................................................................... Nursing
Angela McGuirk ....................................................................................................................... Chemistry
Laurel McLaughlin ..................................................................................................................... Nursing
Alfons McNeal ........................................................................................................................... Mathematics
Patti McNeilly .......................................................................................................................... Early Childhood Education
Christopher McNicol ............................................................................................................ Mathematics
Gayle Mercer ............................................................................................................................ English
Cheryl Meyer ............................................................................................................................ English
Donald Meyers ........................................................................................................................ Nursing
Marlene Michels ....................................................................................................................... English
Debra Middleton ...................................................................................................................... Mathematics
Jonathan Miller ....................................................................................................................... Geology/Physical Science
Charles Morris ........................................................................................................................ Music
David Moyses .......................................................................................................................... Chemistry
Hope Mwemba ......................................................................................................................... Allied Health
Joseph Myers .......................................................................................................................... Heating/Refrigeration/Air Conditioning
Kevin Nehil ................................................................................................................................ History
Glenda Nielson .......................................................................................................................... Health Information Technology
Matthew Odell ........................................................................................................................ Chemistry
Bradley Olrich .......................................................................................................................... Art
Jenna Onwellier ......................................................................................................................... Nursing
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Chris Pellerito .......................................................................................................................... Speech
Daryl Phillips ............................................................................................................................. Psychology
Lloyd Phillips ............................................................................................................................ Psychology/Sociology
Susan Pletcher-Rood ................................................................................................................ Psychology
Justin Plevinski ....................................................................................................................... Computer Information Systems/Humanities/English
Cindy Poag .............................................................................................................................. Computer Information Systems/Business Information Systems
# PERSONNEL DIRECTORY

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# MTEC/SBTDC INSTRUCTORS

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<tr>
<td>Darlene Bishop</td>
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PERSONNEL DIRECTORY

Sharon Burch .................................................................................................................................................................................................. Phlebotomy
Shelley Davis ................................................................................................................................................................................................................... CNA
Annette Duby .............................................................................................................................................................................................................. Dialysis
Cindy Fillmore ........................................................................................................................................................................................................... Phlebotomy
D’Ann Fountain ........................................................................................................................................................................................................... Dialysis
Windy Govitz ........................................................................................................................................................................................................... CNA
Paulette Green ........................................................................................................................................................................................................ Phlebotomy
Arylea Rau ................................................................................................................................................................................................................. CNA
Al Sabourin ........................................................................................................................................................................................................ Phlebotomy
Terresa Slocum ........................................................................................................................................................................................................ Phlebotomy
Elizabeth Starr-Gepford ........................................................................................................................................................................................................... CNA
Darcy Straus ................................................................................................................................................................................................................. CNA
Robert Zelinski ........................................................................................................................................................................................................ Industrial Electrician Technician

