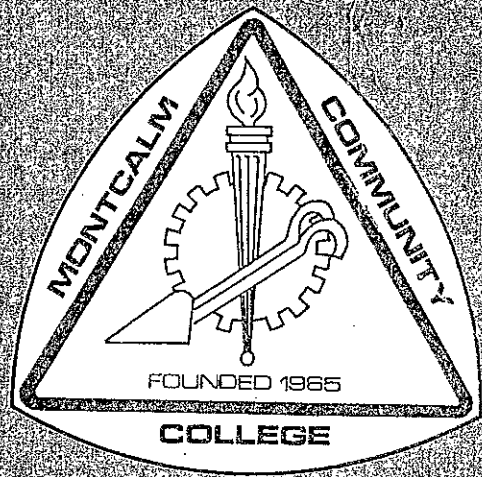


*Sally*

# 1988-89 Planning Guide



**montcalm community college**

**...helping you prepare for life**

## TABLE OF CONTENTS

### GENERAL INFORMATION

Admission to Montcalm Community College.....	1
Tuition and Fees.....	3
Financial Aid Information.....	5
Credit Acceptance Guidelines.....	9
Grading System.....	12
Information for Transfer Students.....	13
Multiple Degree Procedure.....	14

### PROGRAM PLANNING GUIDE (DEGREE PROGRAMS)

Associate Degree in Arts and Sciences.....	15
Art.....	16
Biological Sciences.....	17
Language Arts.....	18
Physical Education.....	19
Physical Sciences.....	20
Social Science.....	21

Associate Degree in Applied Arts and Sciences.....	22
1 Automotive Technology.....	23
Business Studies.....	25
2 Accounting	
3 Business Administration	
4 Small Business Development/Management	
5 Business Data Processing	
6 Criminal Justice-Corrections.....	29
7 Drafting Technology.....	30
8 Electronics Technology.....	31
9 Food Service Technology.....	32
10 Industrial Technology.....	33
11 Nursing (Level I and II).....	34
Nursing (Advanced Standing LPN).....	35
Office Education.....	36
12 Executive Secretary	
13 Information Processing	
14 Legal Secretary	
15 Medical Secretary	
16 Paralegal Studies.....	40
17 Radiologic Technology.....	41

Associate Degree in General Studies.....	42
--	----

PROGRAM PLANNING GUIDE (CERTIFICATE INFORMATION)

DIR

Certificate Information.....	43
16 Allied Health.....	44
10 Apprentice Training.....	45
Automotive Servicing.....	46
Small Business Development/Management.....	47
20 Child Development.....	48
2\ Cosmetology.....	49
Criminal Justice-Corrections.....	50
Drafting Technology.....	51
Electronics Technology.....	52
Food Service Technology.....	53
20 Machine Tool Operation.....	54
Nursing (Level I).....	55
Office Education.....	56
2\ Clerk Typist	
Information Processing	
2\ Legal Office Assistant	
Medical Office Assistant	
2\ Stenographer	
2\ Welding Technology.....	61

COL

COURSE CODE INDEX.....	62
------------------------	----

COURSE DESCRIPTIONS.....	64
--------------------------	----

Allied Health.....	65
Automotive Technology.....	68
Business Administration.....	72
Child Development.....	75
Consumer Education.....	76
Cosmetology.....	77
Criminal Justice.....	80
Data Processing.....	83
Electronics Technology.....	86
Food Service Technology.....	89
Foreign Language.....	91
Humanities.....	92
Industrial Technology.....	97
Language Arts.....	100
Mathematics.....	103
Natural Science.....	105
Nursing.....	108
Office Education.....	112
Physical Education.....	115
Paralegal Studies.....	119
Student Development.....	120
Social Sciences.....	123
Technical Drafting.....	126
Welding Technology.....	129
Directed Study.....	130

DIRECTORY OF PERSONNEL.....131

COLLEGE CALENDAR.....133

.. 43  
.. 44  
.. 45  
.. 46  
.. 47  
.. 48  
.. 49  
.. 50  
.. 51  
.. 52  
.. 53  
.. 54  
.. 55  
.. 56

. 61

. 62

. 64

. 65  
. 68  
. 72  
. 75  
. 76  
. 77  
. 80  
. 83  
. 86  
. 89  
. 91  
. 92  
. 97  
.100  
.103  
.105  
.108  
.112  
.115  
.119  
.120  
.123  
.126  
.129  
.130

## ADMISSION TO MONTCALM COMMUNITY COLLEGE

All applicants shall possess a high school diploma or, if over the age of 18 years, shall submit to an educational equivalency examination (GED).

In keeping with the "Open-Door Policy" of Montcalm Community College, exceptions may be made at the discretion of the Dean of Student Services.

### HOW TO APPLY FOR ADMISSION

1. Complete an application for admission to Montcalm Community College. Applications for admission are available by contacting the MCC Admissions Office or any local high school counseling office.
2. Submit the completed application for admission and the non-refundable \$5 application fee to:  
Admissions Office  
Montcalm Community College  
2800 College Drive  
Sidney, MI 48885-9746
3. Submit an official copy of complete high school transcripts or GED results to the MCC Admissions Office. Students who have attended other post-secondary educational institutions must also submit an official transcript from all other institutions.

Students are responsible for providing MCC with the above information. If a student fails to provide or falsifies this information, he/she will not be allowed to register for classes until MCC receives the necessary information or other arrangements have been made with the Dean of Student Services. Questions regarding the admissions procedure should be directed to the MCC Admissions Office at (517) 328-2111, extension 228, or the local high school counselors.

### GUEST APPLICATION

A guest applicant is a student who is currently enrolled in a program at another college or university, and who wishes to complete a course at MCC as part of that program. Guest applicants may complete the regular application procedure, or complete a Guest Application Form, and receive permission to attend MCC. Guest Application Forms are usually available at the Records Office of the student's home college or university. A student may not attend as a guest for two consecutive semesters. MCC students may wish to use the guest application form to attend a college other than MCC for one semester.

### FORMER STUDENTS

MCC extends a continuous matriculation to all students in good standing with the College. Former students need to contact the Admissions Office to update their personal file and reactivate their registration status.

Dismissed students must re-apply through the Dean of Student Services Office.

**POLICY AGAINST DISCRIMINATION**

It is the policy of MCC that no person shall--on the basis of sex, race, religion, color, national origin, age, or handicap--be excluded from participation in, be denied the benefits of, or be subjected to discrimination in any of its programs or activities.

Mr. James Lantz is the college EEO Officer/Title IX - Section 504 coordinator. His office is located in the Library/Administration Building - telephone 517-328-2111, extension 220.

## TUITION AND FEES

### RESIDENTS OF MONTCALM COMMUNITY COLLEGE DISTRICT

Tuition

\$25.00 per credit hour

Fees \$1 per credit hour to a maximum of

\$12.00 per semester

(Resident of MCC district - lives within one of the public school districts of Carson City, Central Montcalm, Greenville, Lakeview, Montabella, Tri-County, and Vestaburg.)

### MICHIGAN NON-DISTRICT RESIDENTS

Tuition

\$37.50 per credit hour

Fees \$1 per credit hour to a maximum of

\$12.00 per semester

### CUT-OF-STATE RESIDENTS

Tuition

\$41.00 per credit hour

Fees \$1 per credit hour to a maximum of

\$12.00 per semester

### OTHER FEES

\*Justify No

\$5

Application for Admission (paid only once)

\$5

Late Registration Fee

\$5 (per contact hour)\*

Laboratory Fee

\*A course with a required laboratory will cost an additional \$5 per student contact hour over and above the assessed credit hours charged for the course. For example: NUR102, 7 credits with 11 laboratory hours, the student will be charged for 7 credit hours and 11 additional contact hours. In-district student-7 credit hours x \$25 + 11 additional contact hours x \$5 = \$230.

PAYMENT OF TUITION AND FEES

1. Tuition and fees are due and payable at the time of registration.
2. The College will accept Visa and Mastercard credit cards.
3. Students who receive financial aid through the College Grant Programs shall present to the cashier a form from the Financial Aid Office to complete their enrollment. Any difference in aid and total tuition will be payable at the time of registration. If financial aid is not forthcoming, the balance will be due at the time of notification. No refunds after the drop and add deadline.
4. Short-term credit will be available upon application at least 10 days prior to the start of classes. Credit references will be required. Processing shall be completed by the end of the drop/add period. If credit cannot be authorized by that date, the applicant will be required to drop all classes. Down payment will be refunded.

CREDIT TERMS

\$ 1-\$150	Paid in full
\$151-\$200	50% down - balance 30 days plus \$5 handling fee
\$201-\$500	60% down - 50% of balance 30 days Total 60 days plus \$10 handling fee

5. Failure to pay as scheduled will result in the withholding of grades, certificates, and degrees. Graduating students will not be allowed to participate in graduation ceremonies.
6. Collection processes will be initiated for failure to pay.

**NO OTHER CREDIT ARRANGEMENTS CAN BE MADE THROUGH THE COLLEGE**



## FINANCIAL AID INFORMATION

Montcalm Community College strives to make a college education possible for all qualified students. Financial aid is available in a variety of forms: scholarships, loans, grants, and work-study jobs that supplement the cost of your college education.

### HOW TO APPLY FOR AID

To be considered for financial aid, students must file a Financial Aid Form (FAF). It will then be processed by the College Scholarship Service. Timing of the application is important. Students may apply for aid after January 1, and after the student or his/her parents have completed their income tax return for the past calendar year.

By completing the FAF, students will be considered for several types of financial aid. However, students may apply only for a Pell Grant by submitting just a Pell Grant application.

The Pell Grant application and the Financial Aid Form are available at MCC's Financial Aid Office or the high school guidance office.

### MCC SCHOLARSHIPS

Montcalm Community College offers several scholarships each year to area high school students. Specific details about the following scholarships may be obtained from the high school counselor or MCC Financial Aid Office.

1. Board of Trustees (in-district) - two scholarships per area high school are available. These are given to students who have attained a "B" average in high school. Recipients could receive up to full tuition and fees.
2. Board of Trustees (out-district) - seven scholarships are available. These are given to students who have attained a "B" average in high school. Recipients could receive up to full tuition and fees.
3. Area High School Grants - two grants per area high school are available. Students who are recommended must apply for a Pell Grant. If ineligible for Pell, recipients could receive up to full tuition and fees from MCC.
4. Performing Arts/Music Stipend - fifteen stipends are available to students who perform in choir and band. Recipients could receive up to full tuition and fees.
5. Adult High School Completion - two scholarships are available to each high school completion program. Scholarships will cover 7 credit hours of tuition and fees (in-district rate).
6. Outstanding Achievement Awards - five awards will be available to students who have excelled in a specific area in high school. Recipients could receive up to full tuition and fees.

7. MCC Adult Scholarships - five scholarships will be available to new students over the age of 21. The amount will be \$200 per semester.
8. Scholarships for High School Seniors - scholarships for three (3) MCC classes, tuition and fee free (limited to the in-district rate), may be available to students who have completed their junior year of high school with at least a B average. These courses must be taken during their senior year.
9. Scholarships for Adult High School Seniors - scholarships for three (3) MCC classes, tuition and fee free (limited to the in-district rate), may be available to students who have achieved senior status, have at least a B average, and are currently enrolled in the last quarter of their adult high school completion program. These courses must be taken during their senior year.
10. Over-60 Scholarships - tuition scholarships are available to persons age 60 or older.
11. MCC Foundation Scholarship (in-district) - one \$1000 scholarship will be available annually to students entering directly from high school with a grade point average of 3.00 (B) or better and who declare a major in mathematics and/or science.
12. James Crosby Memorial Scholarship - one \$1000 scholarship will be available annually to a sophomore student with a grade point average of 3.00 (B) or better and who has a letter of support from 4-H Leaders' Council.

There are also several local scholarships available each year. More information can be obtained from the Financial Aid Office.

#### STATE AID PROGRAMS

##### GUARANTEED STUDENT LOAN

Under this program, students may borrow up to \$2,625 per academic grade level. This loan bears an 8% interest rate. Applications for this loan are available at many local banks and credit unions.

##### STATE DIRECT STUDENT LOAN

Students unable to obtain a Guaranteed Student Loan from a private lender may be eligible for a State Direct Loan. Students may borrow up to \$2,625 per academic level. Students may obtain a Direct Loan application kit from the Financial Aid Office.

##### MICHIGAN COMPETITIVE SCHOLARSHIP

The State Scholarship program currently measures academic potential on the basis of the National ACT Exam. Eligible applicants may receive up to the amount of demonstrated need or the amount of tuition, whichever is less. Students must be Michigan residents. For more information, students may contact their high school counselor or the Financial Aid Office.

### SINGLE PARENT/HOMEMAKER PROGRAM

The Single Parent/Homemaker Program was made possible through a grant provided by the Vocational Educational Department of the State of Michigan. This program is designed to assist students who are enrolled in a vocational program and who are single parent/homemakers or non-traditional job trainees.

Students applying must meet several eligibility criteria. Currently, MCC is able to provide tuition assistance to eligible students. Applications may be obtained from the Financial Aid Office.

### MICHIGAN ADULT PART-TIME GRANT PROGRAM

The Michigan Adult Part-Time Grant Program is designed to provide grant assistance for needy adults who enroll at approved public or private degree-granting Michigan colleges on a part-time basis. Grants of up to \$600 per year are available for not more than two years of study.

### MICHIGAN EDUCATIONAL OPPORTUNITY GRANT PROGRAM

The Michigan Educational Opportunity Grant Program is designed to provide grant assistance for needy undergraduates who are enrolled on at least a half-time basis at public, Michigan colleges and universities. Grants of up to \$1000 per year are available under this program.

### MICHIGAN WORK-STUDY PROGRAM

The Michigan Work-Study Program is designed to provide work opportunities for needy, undergraduate students who enroll at approved public or private degree-granting, Michigan colleges on a full or part-time basis. Both non-profit and profit-based employers may sign agreements with Michigan colleges to participate in this program.

### MICHIGAN AUXILIARY LOAN (PLUS) PROGRAM

Parents may borrow for their dependent children and independent undergraduate and graduate students may borrow for themselves for study at eligible schools. Requests for application forms may be made through participating Michigan lenders (banks, savings and loan associations, and credit unions).

### SUPPLEMENTAL LOANS FOR STUDENTS (SLS)

Independent students, who attend an eligible college at least half-time, may borrow up to \$4,000 per academic year. These loans are normally sought by students who have exhausted eligibility for other financial aid programs. Interest rates are set annually at a variable rate. Applications are available from participating banks, credit unions, or savings and loan associations.

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FEDERAL AID PROGRAMS

PELL GRANT

The Pell Grant is available on the basis of demonstrated financial need. It is for undergraduate students who are attending eligible vocational schools or colleges on at least a half-time basis. These grants are based on the cost of attendance at the institution and do not exceed 50% of the cost of education. To be considered, students may file a Pell Grant application or a Financial Aid Form (FAF).

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT

These are limited funds available to students who demonstrate financial need. These grants can be up to \$2,000 per academic year. To be considered for this grant, students must file a Financial Aid Form (FAF).

PERKINS LOAN PROGRAM

(Formerly known as the National Direct Student Loan Program (NDSL).) These loans are available to students who demonstrate financial need. These loans bear a 5% interest rate and allow the student a nine month grace period before repayment begins. Students can borrow up to \$3,000 for two years of undergraduate work. To be considered, students must file a Financial Aid Form (FAF).

COLLEGE WORK-STUDY PROGRAM

This financial aid is in the form of a part-time job on the college campus. It is available to students enrolled at least half-time and who demonstrate financial need. Preference is given to students who have the greatest financial need. Students can work up to 20 hours per week. To be considered, students must file a Financial Aid Form (FAF).

MONTCALM COMMUNITY COLLEGE  
CREDIT ACCEPTANCE GUIDELINES

3.

Students enrolled at Montcalm Community College for the first time either as first semester freshmen or as first or second year transfer students may wish to have coursework taken at other institutions evaluated for MCC credit. While not all coursework will be automatically accepted, in many instances it can be used to satisfy MCC course requirements or applied toward completion of the associate degree or certificate as elective credit.

A maximum of 36 credit hours may be transferred into Montcalm Community College. In order to receive an Associate Degree, a student must earn a minimum of 24 credit hours at Montcalm Community College. In the case of certificate programs, a minimum of fifty percent (50%) of the credits required for the certificate must be earned at MCC.

Moreover, students who intend to graduate from Montcalm Community College must be enrolled at the College during their final semester prior to receiving a degree or certificate.

Described below are guidelines for the acceptance of credit from other colleges or universities and for earning credit in non-traditional ways. In order for a student to qualify, he/she must make formal application to the College and be an enrolled student. More detailed information is available from the Admissions Office (or from the appropriate instructional administrator).

4.

1. Transfer Credit from Accredited Institutions of Higher Learning

Courses taken at other colleges or universities in which a student has earned a "C" grade or better may be transferred to Montcalm Community College.

For more information on transfer credit please refer to the Student Handbook.

2. Credit for Correspondence Courses

Generally credit will not be granted by MCC for correspondence coursework. Exceptions are limited to United States Armed Forces Instruction courses and courses from regionally accredited institutions of higher learning.

5.

Procedure: In order to qualify for correspondence credit a student must forward official transcripts to the Registrar's Office. The transcripts will be evaluated by the appropriate instructional administrator. A fee of \$5.00 will be charged for each credit granted.

3. Credit or Waiver by Examination

MCC recognizes that many of its students come to college with a wealth of practical experience. Often that experience is equivalent to knowledge that would be gained through coursework. To take a course in that field may be needless repetition.

If a student wishes to receive a waiver or credit for a course in which he/she feels competent and for which an exam is offered he/she may opt for "credit or waiver by examination".

- a. For credit: after enrolling in the course and successfully completing the exam the student will be awarded full credit for the course. An "S" grade will be awarded.
- b. For waiver: upon successful completion of the exam, the requirement for taking that course will be waived. An examination fee of \$5.00 per credit hour will be charged.

This option is available for a specific course only once and is not available for a course in which a student has already received a grade.

4. C.L.E.P. (College Level Examination Program) Credit

Students enrolled at MCC who have taken part in the College Level Examination Program (CLEP) and who have ranked in the 50th percentile or higher on a Subject Area test may request a waiver of specific course requirements or have course credit granted. If the waiver is applied, the student will not have to take the corresponding MCC course but will be required to take the equivalent credit hours in other MCC course work. For those students who wish to have specific course credits granted for the CLEP exams a fee of \$5.00 per credit hour will be charged for each credit granted. A maximum of 14 credits may be earned in this fashion.

Procedure: To qualify for CLEP credit a student must supply to the Registrar's Office an official transcript of the test results. The appropriate instructional administrator will then evaluate the examination results for credit. CLEP credit will be noted on the transcript.

5. Articulation Credits

MCC recognizes that some coursework completed in high school may be equivalent to basic courses offered at the college. Written agreements to grant college credit for high school courses have been reached with several school districts in respect to specific programs.

The conditions for receiving such credit are that the student:

1. has maintained a "B" average in high school course(s) under consideration; and
2. has received a written recommendation from the appropriate high school instructor.

Credit will be granted when the student has completed six (6) hours of MCC coursework with a "C" average in the discipline for which college credit is being granted. There will be no charge for the credit hours granted. To take advantage of this opportunity a student must enroll at MCC, take the appropriate courses no later than the beginning of the third year following high school graduation, and formally request credit. Finally, credit will be awarded through notation (no grade will be given) upon completion of the requirements. A maximum of nine (9) hours can be earned in this way.

Procedure: To qualify for articulation credits the student must submit the required forms to the Registrar's Office. When the coursework at MCC has been completed, he/she must then notify the appropriate instructional administrator.

6. Credit for Training Program

A. Armed Services Training

1. Students who have successfully completed Military Basic Training will be granted up to four credit hours of Physical Education credit provided they:
  - a. formally request credit for Physical Education;
  - b. submit to the Registrar "Form DD214" indicating the successful completion of "Basic Training"

B. Other Training Programs

2. Students who have successfully completed military coursework may receive transfer credit upon application according to the appropriate ACE guide. The MOS number is, by itself, not recognized for transfer credit. A fee of \$5.00 will be charged for each credit granted.

Students who have successfully completed courses outlined in The National Guide (ACE) may receive transfer credit. A fee of \$5.00 will be charged for each credit granted.

Procedure: In order to earn credit for training or military coursework, a student must forward official transcripts to the Registrar's Office. The transcripts will be evaluated for credit by the appropriate instructional administrator.