SUPPORT STAFF

Mark Adsit ................................................................................................................................................................................................................. Part-time Custodian
Joseph Affholder ............................................................................................................................................................................................................. 2nd Shift Custodian
Dawn Alberts .............................................................................................................................................................................................................. Theatre Production Specialist
Kevin Allen ..................................................................................................................................................................................................................... Resource Team Academic Advisor
Lacey Anderson ........................................................................................................................................................................................................ Health Technologies Program Specialist
Karen Archamboult ........................................................................................................................................................................................................ Part-time Enrollment Resource Team
Lindsay Armstrong ........................................................................................................................................................................................................ Financial Aid Executive Secretary
Lois Aultman ........................................................................................................................................................................................................ Hospitality Assistant/Grill
Amy Austin ................................................................................................................................................................................................................ Custodian, Doan Center
Allen Ayers ........................................................................................................................................................................................................................ Maintenance
Nicole Barnes ................................................................................................................................................................................................................ Part-time ASC Test Monitor
Glenn Bechtel ................................................................................................................................................................................................................ Part-time Science Lab Technician
Dorothy Boge ................................................................................................................................................................................................................ Payroll Technician
Theresa Borawski ......................................................................................................................................................................................................... Retention Advisor
Lori Bowers ................................................................................................................................................................................................................ Computer Lab Technician
Phillip Brazier ............................................................................................................................................................................................................. 3rd Shift Custodian
Margaret Bronder ........................................................................................................................................................................................................ Part-time Academic Advisor
Martha Budd ............................................................................................................................................................................................................... Accounts Payable Specialist
Christina Burch ........................................................................................................................................................................................................... Executive Secretary/MTEC & BIDC
Jeremy Carrier ..................................................................................................................................................................................................................... Shipping & Receiving Specialist
Tonya Clayton ........................................................................................................................................................................................................ Administrative Assistant to Academic Deans
Leah Clark ................................................................................................................................................................................................................ Health, Math & Science Administrative Assistant
Peter DeRoche ........................................................................................................................................................................................................ Part-time Graphic Designer
Tena Diamond .................................................................................................................................................................................................................. Academic Advisor
Bradley Eckman ........................................................................................................................................................................................................ 3rd Shift Custodian
Anitra Eldred ................................................................................................................................................................................................................ 3rd Shift Custodian
Michael Evans ................................................................................................................................................................................................................ Resource Team Academic Advisor
Beth Fitzpatrick ............................................................................................................................................................................................................. Financial Aid Specialist
Carl Fouts ..................................................................................................................................................................................................................... 3rd Shift Custodian
Sarah Gariglio ........................................................................................................................................................................................................ Enrollment Clerk, Mt. Pleasant
Jonathan Graham ......................................................................................................................................................................................................... HVAC Technician
Ginger Gulick ................................................................................................................................................................................................................. Systems Technician
Sarah Hamilton .......................................................................................................................................................................................................... Bookstore Operations Assistant
Jeannette Heiser ........................................................................................................................................................................................................... ASC Test Monitor
Marsha Hovey ............................................................................................................................................................................................................... Executive Secretary, Financial Aid, Mt. Pleasant
Kaela Humm ................................................................................................................................................................................................................ Part-time Retention Advisor
Ronnie Jankoviak........................................................................................................................................................................................................ Media Assistant II
Sandy Jones ................................................................................................................................................................................................................ Biology Lab Technician
Charlotte Keel ............................................................................................................................................................................................................. Lead Custodian
Lana Kleinhhardt ........................................................................................................................................................................................................ Admissions Clerk, Mt. Pleasant
Rebecca Knickmeier ............................................................................................................................................. Academic Support/Media Specialist
James Kridler ................................................................................................................................................ Part-time International/Academic Advisor
Virginia Kridler .............................................................................................................................................. Resource Team Advisor
Frank Lefever .................................................................................................................................................... Science Lab Tech
Christopher Lobdell ........................................................................................................................................ Maintenance
Julie Lobdell ........................................................................................................................................................ Academic Support Center Specialist
Doug Manee ....................................................................................................................................................3rd Shift Custodian, Mt. Pleasant Campus
Cynthia Mussell .................................................................................................................................................. Administrative Specialist, College Advancement
Joseph Myers ................................................................................................................................................... Electrician Technician
Rebecca Nalevayko ........................................................................................................................................ Bookstore Operations Assistant
Sean O’Brien ................................................................................................................................................... Computer/Communication/AV Specialist, Mt. Pleasant Campus
Norma Owens .................................................................................................................................................. Administrative Assistant to Faculty
Christopher Payne ................................................................................................................................................ Hospitality-Grill
Tonia Persky ...................................................................................................................................................... Administrative Specialist for Academic Services
Hillary Phillips .................................................................................................................................................... Academic Advisor, Title III
Alyse Redman .................................................................................................................................................. Academic Advisor, Title III
Melissa Rohen .................................................................................................................................................. Library/Media Specialist
Christine Rowden ........................................................................................................................................ Part-time Retention Advisor
Ryan Robb ..................................................................................................................................................... Resource Team Academic Advisor
Karley Roy ..................................................................................................................................................... Enrollment Clerk
Janice Sagle ..................................................................................................................................................... Resource Team Academic Advisor
Robert Salowitz ........................................................................................................................................... Part-time Retention Advisor
Karen Sanders ................................................................................................................................................ Science Lab Technician
Constance Sanderson ...................................................................................................................................... Enrollment Clerk
Eric Sinicki .................................................................................................................................................... Part-time Evening Computer Lab Tech
Jennifer Slade .............................................................................................................................................. Admissions Specialist
William Spencer .......................................................................................................................................... Maintenance, Mt. Pleasant Campus
Cathy Starkweather ...................................................................................................................................... Food Service Cook
Rebecca Stein-Mindel ...................................................................................................................................... Cashier
Matt Todd ....................................................................................................................................................... HRA Lab Coordinator
Katherine Warren ........................................................................................................................................... Part-time Clinical Simulation Center Assistant
Robert Watters ............................................................................................................................................... 2nd Shift Custodian, Mt. Pleasant Campus
Rhonda Wezensky ........................................................................................................................................ Part-time Clinical Simulation Center Assistant
Deanna Yats .................................................................................................................................................. Part-time Bookstore Sales Clerk
Donald Zuker .................................................................................................................................................. 3rd Shift Custodian, Mt. Pleasant Campus
CURRICULUM CHANGES
FOR ACADEMIC YEAR 2011-2012