## GRADING SYSTEM

Academic achievement will be appraised and recorded by means of the following system of letter grades:

<u>GRADE</u>	<u>HONOR POINT VALUE</u>
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	.7
E	Failure
WP	Withdrew while passing
WF	Withdrew while failing
I	Incomplete (see note below)
V	Audit (see note below)
*S	Satisfactory completion
*U	Unsatisfactory

**NOTE:** Incomplete Grades - The "I" grade will be employed sparingly. It will be awarded in the case where a student has found it impossible to complete required coursework by the close of a semester for reasons beyond the student's control. It is an indication by the instructor of his belief that the student will receive a passing grade when the requirements have been fulfilled. Upon mutual written agreement (Incomplete Form) between student and instructor, the following procedure will be observed:

1. An incomplete (I) grade shall be entered on a student's record when a course is incomplete at the termination of the scheduled semester.
2. When the student has completed the course requirements, the instructor will notify the Registrar of the final grade. If no grade change has been received by the Registrar by the expected date of completion, the "I" will be changed to the final grade indicated on the incomplete contract for non-completion.
3. An "I" grade shall not be computed with other grades to establish a grade point average (GPA).
4. If a student receives an "I" grade in a course(s) while receiving veterans benefits, the coursework must be completed within one year or the student will be required to repay benefits received for that course.

**NOTE:** Audit - applies to the situation where a person pays tuition for a course but is not required to complete assignments or examinations. No credit is given for auditing a class.

\*"S" (satisfactory completion) and "U" (unsatisfactory completion) grades will be used only for the following courses: SD150, SD151, SD152, SD153, SD156, SD160, SD161, SD162, SD163, SD170, SD175, NUR117, and those courses for which competency exams are submitted. SD145 approved 3/15/88



**INFORMATION FOR TRANSFER STUDENTS**  
**STATEWIDE COLLEGE AND UNIVERSITY ARTICULATION AGREEMENT**

The Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO) Transfer Agreement was established to improve transfer student articulation between two-year and four-year colleges in Michigan. MCC is a participant in this agreement with the following Michigan four-year institutions:

Adrian College	Lawrence Institute of Technology
Albion College	Madonna College
Alma College	Michigan Christian College
Aquinas College	Michigan State University
Baker College	Michigan Technological University
Calvin College	Muskegon Business College
Central Michigan University	Nazareth College
Cleary College	Northern Michigan University
Davenport College	Northwood Institute
Detroit College of Business	Oakland University
Eastern Michigan University	Olivet College
Ferris State University	Sienna Heights College
General Motors Institute	Spring Arbor College
Grand Valley State University	St. Mary's College
Hope College	Western Michigan University
Kalamazoo College	
Lake Superior State University	

This agreement provides that a student who completes the Associate Degree in Arts and Sciences at MCC and who is accepted as a transfer student by one of these schools will have satisfied the basic general education requirements of that four-year college. The specific requirements of the MACRAO agreement are:

1. English Composition	6 Semester Hours	or	9 Quarter Hours
2. Humanities	8 Semester Hours	or	12 Quarter Hours
3. Social Sciences	8 Semester Hours	or	12 Quarter Hours
4. Natural Sciences	8 Semester Hours	or	12 Quarter Hours

**QUESTIONS:** Which courses does MCC require? Which courses do four-year colleges recommend that a transfer student take at the community college level? Which electives are most useful in a given specialized field of study?

**ANSWERS:** The following page contains information about several concentrations of study (majors) which one might pursue in the completion of a baccalaureate degree at a four-year college. SEE AN MCC COUNSELOR for more details about this **IMPORTANT PLANNING!** The information provided here will change as four-year institutions change their degree requirements. You SHOULD CONTACT the admissions office at the four-year college or university which you expect to attend (as soon as possible after beginning at MCC).

This information cannot be considered as an agreement or contract between the individual student and Montcalm Community College or its staff.

MCC offers students a variety of degree programs from which to choose:

- Associate Degree in Arts and Sciences (MACRAO Transfer)
- Associate Degree in Applied Arts and Sciences
- Associate Degree in General Studies

#### MULTIPLE DEGREE PROCEDURE

A student may earn all three of MCC's degrees if he/she meets the requirements for those degrees. However, if a student has already received (or is receiving) an AAS or an AAAS degree, he/she may not apply for an Associate Degree in General Studies.

To receive an Applied Arts and Science degree a student must complete the degree requirements for that program. The completion of a certificate program coupled with general education courses is not sufficient to qualify for an AAAS degree.

Students may receive more than one AAAS degree if they fulfill the requirements specified by the department. However, a student may earn only one AAAS degree within a department (e.g. Business Studies, including Business Data Processing, and Office Education). Students may complete more than one area of concentration within a department. Each area of concentration will be noted on the degree. While a second degree will not be granted, an area of concentration completed after the AAAS degree is issued will be noted on the transcript.

#### INFORMATION FOR APPLIED ARTS AND SCIENCES DEGREES

The certificate and degree programs listed on pages 23 through 41 are designed for students who wish to complete a specialized training education before entering the job market. Students planning to transfer to a four-year (senior) college or university should consult with a counselor to determine whether it is best to select courses other than those listed herein, in order to maximize transferability of credits to upper level colleges and universities.

This document was prepared on December 1, 1987 and is subject to change without prior notice and therefore cannot be considered as an agreement or contract between the individual student and Montcalm Community College or its staff.

DEGREE PROGRAMS

ASSOCIATE DEGREE IN ARTS AND SCIENCES

Art  
 Biological Sciences  
 Language Arts  
 Physical Education  
 Physical Sciences  
 Social Sciences

GUIDELINES FOR DEGREE IN ARTS AND SCIENCES (MACRAO TRANSFER)  
 THIS DEGREE OUTLINE MEETS MACRAO TRANSFER GUIDENLINES

RECOMMENDED BUT NOT LIMITED TO: ART, BIOLOGICAL SCIENCES, LANGUAGE ARTS, PHYSICAL EDUCATION, PHYSICAL SCIENCES, SOCIAL SCIENCES

	<u>COURSE TITLES</u>	<u>COURSE NUMBERS</u>	<u>CREDIT HOURS</u>
LA	Freshman English I	LA100	3
	Freshman English II*	LA101	3
HU	Humanities I	HU200	4
	Humanities II	HU201	4
NS	Biological Science**	NS100	4
	Physical Science**	NS101	4
SS	Intro to Social Science I	SS110	4
	Intro to Social Science II*** SS111		4
		TOTAL REQUIRED HOURS	30
		TOTAL ELECTIVE HOURS	30
		TOTAL FOR DEGREE	60

- \* OR (having earned B+ or better in LA100) any other language arts courses except speech or drama
- \*\* OR (with sufficient science background) any other TWO science laboratory courses
- \*\*\* OR any other TWO social science courses

ELECTIVE HOURS SHOULD REFLECT A MAJOR OR MINOR FIELD OF STUDY

SPECIFIC PROGRAM OUTLINES ARE FOUND ON PAGE 16 THROUGH 21

**ART**  
**ARTS AND SCIENCES**  
**ASSOCIATE DEGREE PROGRAM**

This program in the liberal arts leads to an Associate Degree in Arts and Sciences with an emphasis in art. The objective of this program is to provide the background and skills necessary to continue study in the field of the visual arts. With the course load indicated below, a student can complete this 60 credit hour degree in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Intro to Social Science I	SS110	4
Intro to Art	HU120	2
Drawing I or Sketching	HU122	3
Painting I	HU125	3

**SPRING SEMESTER**

Freshman English II*	LA101	3
Intro to Social Science II*	SS111	4
Drawing II	HU123	3
Painting II	HU126	3
Elective		3-4

**SECOND YEAR**

**FALL SEMESTER**

Humanities I	HU200	4
Biological Science	NS100	4
Ceramics I	HU130	3
Painting III	HU227	3
Art "Teaching Courses"		1-3
Elective		

**SPRING SEMESTER**

Humanities II	HU201	4
Physical Science	NS101	4
Ceramics II	HU131	3
Painting IV	HU228	4
Art "Teaching Courses"		1-3
Elective		

**SUGGESTED ELECTIVES:**

History  
 Philosophy  
 Literature

\*See alternatives listed under requirements for the Associate Degree in Arts and Sciences

**BIOLOGICAL SCIENCES  
ARTS AND SCIENCES  
ASSOCIATE DEGREE PROGRAM**

This program in the liberal arts leads to an Associate Degree in Arts and Sciences with an emphasis in biology. The objective of this program is to provide the background and skills necessary to continue study in the field of biological science. With the course load indicated below, a student can complete this 60 credit hour degree in two years.

**FIRST YEAR**

<u>FALL SEMESTER</u>		<u>SPRING SEMESTER</u>	
Freshman English I	LA100 3	Freshman English II*	LA101 3
College Chemistry I	NS220 4	College Chemistry II	NS221 4
Botany	NS110 4	Zoology	NS115 4
Math Elective	3	Math Elective	3

**SECOND YEAR**

<u>FALL SEMESTER</u>		<u>SPRING SEMESTER</u>	
Humanities I	HU200 4	Humanities II	HU201 4
Intro to Social Science I	SS110 4	Intro to Social Science II*	SS111 4
Anatomy and Physiology I	NS103 4	Anatomy and Physiology II	NS203 4
Science Elective	4	Science Elective	4

**SCIENCE ELECTIVES**

Microbiology	NS201
Intro to Physics I & II	NS230/231
Earth Science	NS102
Environmental Geography	NS120

**MATH ELECTIVES**

Intermediate Algebra	MA104
Trigonometry	MA102
College Algebra	MA159
Analytic Geometry	MA160

\*See alternatives listed under requirements for the Associate Degree in Arts and Sciences

**LANGUAGE ARTS  
ARTS AND SCIENCES  
ASSOCIATE DEGREE PROGRAM**

This program in the liberal arts leads to an Associate Degree in Arts and Sciences with an emphasis in the language arts. The objective of this program is to provide the background and skills necessary to continue study in the field of language arts (literature, speech, communications). With the course load indicated below, a student can complete this 60 credit hour degree in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Intro to Social Science I	SS110	4
American Thought & Lit I	LA200	3
Speech	LA210	3
Elective		3

**SPRING SEMESTER**

Freshman English II*	LA101	3
Intro to Social Science II*	SS111	4
American Thought & Lit II	LA201	3
Elective		3
Elective		3

**SECOND YEAR**

**FALL SEMESTER**

Humanities I	HU200	4
English Literature I	LA220	3
Biological Science	NS100	4
Elective		3

**SPRING SEMESTER**

Humanities II	HU201	4
English Literature II	LA221	3
Physical Science	NS101	4
Elective		3

**LITERATURE ELECTIVES:**

Short Story	LA230
Children's Literature	LA235
The Novel	LA240
Drama as Literature	LA260
Drama as a Performing Art	LA261
Poetry	LA270

**OTHER ELECTIVES:**

U.S. History to 1865	SS250
U.S. History since 1865	SS251
Michigan History	SS255
General Psychology	SS220
Economics	SS215
Intro to Philosophy	HU220

\*See alternatives listed under requirements for the Associate Degree in Arts and Sciences

**PHYSICAL EDUCATION  
ARTS AND SCIENCES  
ASSOCIATE DEGREE PROGRAM**

This is a program in liberal arts leading to an Associate Degree in Arts and Sciences with an emphasis in physical education. The objective of this program is to provide the background and skills necessary to continue study toward possible majors in secondary education with a minor in coaching; plus physical education and sport curriculum leading to employment in general recreation areas or therapeutic recreation; business; TV production; or health services management. With the course load indicated below, a student can complete this 60 hour degree in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Intro to Social Science I	SS110	4
Biological Science	NS100	4
Intermediate Algebra	MA104	3
Personalized Body Cond. or Intro to Physical Fit	PE103	1
	PE110	1

**SPRING SEMESTER**

Freshman English II*	LA101	3
Intro to Social Science II*	SS111	4
Speech	LA210	3
Sports Fundamentals	PE105	1
Electives		3-4

**SECOND YEAR**

**FALL SEMESTER**

College Chemistry	NS220	4
Anatomy & Physiology I	NS103	4
Humanities I	HU200	4
Sports Officiating	PE121	1
Beginning Swimming	PE130	1
Elective		

**SPRING SEMESTER**

General Psychology	SS220	3
Anatomy & Physiology II	NS203	4
Humanities II	HU201	4
Emergency Health Care	PE205	2
Elective		3-4

It is a requirement that all students taking Physical Education courses submit evidence of physical fitness from their doctor to Montcalm Community College. This form will be placed in the student's file and kept on record for one year.

CMU's PED designated courses are subject to a limitation of six hours toward curriculum requirements for graduation.

**SUGGESTED ELECTIVES**

Introduction to Business	BA135
Principles of Marketing	BA233
Small Business Management	BA235
Management	BA237
Intro to Data Process & Programming	DP110
Introduction to BASIC	DP112

\*See alternatives listed under requirements for the Associate Degree in Arts and Sciences

**PHYSICAL SCIENCES  
ARTS AND SCIENCES  
ASSOCIATE DEGREE PROGRAM**

This program in the liberal arts leads to an Associate Degree in Arts and Sciences with an emphasis in the physical sciences. The objective of this program is to provide the background and skills necessary to continue study in the field of physical science (physics and chemistry). With the course load indicated below, a student can complete this 60 credit hour degree in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
College Chemistry I	NS220	4
Intro to College Physics I	NS111	4
College Algebra	MA159	3

**SPRING SEMESTER**

Freshman English II*	LA101	3
College Chemistry II	NS221	4
Intro to College Physics II	NS112	4
Analytic Geometry	MA160	3

**SECOND YEAR**

**FALL SEMESTER**

Humanities	HU200	4
Intro to Social Science I	SS110	4
Calculus I	MA250	4
Elective		3-4

**SPRING SEMESTER**

Humanities II	HU201	4
Intro to Social Science II*	SS111	4
Calculus II	MA251	4
Elective		3-4

**SCIENCE ELECTIVES:**

Biological Science	NS100
Earth Science	NS102
Botany	NS110
Zoology	NS115
Environmental Geography	NS120
Nature Study	NS208

\*See alternatives listed under requirements for the Associate Degree in Arts and Sciences



SOCIAL SCIENCE  
ARTS AND SCIENCES  
ASSOCIATE DEGREE PROGRAM

This program in the liberal arts leads to an Associate Degree in Arts and Sciences with an emphasis in the social sciences. The objective of this program is to provide the background and skills necessary to continue study in the field of social science. With the course load indicated below, a student can complete this 60 credit hour degree in two years.

FIRST YEAR

FALL SEMESTER

Freshman English I	LA100	3
Intro to Social Science I	SS110	4
U.S. History to 1865	SS250	3
Sociology	SS230	3

SPRING SEMESTER

Freshman English II*	LA101	3
Intro to Social Science II*	SS111	4
U.S. History since 1865	SS251	3
Social Problems	SS235	3

SECOND YEAR

FALL SEMESTER

Humanities I	HU200	4
General Psychology	SS220	3
Cultural Anthropology	SS260	3
Biological Science	NS100	4

SPRING SEMESTER

Humanities II	HU201	4
Child Psychology	SS221	3
Principles of Economics	SS215	3
Physical Science	NS101	4

SUGGESTED ELECTIVES

Michigan History	SS255
Speech	LA210
American Literature	LA200/LA201
Math	MA104
Intro to Philosophy	HU220
Foreign Language	FL

\*See alternatives listed under requirements for the Associate Degree in Arts and Sciences

DEGREE PROGRAMS

ASSOCIATE DEGREE IN APPLIED ARTS AND SCIENCES

- Automotive Technology
- Business Data Processing
- Business Studies
  - Accounting
  - Business Administration
  - Small Business Development/Management
- Cosmetology
- Criminal Justice
- Drafting Technology
- Electronics Technology
- Food Service Technology
- Nursing
- Office Education
  - Executive Secretary
  - Information Processing
  - Legal Secretary
  - Medical Secretary
- Paralegal Studies
- Radiological Technology (1+1 Agreement)

GUIDELINES FOR DEGREE IN APPLIED ARTS AND SCIENCES

	<u>COURSE TITLES</u>	<u>COURSE NUMBER</u>	<u>CREDIT HOURS</u>
LA	Freshman English I	LA100	3
	Freshman English II*	LA101	3
SS	Intro to Social Science I	SS110	4
	Intro to Social Science <u>II**</u>	SS111	4 or 3
	or Biological Science or Physical Science	NS100 or NS101	
	or Humanities I or Humanities II	HU200 or HU201	
	or any other Social Science course		
		LIBERAL ARTS REQUIRED HOURS	14 or 13
		PROGRAM REQUIREMENTS (See specific program description)	
		TOTAL FOR DEGREE	60+

*no note at bottom*

\* OR (having earned B+ or better in LA100) any language arts courses except speech or drama

NOTE: Nursing students see page 42 for degree requirements

SPECIFIC PROGRAM OUTLINES ARE FOUND ON PAGE 23 THROUGH 41

**AUTOMOTIVE TECHNOLOGY**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

This program is designed to give the technical student basic preparation in several automotive subjects of her or his choice. It also allows the student to select certain support courses which best fill individual needs for transfer or direct work applications. Instructor or counselor help is strongly recommended in making these selections. A graduate may seek higher degrees in business, engineering, marketing, or teaching and/or seek employment in automotive maintenance, manufacturing, field service, or sales positions. A minimum of 60 credit hours is required.

**REQUIRED COURSES: (23 CREDITS)**

Freshman English I	LA100	3	Elementary Algebra	MA100	3
*Freshman English II	LA101	3	Concepts in Electricity	EL100	3
Intro to Social Science I	SS110	4	Basic Fluid Power	IT253	3
*Intro to Social Science II	SS111	4			

**AUTOMOTIVE REQUIREMENTS**

(29 CREDITS--NO MORE THAN 31 WILL APPLY TO THE DEGREE)

Students may select from any of the AM courses available, except AM114, AM118, AM160, and AM164. Prerequisites must be satisfied. Instructor assistance is recommended.

**ELECTIVES**

Students must select from the groups listed below, provided all prerequisites are satisfied. Instructor or counselor assistance is recommended.

BA-Business Administration	IT-Industrial Technology	OE-Office Education
DP-Data Processing	LA-Language Arts	SS-Social Science
EL-Electricity/Electronics	MA-Mathematics	TD-Technical Drafting
FL-Foreign Language	NS-Natural Science	WE-Welding
HU-Humanities		

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

A CERTIFICATE PROGRAM IN THE AUTOMOTIVE AREA IS ALSO AVAILABLE SEE PAGE 46

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## LICENSES AND CERTIFICATION

Professional auto service technicians are required to hold a state license with certifications appropriate to their work. There are eight certification areas; each has its own test. National ASE tests and certificates are also available in these same subjects, and are accepted by most states in place of their own. Many employers prefer to hire ASE licensed technicians. MCC offers coursework, both theoretical and practical, which prepares students to pass tests in either series.

Listed below are the eight state and national testing areas, together with the recommended MCC courses needed to fully prepare for each. A person with previous training or experience, or who has not completed high school, should check with an automotive instructor for individual recommendations.

### BRAKES

Automotive Tools & Hardware	AM104	1
Automotive Brakes & Servicing	AM108	3
Hydraulics & Fluid Mechanics	IT253	3

### FRONT-END SUSPENSION, STEERING

Automotive Tools & Hardware	AM104	1
Hydraulics & Fluid Mechanics	IT153	3
Auto Steer. & Susp. Theory	AM130	2
Auto Steer. & Susp. Lab	AM131	2

### ENGINE REPAIR

Automotive Tools & Hardware	AM104	1
Engine Servicing I	AM106	2
Engine Servicing Theory II	AM124	2
Engine Servicing Lab II	AM125	3

### ENGINE TUNE-UP AND PERFORMANCE

Concepts in Electricity	EL100	3
Auto Tools & Hardware	AM104	1
Engine Servicing I	AM106	2
Auto Engine Perf Theory I	AM210	2
Auto Engine Perf Lab I	AM211	2
Auto Engine Perf Theory II	AM212	2
Auto Engine Perf Lab II	AM213	3

### MANUAL TRANSMISSIONS, DIFFERENTIALS AND DRIVE TRAINS

Automotive Tools & Hardware	AM104	1
Manual Transmission Theory	AM132	2
Manual Transmission Lab	AM133	2

### HEATING, VENTILATING, AND AIR CONDITIONING

Automotive Tools & Hardware	AM104	1
Auto Heating & Air Con. Theory	AM260	2
Auto Heating & Air Con. Lab	AM261	2

### AUTOMATIC TRANSMISSIONS

Hydraulics & Fluid Mechanics	IT253	3
Automotive Tools & Hardware	AM104	1
Automatic Transmission Theory	AM230	2
Automatic Transmission Lab	AM231	2