PROGRAM RESTRUCTURING

In order to streamline and better communicate the purpose of various degrees, the number of Associate Degrees and the number of categories of those degrees was reduced. Four categories of degrees remain: Associate in Arts, Associate in Science, Associate in Applied Science, and Associate in Nursing. Associate in Arts and Associate in Science are programs designed for students planning to transfer to a four-year institution; Associate in Applied Science and Associate in Nursing are designed for students planning to enter their occupational areas after completion of a two-year program.

THE FOLLOWING DEGREES WERE DEACTIVATED:

Associate in Baccalaureate Studies Degree
Associate in Business Administration
Associate in Science Degree: Biology
Associate in Science Degree: Chemistry
Associate in Arts Degree: Elementary Education - CMU
Associate in Fire Science Degree
Associate in General Studies Degree
Associate in Business Degree: Hospitality Management
Associate in Business Degree: Legal Secretary / Office Professional
Associate in Business Degree: Medical Secretary / Office Professional
Associate in Science Degree: Pre-Engineering
Associate in Arts Degree: Psychology
Associate in Arts Degree: Secondary Education - CMU
Associate in Arts Degree: Sociology
Associate in Arts Degree: Theatre
Associate in Nursing Degree Nursing Step-Up (LPN to RN)

THE FOLLOWING DEGREES WERE RETITLED WITH CHANGES TO PROGRAM CONTENT:

Associate in Applied Science Degree: Criminal Justice-Law Enforcement Transfer became Associate in Arts: Criminal Justice-Law Enforcement Transfer. Group II requirements were reduced from 15 credits of specified PSY and SOC coursework to 9 credits in at least two disciplines with three or more credits at the 200 level; Group V requirements were changed, from 18 credits of specific CJS courses to 15 credits of CJS elective coursework; elective credits were expanded from 3 credits to 8 credits.

Associate in Arts Degree: Arts became Associate in Liberal Studies Transfer. Group II requirements were changed to 9 credits from 12; Group III requirements were changed to 9 from 15 and a statement was added to explicitly require that at least three credits be at the 200 level; Group IV requirements were changed to 9 credits from 12; electives were expanded to 23 credits from 11 and expanded to include Group VIII for eligibility as elective credit.

Associate in Business Degree: Accounting became Associate in Applied Science: Accounting. MAT 116 requirement was changed to MAT 105.

Associate in Business Degree: Business Information Systems became Associate in Applied Science: Business Information Systems. Tracks of optional courses were added for students pursuing training in medical secretarial or legal secretarial occupations. BUS 153 was removed from the program.

Associate in Business Degree: Computer Information Systems – Programming and Associate in Business Degree: Computer Information Systems – Networking were consolidated into Associate in Applied Science: Computer Information Systems. Group II requirements were changed to MAT 105 from MAT 116; ACC 211 and CIS 203 were removed; CIS 132 was added; CIS 130 became an elective; and the Networking and Programming specific tracks were restructured with elective possibilities added.
Associate in Business Degree: Entrepreneurship – CMU became Associate in Arts: Business Studies Transfer. Group II requirements were changed to 9 credits from 8 credits with MAT 105 (or MAT 116), SCI 200, and 3 Group II elective credits (MAT 212 recommended); Group II requirements added ECO 202 as a requirement; Group V requirements were changed from specified courses to 13 credits of electives from ACC, BUS, BIS, and/or CIS; elective credits were reduced to 10 credits from 11 credits.

Associate in Business Degree: Small Business Management became Associate in Applied Science: Business. MAT 116 requirement was changed to MAT 105; BUS 122 and BUS 151 were added as requirements; ACC 251, ACC 252, BUS 250, and PSY 101 were reclassified from required courses to elective options; an elective requirement of 6 credits was added; BIS 140 was added to the list of courses eligible as electives.