### ELECTRICAL SYSTEMS

Concepts in Electricity	EL100	3
Auto Tools & Hardware	AM104	1
Auto Electrical Sys Theory I	AM140	2
Auto Electrical Sys Lab I	AM141	3
Auto Electrical Sys Theory II	AM142	2
Auto Electrical Sys Lab II	AM143	3

ADDITIONAL AM COURSES ARE LISTED ON PAGES 65 THROUGH 69

**BUSINESS STUDIES**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**  
**ACCOUNTING**

This program leads to an Associate Degree in Applied Arts and Sciences with an emphasis in accounting. The objective of this program is to provide the background and skills necessary for an entrance job in the accounting field. Sixty credit hours are required to obtain a degree. With the course load indicated below, a student can complete the degree in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Financial Accounting	BA115	3
Introduction to Business	BA135	3
Intro to Data Process	DP110	3
Intro to the IBM PC and Compatible PC's**	DP113	1

**SPRING SEMESTER**

Freshman English II*	LA101	3
Managerial Accounting	BA116	3
Speech	LA210	3
Intermediate Algebra	MA104	3

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Cost Accounting I	BA215	3
Legal Environ of Business	BA200	3
Principles of Economics	SS215	3
Elective		3-4

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Cost Accounting II	BA216	3
Human Relations	BA250	3
Management	BA237	3
Elective		3-4

**SUGGESTED ELECTIVES**

Microcomputers: Operating Systems and Applications	DP116
Managerial Mathematics	MA116
Keyboarding	SD145

\*See alternatives listed under requirements for the Associates Degree in Applied Arts and Sciences

\*\*Or taken concurrently with BA116

**BUSINESS STUDIES**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**  
**BUSINESS ADMINISTRATION**

This program leads to an Associate Degree in Applied Arts and Sciences with an emphasis in business administration. The objective of this program is to provide the background skills necessary for an entrance job in the business field. Sixty credit hours are required and can be completed in two years with the course load indicated below.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Financial Accounting	BA115	4
Introduction to Business	BA135	3
Intro to Data Processing	DP110	3
Intro to the IBM PC and Compatible PC's**	DP113	1

**SPRING SEMESTER**

Freshman English II*	LA101	3
Managerial Accounting	BA116	4
Human Relations	BA250	3
Speech	LA210	3
Elective		3-4

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Legal Environ of Business	BA200	3
Marketing	BA233	3
Management	BA237	3
Principles of Economics	SS215	3

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Advertising	BA248	3
General Psychology	SS220	3
Elective		
Elective		

**SUGGESTED ELECTIVES**

Microcomputers: Operating Systems and Programming	DP116
College Algebra	MA159
Retailing	BA234
Accounting for Small Business	BA105
Entrepreneurship	BA136
Small Business Management	BA235
Customer Relations	BA251
Financial Principles	BA252
Purchasing	BA255
Sales Management	BA265
Credits and Collections	BA268

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

\*\*Or taken concurrently with BA116

**BUSINESS STUDIES**  
**SMALL BUSINESS DEVELOPMENT/MANAGEMENT**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

The associate degree program is designed to prepare the student to start up a new business venture, determine vendors, price merchandise, use a microcomputer for accounting purposes, recruit and select employees and handle public relations. An Associate Degree in Applied Arts and Sciences will be awarded upon successful completion of at least 60 credit hours including the coursework described below.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Financial Accounting	BA115	4
Entrepreneurship	BA136	3
Intro to Data Processing	DP110	3
Marketing	BA233	3

**SPRING SEMESTER**

Freshman English II*	LA101	3
Advertising	BA248	3
Speech	LA210	3
Small Business Management	BA235	3
Elective		

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Legal Environ of Business	BA200	3
Business Mathematics	OE120	3
Principles of Economics	SS215	3
Microcomputers - Operating Systems and Applications	DP116	3

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Retailing	BA234	3
Customer Relations	BA251	2
General Psychology	SS220	3
Elective		

**SUGGESTED ELECTIVES**

Management	BA237
COBOL Programming	DP220
Managerial Accounting	BA116
Accounting for Small Business	BA105
Introduction to Business	BA135

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

A CERTIFICATE PROGRAM FOR SMALL BUSINESS DEVELOPMENT/MANAGEMENT IS ALSO AVAILABLE  
 SEE PAGE 47

**BUSINESS STUDIES**  
**BUSINESS DATA PROCESSING**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

This program leads to an Associate Degree in Applied Arts and Sciences, with a specialty in business data processing. The objective of this program is to provide the background and skills necessary for an entrance job in the business data processing field. It is designed with two tracks: one for students seeking careers with larger companies having centralized computer departments\*; the other for students seeking careers with smaller companies using microcomputers and commercially available software packages\*\*. Sixty credit hours required. The following outline indicates the order in which courses should be taken. With the course load indicated below, a student can complete the degree in two years.

**FIRST YEAR**

<u>FALL SEMESTER</u>		<u>SPRING SEMESTER</u>	
Freshman English I	LA100 3	Freshman English II***	LA101 3
Financial Accounting	BA115 4	Managerial Accounting	BA116 4
Introduction to Business	BA135 3	Human Relations	BA250 3
Intro to Data Process	DP110 3	Intro to Pascal*	DP122 3
Intro to IBM PC and Compatible PC's****	DP113 1	or Microcomputers: Operating Systems & Applications**	DP116 3
		Elective	

**SECOND YEAR**

<u>FALL SEMESTER</u>		<u>SPRING SEMESTER</u>	
Intro to Social Science I	SS110 4	Intro to Social Science II***	SS111 4
Legal Environ of Business Management	BA200 3 BA237 3	RPGII Programming*	DP225 3
Systems Concepts/Design	DP240 3	or Microcomputer Data Base Applications**	DP235 3
Cobol Programming*	DP220 3	Programming Project	DP290 3
or Microcomputer Spreadsheets**	DP230 3	Speech	LA210 3

**SUGGESTED ELECTIVES:**

Beginning Typing	OE100
or Keyboarding	SD145
Elementary Algebra	MA100

**NOTE: STUDENTS PLANNING TO TRANSFER TO FOUR-YEAR COLLEGES ARE STRONGLY ADVISED TO CONSULT A COUNSELOR DURING THEIR FIRST SEMESTER**

\*For students pursuing a programming career in high-level languages.

\*\*For students pursuing a career in microcomputer applications.

\*\*\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

\*\*\*\*Or taken concurrently with BA116



**CRIMINAL JUSTICE - CORRECTIONS**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

This associate degree program is designed to prepare the successful graduate for a career in corrections with increased opportunities. It includes the 15 credit hours needed for certification (see important information above), plus normal degree requirements and other career related courses. It also is designed to provide maximum transferability to those four year colleges and universities which offer a Bachelor's Degree in Criminal Justice or related fields. The following outline indicates the order in which courses should be taken. With the course load shown below, a student can complete the degree in two years.

**FIRST YEAR**

**FALL SEMESTER**

Intro to Corrections  
 Freshman English I  
 Intro to Social Science I  
 Intro to Criminal Justice  
 Elective

CJ110 3  
 LA100 3  
 SS110 4  
 CJ100 3  
 3-4

**SPRING SEMESTER**

Corrections Institutions/  
 Facilities  
 Freshman English II\*  
 Intro to Social Science II\*  
 Personal Self-Defense  
 Elective

CJ120 3  
 LA101 3  
 SS111 4  
 PE114 1  
 3-4

**SECOND YEAR**

**FALL SEMESTER**

Humanities I  
 Speech  
 Legal Issues in Corrections  
 Emergency Health Care  
 Client Relations in  
 Corrections  
 Stress Management for  
 Correctional Officers\*\*

HU200 4  
 LA210 3  
 CJ220 3  
 PE205 2  
 CJ250 3  
 CJ115 1

**SPRING SEMESTER**

Humanities II  
 American Criminal Law  
 Client Growth & Development  
 Criminal Justice Practicum+  
 Report Writing for  
 Line Officers

HU201 4  
 CJ210 3  
 CJ260 3  
 CJ290 5  
 CJ135 1

+Additional 290's will be added for police, fire, public safety, etc., as need arises

\*See alternatives listed under the requirements of the Associate Degree in Applied Arts and Sciences

\*\*Pending Curriculum Committee Approval

A CERTIFICATE PROGRAM IN CRIMINAL JUSTICE IS ALSO AVAILABLE SEE PAGE 50

**DRAFTING TECHNOLOGY**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

The sequence of courses shown below allows students to earn an associate degree in applied arts and sciences in two years of school as a full-time student. Students who wish to attend school part-time need not necessarily adhere to this exact sequence. Please check with your counselor. Sixty credit hours required.

<u>FALL SEMESTER</u>		FIRST YEAR		<u>SPRING SEMESTER</u>	
Metallurgy & Heat Treatment	IT130	2	Sketching	HU121	2
Basic Machine Operation	IT220	3	Manufacturing Processes	IT260	2
Freshman English I	LA100	3	Freshman English II*	LA101	3
Intermediate Algebra	MA104	3	Trigonometry	MA102	3
Technical Drafting I	TD100	3	Descriptive Geometry	TD110	3
			Technical Drafting II	TD130	3
<u>FALL SEMESTER</u>		SECOND YEAR		<u>SPRING SEMESTER</u>	
Concepts in Electricity	EL100	3	Customer Relations	BA251	2
Product Design	TD215	3	Basic Fluid Power	IT253	3
Intro to Social Science I	SS110	4	Intro to Social Science II*	SS111	4
Jig & Fixture Design	TD230	3	Tool & Die Design I**	TD135	2
Intro to Data Processing	DP110	3	Computer Aided Drafting I	TD250	3

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

\*\*May substitute Plastic Mold Design I (TD140)

A CERTIFICATE PROGRAM IN DRAFTING IS ALSO AVAILABLE SEE PAGE 51

**ELECTRONICS TECHNOLOGY**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

This program prepares the student for diagnosis and repair of complex electronic devices. It may be transferable as a package to a four year university. Through proper selection of electives, emphasis may be placed upon communications, computers, or industrial electronics. A counselor or instructor can help select courses for these areas. Sixty credit hours required for the degree; at least 30 must be EL courses. The following outline indicates the order in which courses should be taken. With the course load shown below, a student can complete the degree in two years.

<u>FIRST YEAR</u>					
<u>FALL SEMESTER</u>		<u>SPRING SEMESTER</u>			
Freshman English I	LA100	3	Freshman English II*	LA101	3
Intermediate Algebra	MA104	3	Trigonometry	MA102	3
Concepts of Electricity	EL100	3	Electronic Circuits	EL210	3
Electronic Circuit Analysis	EL110	3	Electronic Devices	EL120	3
Intro to Data Processing	DP110	3	Elective (EL)		2-3
<u>SECOND YEAR</u>					
<u>FALL SEMESTER</u>			<u>SPRING SEMESTER</u>		
Intro to Social Science I	SS110	4	Intro to Social Science II*	SS111	4
Intro to College Physics I	NS111	3	Intro to College Physics II	NS112	3
Microprocessors I	EL141	3	Customer Relations	BA251	2
Microprocessors II	EL241	1	Electronic Test Equipment	EL160	3
Digital Electronics	EL230	3	Elective (EL)		2-3
Elective (EL)		2-3			

**PROGRAM REVISIONS ARE ANTICIPATED - PLEASE CHECK**

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

A CERTIFICATE PROGRAM IN ELECTRONICS TECHNOLOGY IS ALSO AVAILABLE SEE PAGE 52

**FOOD SERVICE TECHNOLOGY**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**  
 (FULL-TIME PROGRAM ONLY AVAILABLE TO COPE STUDENTS)

The Food Service Technology program is designed to provide students with the skills and technical knowledge necessary to prepare for entry level employment in the food service/restaurant industry. Students completing this program will have basic skills in food preparation, nutrition and menu planning, hotel and restaurant management, and small business operation as it relates to the food industry. In addition, they will fulfill all the requirements for an Applied Arts and Sciences Degree. The following outline indicates the order in which courses should be taken. With the course load indicated below, a student can complete the degree in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Business Mathematics	OE120	3
Intro to Food Services	FST100	3
Food Service Safety and Sanitation	FST101	2
Food Production Skills - General	FST110	4

**SPRING SEMESTER**

Freshman English II*	LA101	3
Intro to Business	BA135	3
Food Production Skills - Entree	FST120	4
Meat and Portion Control	FST130	2
Nutrition and Menu Planning	FST140	3

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Equipment Design, Layout and Selection	FST200	2
Food Service Management	FST201	3
Food Production Skills - Bakery	FST210	4

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Small Business Management	BA235	3
Humanities I	HU200	4
Food Production Skills - Catering	FST220	4
Food Purchasing	FST230	3

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

A CERTIFICATE PROGRAM IN FOOD SERVICE TECHNOLOGY IS ALSO AVAILABLE SEE PAGE 53

**INDUSTRIAL TECHNOLOGY**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

The graduate of the industrial technology program will have a well-rounded background, which prepares him/her for work in manufacturing and process industries as planners, buyers, or as technicians. In addition, transfer to a four-year Bachelor's Degree Program is possible. The training offers many hours of practical, hands-on experience to complement the theory. A minimum of 60 credit hours is required. The following outline indicates the order in which courses should be taken. With the course load shown below, a student can complete the degree program in two years.

**FIRST YEAR**

**FALL SEMESTER**

Basic Machine Operation	IT220	3
Freshman English I	LA100	3
Elementary Algebra	MA100	3
Technical Drafting I	TD100	3
Intro to Data Processing	DP110	3

**SPRING SEMESTER**

Sketching	HU121	2
Basic Fluid Power	IT253	3
Manufacturing Processes	IT260	2
Freshman English II*	LA101	3
Intermediate Algebra	MA104	3
Layout & Precision Measure	TD106	2

**SECOND YEAR**

**FALL SEMESTER**

Concepts in Electricity	EL100	3
Basic CNC Operation	IT102	2
Metallurgy & Heat Treatment	IT130	2
Intro to College Physics I	NS111	3
Intro to Social Science I	SS110	4

**SPRING SEMESTER**

Industrial Quality Control	IT270	2
Customer Relations	BA251	2
Trigonometry	MA102	3
Intro to College Physics II	NS112	3
Intro to Social Science II*	SS111	4
Welding Elective		

STUDENTS ARE URGED TO LEARN TYPING IN HIGH SCHOOL OR EARLY IN THIS PROGRAM

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

**NURSING**  
**LEVEL I & II**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

A student with no prior nursing education may complete Level I & II and be awarded an Applied Arts & Sciences Degree. The student may then become eligible to write the National Council Licensing Examination (NCLEX-RN) and practice as a Registered Nurse (RN). In addition to Level I admission criteria (see previous page), the student must also have completed a general chemistry and algebra course with "C" or better grades, not more than 10 years old (completed in one year if high school or one semester if college work and the chemistry course must include a lab) and NS103, NS203, SS220, SS221, prior to being admitted to nursing. Progression into Level II, after successfully completing all Level I courses, requires a satisfactory score on the Applied Weights and Measures Test and recommendations by the faculty members. It is further RECOMMENDED that a student wishing to become an RN complete LA100, LA101, PE110, and SS240 or SS110 prior to beginning the nursing curriculum.

The following curriculum guide is RECOMMENDED:

FALL SEMESTER - 16 WEEKS

Anatomy & Physiology I	NS103	4
Intro to Physical Fitness	PE110	1
Freshman English I	LA100	3
General Psychology	SS220	3

SPRING SEMESTER - 16 WEEKS

Anatomy & Physiology II	NS203	4
Freshman English II	LA101	3
Child Psychology	SS221	3
Social Science I or	SS110	4
Political Science	SS240	3

**LEVEL I & II**

FALL SEMESTER - 16 WEEKS

Basic Nursing Skills I	NUR102	7
Food in Health & Disease	NUR110	2
Concepts of Interpersonal Relationships	NUR120	2
Medical-Surgical I	NUR150	2
Pharmacology I	NUR161	1

SPRING SEMESTER - 16 WEEKS

Basic Nursing Skills II	NUR104	12
Maternal-Child Nursing I	NUR145	3
Medical-Surgical II	NUR151	3
Pharmacology II	NUR162	1

SUMMER SEMESTER - 8 WEEKS

Clinical Practicum	NUR117	6
Nursing Seminar	NUR125	1
Medical-Surgical III	NUR152	1
Role Transition	NUR200	2

FALL SEMESTER - 16 WEEKS

Advanced Medical - Surgical	NUR251	10
Microbiology	NS201	4

SPRING SEMESTER - 16 WEEKS

Maternal-Child Nursing II	NUR245	6
Community Mental Health	NUR255	6

SUMMER SEMESTER - 4 WEEKS

Leadership Role in Nursing	NUR225	3
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A CERTIFICATE PROGRAM IN LICENSED PRACTICAL NURSING IS ALSO AVAILABLE SEE PAGE 55

**NURSING  
LEVEL II  
ADVANCED STANDING LPN  
APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

A student with prior nursing education and/or a Licensed Practical Nurse (LPN may complete Level II and become eligible to write the National Council Licensing Examination (NCLEX-RN) and practice as a Registered Nurse (RN). To be placed on the waiting list the following admission criteria must be met; official transcripts of all previous nursing courses, scores of 18 on the ASSET Reading test and 19 on the ASSET Numerical Skills test, satisfactory scores on the Applied Weights and Measures test, a chemistry course (with a "C" or better grade and not more than 10 years old which included a lab), a pharmacology course in the Practical Nurse Program, six months current acute care work experience. Before beginning Level II nursing courses, NS103, NS203, SS220, and NUR200 must be completed. It is further RECOMMENDED that a student wishing to become an RN complete LA100, LA101, PE110, and SS240 or SS110 prior to beginning Level II Nursing Curriculum. Admission into Level II is not guaranteed immediately upon meeting admission criteria, but is dependent upon available space. A student is placed on the waiting list when admission criteria are met.

The following curriculum guide is RECOMMENDED:

FALL SEMESTER - 16 WEEKS

Anatomy & Physiology I	NS103	4
Intro to Physical Fitness	PE110	1
Freshman English I	LA100	3
General Psychology	SS220	3

SPRING SEMESTER - 16 WEEKS

Anatomy & Physiology II	NS203	4
Freshman English II	LA101	3
Social Science I or	SS110	4
Political Science	SS240	3

SUMMER SEMESTER - 8 WEEKS

Role Transition	NUR200	2
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FALL SEMESTER - 16 WEEKS

Advanced Medical -		
Surgical Nursing	NUR251	10
Microbiology	NS201	4

SPRING SEMESTER - 16 WEEKS

Maternal-Child Nursing II	NUR245	6
Community Mental Health	NUR255	6

SUMMER SEMESTER - 4 WEEKS

Leadership Role in		
Nursing	NUR225	3

A CERTIFICATE PROGRAM IN LICENSED PRACTICAL NURSING IS ALSO AVAILABLE SEE PAGE 55

**OFFICE EDUCATION**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**  
**EXECUTIVE SECRETARY**

The graduate of the executive secretarial science curriculum will have a knowledge of business technology and skill in dictation and accurate transcription of business letters and reports. The graduate is prepared to be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation, is responsible for meeting office callers, screening telephone calls, and assisting the executive. An Associate Degree in Applied Arts and Sciences will be awarded upon successful completion of at least 60 credit hours, including the coursework below. By following this sequence, the program can be completed in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Intermediate Typing	OE101	3
Business Mathematics	OE120	3
Business Communications I	OE129	3
Elective		3

**SPRING SEMESTER**

Freshman English II*	LA101	3
Business Communications II	OE130	3
Advanced Typing	OE202	3
Business Calculators	OE240	3
Information Processing I	OE225	4

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Shorthand I	OE103	4
Acctg for Small Business	BA105	3
Voice Transcription	OE220	3
Elective		3

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Records Management	OE175	3
Shorthand II	OE104	4
Office Procedures	OE230	3
Elective		3

**SUGGESTED ELECTIVES**

Introduction to Business	BA135
Human Relations	BA250
Intro to Data Processing	DP110
Information Processing II	OE226
Information Processing III	OE227
Field Experience	OE290
Advanced Shorthand	OE203

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences



**OFFICE EDUCATION**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**  
**INFORMATION PROCESSING**

The graduate of this associate degree program will have a knowledge of business concepts and skill in the use of several types of electronic office equipment. The student is prepared to be employed as an information processing secretary and/or an administrative secretary. Advancement may also be attained for those students who wish to further specialize in related fields. An Associate Degree in Applied Arts and Sciences will be awarded upon successful completion of at least 60 credit hours including the coursework below. By following this sequence, the program can be completed in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Intermediate Typing	OE101	3
Business Mathematics	OE120	3
Business Communications I	OE129	3
Elective		3-4