Associate in Science: Science became Associate in Science: Math and Science Studies Transfer. The following requirements were removed: BIO 101, CHM 111, CHM 112, CIS 175, ECO 201, PHY 105/211, PHY 106/212, HUM 200, SSC 200, MAT 124/126. New Group II requirements called for MAT 105/212/or higher, 24 credits in Math and Science with at least 9 credits at the 200 level (excluding SCI 200). New Group III requirements called for 9 credits in at least two disciplines with at least 3 credits at the 200 level. New Group IV requirements called for 9 credits in at least two disciplines with at least three credits at the 200 level and no more than three credits in Fine Arts.

CHANGES TO PROGRAMS THAT MAINTAINED DEGREE TITLE

Associate in Applied Science Degree: Computer Aided Drafting & Design Technology added IND 140 to the list of elective choices.

Associate in Applied Science: Criminal Justice – Corrections reduced its Group III requirements from 15 credits with specified courses to 9 credits in two disciplines with at least three credits at the 200 level; two concentration tracks were included in the program; and an elective section of 8-14 credits was added.

Associate in Applied Science Degree: Graphic Design reclassified ART 210 from required to elective; elective credits were expanded from 3 to 6; new courses ART 246, ART 252, and ART 254 were added as eligible choices for elective credit.

Associate in Applied Science Degree: Health Information Technology replaced HIT 200 with HIT 201.

Associate in Arts Degree: Visual Arts increased Group IV requirements to 31 credits from 27 credits, including the addition of ART 241 and the increase in required ART electives from 15 to 18 credits with an expanded list of choices.

Certificate of Achievement: Business Information Systems replaced ACC 201 with BIS 127 as a program requirement.

Certificate of Achievement: Welding Technology replaced WLD 126 and 127 with WLD 125, and replaced WLD 150 with WLD 245.

Training Credential: Records Information Management Specialist changed the requirement for CIS 203 to either CIS 203 or BIS 136 and changed the requirement for CIS 205 to either CIS 205 or CIS 221.

THE FOLLOWING DEGREES WERE RETITLED WITHOUT CHANGES TO PROGRAM CONTENT:

Associate in Business Degree: Medical Transcriptionist became Associate in Applied Science Degree: BIS - Medical Transcription

Associate in General Technology Degree became Associate in Applied Science: General Technology

NEW PROGRAMS

Training Credential: Geothermal Technology

NEW COURSES

See course description section of the catalog for more information

ART 241, 255, 256, 247
ELT 217, 218, 219, 220, 221
HIT 201
HRA 251, 254, 261, 262, 263, and 265
**CHANGES IN EXISTING COURSES**

**ART 240** – prerequisites were changed from “ART 110, 130, 210, 215, 236, and 239” to “ART 110, 130, 205, 215, 236, and 239”

**BIO 110, 131, 135, 141, 201, 203, 215** – prerequisite changed from credit in BIO 101 to “BIO 101 with minimum grade of C”

**BIO 210** – prerequisite changed from “BIO 101 or a college course equivalent to BIO 101 or a minimum grade of B, within the past 3 years in a High School Advanced Placement Biology course” to “BIO 101 with a minimum grade of C, OR High School Advanced Placement Biology course, completed within the past 3 years, with a minimum grade of B”

**ENG 110** – the following was deleted from the course description: “Students who perform at an extremely high level throughout ENG 110 may be invited to submit a portfolio for ENG 111 Portfolio Assessment, potentially leading to credit in ENG 111.”

**CIS 225** – course title changed to “Database Systems” from “Database (Oracle)”

**DRF 105** – prerequisite was changed to read as follows: “DRF 101; IND 101 Recommended”

**PHT 106** – course title was changed to “Pharmaceutical Calculations” from “Pharmaceutical Calculations and Drug Preparation”.

**PHT 114** – course title was changed to “Pharmacology for Pharmacy Technicians”

**PHT 115** – course title was changed to “Pharmacy Technician Clinical” and changes were made to the description

**PTA 105** – aquatic therapy was removed from its course description and added to that of PTA 106

**PTA 140** – credit hours changed to 5.3 from 4.

**PTA 205 & 206** – PTA 130 & 131 are removed from the list of co-requisites.

**DEACTIVATED COURSES**

**WLD 127**

**BIS 130** (wherever BIS 130 appeared as a pre-requisite or program requirement, it was replaced by CIS 100)