**SPRING SEMESTER**

Freshman English II*	LA101	3
Business Communications II	OE130	3
Advanced Typing	OE202	3
Business Calculators	OE240	3
Information Processing I	OE225	4

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Intro to Data Processing	DP110	3
Acctg for Small Business	BA105	3
Information Processing II	OE226	3
Voice Transcription	OE220	3

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Records Management	OE175	3
Information Processing III	OE227	3
Office Procedures	OE230	3
Elective		3-4

**SUGGESTED ELECTIVES**

Introduction to Business	BA135
Human Relations	BA250
Field Experience	OE290

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

A CERTIFICATE PROGRAM IN INFORMATION PROCESSING IS ALSO AVAILABLE SEE PAGE 58

**OFFICE EDUCATION**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**  
**LEGAL SECRETARY**

This program leads to an Associate Degree in Applied Arts and Sciences. The Legal Secretarial program is designed to prepare for employment and/or advancement. Students who wish to specialize in legal shorthand and transcription and legal office procedures. An Associate Degree in Applied Arts and Sciences will be awarded upon successful completion of at least 60 credit hours including the coursework below.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Intermediate Typing	OE101	3
Business Mathematics	OE120	3
Business Communications I	OE129	3
Elective		3

**SPRING SEMESTER**

Freshman English II*	LA101	3
Acct for Small Business	BA105	3
Advanced Typing	OE202	3
Information Processing I	OE225	4
Business Calculators	OE240	3

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Legal Environ of Business	BA200	3
Shorthand I	OE103	4
Voice Transcription	OE220	3
Legal Term & Transcription	OE205	3

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Shorthand II	OE104	4
Legal Office Procedures	OE206	3
Office Procedures	OE230	3
Elective		3

**SUGGESTED ELECTIVES**

Introduction to Business	BA135
Human Relations	BA250
Intro to Data Processing	DP110
Information Processing II	OE226
Information Processing III	OE227
Business Communications II	OE130
Field Experience	OE290
Shorthand III	OE230

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences

A CERTIFICATE PROGRAM FOR LEGAL OFFICE ASSISTANT IS ALSO AVAILABLE SEE PAGE 57

**OFFICE EDUCATION**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**  
**MEDICAL SECRETARY**

This program leads to a degree in Applied Arts and Sciences. The Medical Secretarial program is designed to prepare the student for employment and/or advancement in a physician's office; hospital; medical supply house; local, state, or federal health agency; voluntary health agency; medical college; health insurance firm; or related area. An Associate Degree in Applied Arts and Sciences will be awarded upon successful completion of at least 60 credit hours including the coursework below. By following this sequence, the program can be completed in two years.

**FIRST YEAR**

**FALL SEMESTER**

Freshman English I	LA100	3
Intermediate Typing	OE101	3
Business Mathematics	OE120	3
Business Communications I	OE129	3
Elective		3

**SPRING SEMESTER**

Freshman English II*	LA101	3
Acct for Small Business	BA105	3
Advanced Typing	OE202	3
Information Processing I	OE225	4
Business Calculators	OE240	3

**SECOND YEAR**

**FALL SEMESTER**

Intro to Social Science I	SS110	4
Shorthand I	OE104	4
Medical Terminology	OE207	3
Voice Transcription	OE220	3
Elective		3

**SPRING SEMESTER**

Intro to Social Science II*	SS111	4
Emergency Health Care	PE205	2
Shorthand II	OE104	4
Medical Office Procedures	OE208	3
Office Procedures	OE230	3

**SUGGESTED ELECTIVES**

Introduction to Business	BA135
Human Relations	BA250
Intro to Data Processing	DP110
Information Processing II	OE226
Information Processing III	OE227
Business Communications II	OE130
Field Experience	OE290
Advanced Shorthand	OE203

\*See alternatives listed under requirements for the Associate Degree in Applied arts and Sciences

A CERTIFICATE PROGRAM FOR MEDICAL OFFICE ASSISTANT IS ALSO AVAILABLE SEE PAGE 58

**PARALEGAL STUDIES**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

The paralegal studies curriculum is designed to prepare the student for a career as a Paralegal Assistant. The included course work will expose the student to the types of skills and knowledge needed to compete for jobs in this field. In addition, students completing this course work will fulfill all the requirements for the Applied Arts and Sciences Degree. A minimum of 60 credits is required for this degree.

**FIRST YEAR**

<u>COURSE NAME AND NUMBER</u>	<u>CREDIT HOURS</u>	<u>COURSE NAME AND NUMBER</u>	<u>CREDIT HOURS</u>
LA100 Freshman English I	3	PL110 Legal Research and Brief Writing	3
LA101 Freshman English II*	3	BA115 Financial Accounting	4
SS110 Social Science I	4	DP110 Intro to Data Processing and Programming	3
SS111 Social Science II*	4		
PL100 Intro to Paralegal Studies	3		
OE100 Beginning Typing	3		

**SECOND YEAR**

CJ210 American Criminal Law	3	PL215 Litigation I	3
SS220 General Psychology	3	PL216 Litigation II	3
LA210 Speech	3	PL210 Tax Law**	3
BA200 Business Law	3	Electives	6
PL200 Estates, Wills, and Trusts**	3		

It is recommended that electives be taken from the following areas:  
 Business, Data Processing, Humanities, Language Arts, or Social Science

\*See alternatives listed under requirements for the Associate Degree in Applied Arts and Sciences  
 \*\*Under development

**RADIOLOGIC TECHNOLOGY**  
**APPLIED ARTS AND SCIENCES ASSOCIATE DEGREE**

A "One-Plus-One" approach, the radiologic technology curriculum is offered in cooperation with Mid-Michigan Community College. This program is designed for students who live in the Montcalm Community College service area and are interested in pursuit of this highly technical program. All radiological technology courses (22 credit hours) are taught at Mid-Michigan Community College. The clinical course (26 credit hours) will be arranged locally. The liberal arts, science, and prerequisite courses (31 credit hours) are available at Montcalm.

**FIRST YEAR**

<u>FALL SEMESTER (MONTCALM)</u>			<u>SPRING SEMESTER (MONTCALM)</u>		
Medical Terminology**	OE207	3	Anatomy and Physiology II	NS203	4
Anatomy and Physiology I**	NS103	4	Political Science	SS240	3
Introductory Chemistry**	NS105	4	Intro to Data Processing	DP110	3
General Psychology	SS220	3	Speech	LA210	3
Freshman English I	LA100	3	Elective		
Physical Education Elective					

**\*\*Prerequisite Courses**

All documents, testing, and prerequisites should be completed and submitted to Mid-Michigan Community College by May 1st to be eligible to begin Radiologic Technology classes by the next fall at Mid-Michigan Community College

**SECOND YEAR**

<u>FALL SEMESTER (MID-MICHIGAN)</u>			<u>SPRING SEMESTER (MID-MICHIGAN)</u>		
Intro to Radiologic Tech	RAD100	3	Radiation Physics	RAD110	3
Radiologic Positioning I	RAD105	2	Principles of Radiation Exposure	RAD115	3
			Radiologic Positioning II	RAD125	2
<u>SUMMER SEMESTER (MID-MICHIGAN)</u>					
Radiologic Positioning III	RAD175	2			

**THIRD YEAR**

THIS BEGINS THE 50-WEEK CLINICAL COMPONENT TO BE ARRANGED LOCALLY

<u>FALL SEMESTER</u>			<u>SPRING SEMESTER</u>		
Clinical Education I	RAD200	10	Clinical Education II	RAD220	10
Radiologic Techniques I	RAD215	3	Radiologic Techniques II	RAD217	3
<u>SUMMER SEMESTER</u>					
Clinical Education III	RAD225	6			
Radiographic Quality Assurance	RAD230	1			

Associate in Applied Science Degree is awarded by Mid-Michigan Community College with a major in Radiologic Technology. Graduates are eligible to apply for the Certification Examination offered by the American Registry of Radiologic Technologists.

DEGREE INFORMATION

ASSOCIATE DEGREE IN GENERAL STUDIES

<u>COURSE TITLES</u>	<u>COURSE NUMBERS</u>	<u>CREDIT HOURS</u>
SS Intro to Social Science I	SS110	4
OR		
SS Political Science	SS240	3

Other academic courses (must include courses from at least three of the academic areas: humanities, language arts, mathematics, natural science, and social science).

TOTAL REQUIRED HOURS	15
TOTAL ELECTIVE HOURS	45
TOTAL FOR DEGREE	60+

CERTIFICATE INFORMATION

MCC CERTIFICATE PROGRAM GUIDELINES

Apprentice Training  
Automotive Servicing  
Cosmetology  
Criminal Justice  
Drafting  
Electrical Technology  
Food Service Technology  
Machine Tool Operation  
Nursing  
Office Education  
Clerk-Typist  
Legal Office Assistant  
Medical Office Assistant  
Stenographer  
Word Processing  
Small Business Development/Management  
Welding

OTHER CERTIFICATE AND TRAINING PROGRAMS

Allied Health  
Child Development  
Criminal Justice

**ALLIED HEALTH**  
**EMERGENCY MEDICAL TECHNICIAN CERTIFICATE**

This is a one semester course granting a certificate of completion for the Emergency Medical Technician program. This program of study allows the successful student eligibility to challenge the Michigan Department of Public Health State Examination and be licensed as an EMT. The course requires six hours of lecture per week for 16 weeks and six hours of clinical practice in one of several local cooperating hospitals starting in the sixth week of the semester. It is recommended that the student enroll in Emergency Health Care, PE205, prior to the EMT course. Nine credit hours are required.

**FALL SEMESTER**

Emergency Medical Tech

AH200 9

**SPRING SEMESTER**

Emergency Health Care

PE205 2

**RECOMMENDED SCHEDULE**

**CERTIFICATE OF COMPLETION BY AN OUTSIDE AGENCY MAY BE AWARDED TO STUDENTS FINISHING THIS PROGRAM.**



**APPRENTICE TRAINING  
CERTIFICATE**

Admission into the apprenticeship training program is gained by way of employment and sponsorship by the employer and depends upon a training agreement between the employer, employee, and the United States Bureau of Apprenticeship and Training. Montcalm Community College coordinates the training plan and provides the related instruction.

Each semester of apprenticeship "related instruction" is 16 weeks in length, with the trainee usually taking two courses per semester. A competency examination may result in a waiver of a required course. Official transcripts may also be used for this purpose.

Entrance requirements are established by the employer in accordance with existing Bureau of Apprenticeship and Training standards. Continuation in the training program is dependent upon employment status and level of achievement.

The related instruction schedule shown below is for apprentice tool and die designers. Programs for machinists, plastic mold designers, and mold and die makers, are also available. Thirty-two credit hours are required for completion.

**FIRST LEVEL COURSES**

Shop Math I	MA110	2
Shop Drawing	TD120	2
Blueprint Reading	TD105	2
Shop Math II	MA111	2

**SECOND LEVEL COURSES**

Sketching	HU121	2
Layout & precision Measure	TD106	2
Shop Math III	MA112	2
Ind Safety & First Aid	IT155	2

**THIRD LEVEL COURSES**

Machine Tool Theory	IT100	2
Industrial Quality Control	IT270	2
TIG Welding	WE125	2
Tool & Die Design I	TD135	2

**FOURTH LEVEL COURSES**

Tool & Die Design II	TD136	2
Metallurgy & Heat Treatment	IT130	2
Tool & Die Design III	TD137	2
Basic CNC Operation	IT102	2

THESE COURSES ARE NOT LIMITED TO APPRENTICESHIP STUDENTS ONLY.

**AUTOMOTIVE SERVICING  
CERTIFICATE**

This automotive servicing program is designed to help the student gain her or his first job in the business. Selection of electives and additional courses will determine which state certificates can be earned. Request instructor help. Personal hand tools are required.

**FALL SEMESTER**

Auto Tools & Hardware	AM104	1
Engine Servicing I	AM106	2
Auto Brakes & Servicing	AM108	3
Engine Servicing Theory II	AM124	2
Concepts in Electricity	EL100	3
Shop Math I	MA110	2
or Elementary Algebra	MA100	3
Improving Reading & Writing	SD175	3
Approved Automotive Elective		2

**SPRING SEMESTER**

Auto Electrical Sys Theory I	AM140	2
Auto Electrical Sys Lab I	AM141	3
Customer Relations	BA251	2
Basic Fluid Power	IT253	3
Automotive Welding	WE110	3
Approved Automotive Elective		2

ASSOCIATE DEGREE IN AUTOMOTIVE TECHNOLOGY IS ALSO AVAILABLE SEE PAGE 23

**BUSINESS STUDIES  
CERTIFICATE  
SMALL BUSINESS DEVELOPMENT/MANAGEMENT**

The one-year certificate in small business development/management will prepare the student to handle bookkeeping, determine prices, deal with customers, employ some computer applications, and assist in new business development. Twenty-nine credit hours required.

**FALL SEMESTER**

Entrepreneurship	BA136	3
Intro to Data Processing	DP110	3
Business Mathematics	OE120	3
Legal Environ of Business	BA200	3
Marketing	BA233	3

**SPRING SEMESTER**

Small Business Management	BA235	3
Customer Relations	BA251	2
Acctg for Small Business	BA105	3
Microcomputers - Operating Systems and Applications	DP116	3
Retailing	BA234	3

AN ASSOCIATE DEGREE IN SMALL BUSINESS/DEVELOPMENT MANAGEMENT IS ALSO AVAILABLE  
SEE PAGE 27

**CHILD DEVELOPMENT  
CERTIFICATE PROGRAM**

This 12 credit hour certificate program is specifically designed to prepare candidates to administer and/or be employed in child care centers. Candidates may also seek employment as a teacher's aide in public school preschool programs. These courses may also be used in conjunction with the child development associate credential, which is granted by the National Credentialing Program. The following four courses have been developed for this program.

Introduction to CDA	CDA100	3	Preschool Curriculum	CDA120	3
Child Development: Preschool Years	CDA110	3	Administration of Early Childhood Programs	CDA130	3

THESE COURSES ARE NOT LIMITED TO STUDENTS DESIRING THIS CERTIFICATE

A CERTIFICATE OF COMPLETION BY AN OUTSIDE AGENCY MAY BE AWARDED TO STUDENTS FINISHING THIS PROGRAM.

**COSMETOLOGY  
CERTIFICATE**

The Cosmetology Program is approved by the Michigan Department of Licensing and Regulations and prepares students to take the State Licensing Board Examination. Instruction is scheduled for five days per week, four and one-half hours per day and includes over 1,500 hours of training. Over 900 hours will be spent in laboratory work during which students practice and apply services studied in the classroom setting. A licensed cosmetology instructor directs students' activities in a completely equipped cosmetology laboratory. Thirty-two credit hours and 1500 attendance hours are required for a certificate. **FALL ADMISSION ONLY.**

		<b>FIRST YEAR</b>			
<b><u>FALL SEMESTER*</u></b>				<b><u>SPRING SEMESTER*</u></b>	
Intro to Cosmetology	CS100	3	Beginning Hair Cutting and		
Intro to Cosmetology Lab	CS110	4	Permanent Waving	CS102	3
Beginning Hairstyling	CS101	3	Beginning Hair Cutting and		
Beginning Hairstyling Lab	CS111	4	Permanent Waving Lab	CS112	4
			Beginning Hair Coloring and		
			Professional Development	CS103	3
			Beginning Hair Coloring and		
			Professional Development Lab	CS113	4
		<b>SECOND YEAR</b>			
<b><u>FALL SEMESTER*</u></b>				<b><u>SPRING SEMESTER*</u></b>	
Advanced Hairstyling	CS200	3	Advanced Hairstyling II	CS202	3
Advanced Hairstyling Lab	CS210	5	Advanced Hairstyling II Lab	CS212	5
Advanced Hair Coloring and			Salon Management and Board		
Permanent Waving	CS201	3	Review	CS203	3
Advanced Hair Coloring and			Salon Management and Board		
Permanent Waving Lab	CS211	5	Review Lab	CS213	5

\*18 Week semester program - all courses are 9 weeks.

COSMETOLOGY STUDENTS WILL HAVE AN ADDITIONAL COST FOR UNIFORMS, SHOES AND LOCKER RENTAL.

**CRIMINAL JUSTICE - CORRECTIONS  
CERTIFICATE**

This 15 credit hour, 5 course program is specifically designed to qualify students to apply for corrections officer positions with the Michigan Department of Corrections. To be hired, students must achieve a 2.0 or better grade in each course, pass a written Civil Service exam, pass a physical fitness exam and pass a personal interview. Background investigations are also done.

Intro to Corrections	CJ110	3	Corrections Institutions/ Facilities	CJ120	3
Legal Issues in Corrections	CJ220	3	Client Growth & Development	CJ260	3
Client Relations in Corrections	CJ250	3			

A CERTIFICATE OF COMPLETION BY AN OUTSIDE AGENCY MAY BE AWARDED TO STUDENTS WHO SUCCESSFULLY FINISH THIS PROGRAM.

AN ASSOCIATE DEGREE IN CRIMINAL JUSTICE IS ALSO AVAILABLE SEE PAGE 29

**DRAFTING  
CERTIFICATE**

The drafting certificate is intended to help the student find his/her first job as a detailer or a drawing changer and is considered a first step toward an associate degree. Many of these courses will apply to the associate degree. Thirty credit hours required.

Basic Machine Operation	IT220	3	Customer Relations	BA251	2
Shop Math I or			Sketching	HU121	2
Elementary Algebra (MA100)	MA110	2	Basic Fluid Power	IT253	3
Improving Reading & Writing	SD175	3	Manufacturing Processes	IT260	2
Technical Drafting I	TD100	3	Shop Math II or		
Blueprint Reading	TD105	2	Inter Algebra (MA104)	MA111	2
Intro to Data Processing	DP110	3	Technical Drafting II	TD130	3

The alternate math courses are recommended for those with adequate background who are considering the Associate Degree at a later date.

AN ASSOCIATE DEGREE IN DRAFTING TECHNOLOGY IS ALSO AVAILABLE SEE PAGE 30

**ELECTRONICS TECHNOLOGY  
CERTIFICATE**

This one-year certificate is intended to help the student find his/her first job in repair and servicing of routine electronic devices. It is considered a first step toward the associate degree and many of these courses apply directly. Thirty credit hours required.

Improving Reading & Writing	SD175	3	Customer Relations	BA251	2
Intermediate Algebra	MA104	3	Trigonometry	MA102	3
Concepts in Electricity	EL100	3	Electronic Circuits	EL210	3
Electronic Circuit Analysis	EL110	3	Electronic Devices	EL120	3
Elective (DP110 recommended)		3	Elective (EL251 and EL252 recommended)		3

AN ASSOCIATE DEGREE IN ELECTRONICS TECHNOLOGY IS ALSO AVAILABLE SEE PAGE 31



**FOOD SERVICE TECHNOLOGY  
CERTIFICATE**

The certificate program in food service technology is designed to provide students with the skills and technical knowledge necessary for entry level employment in the food service/restaurant industry. Students completing this program will have basic skills in food preparation, nutrition, and menu planning. A minimum of 30 credit hours is required.

Intro to Food Service	FST100	3	Food Production Skills -		
Food Service Safety & Sanitation	FST101	2	Entree	FST120	4
Food Production Skills - General	FST110	4	Meat and Portion Control	FST130	3
FST Electives		6	Nutrition and Menu Planning	FST140	3
			FST Electives		5

AN ASSOCIATE DEGREE IN FOOD SERVICE TECHNOLOGY IS ALSO AVAILABLE SEE PAGE 32

**MACHINE TOOL OPERATION  
CERTIFICATE**

Students who successfully complete this program are eligible to obtain entry-level jobs in metal working industries as machinist helpers. Many of the following courses are also applicable toward an Associate Degree or an Apprenticeship Certificate. At least 30 credit hours required.

**FALL SEMESTER**

Basic Machine Operation	IT220	3
Basic Writing Skills or Freshman English I (LA100)	SD170	2
Basic CNC Operation	IT102	2
Metallurgy & Heat Treatment	IT130	2
Shop Math I or Elementary Algebra (MA100)	MA110	2
Blueprint Reading	TD105	2
Welding Tech & Joint Prep	WE107	3

**SPRING SEMESTER**

Advanced Machine Operation	IT221	3
Layout & Precision Measure	TD106	2
Manufacturing Processes	IT260	2
Basic Fluid Power	IT253	3
Shop Math II or Intermediate Algebra (MA104)	MA111	2
Industrial Quality Control	IT270	2

## NURSING

Our nursing curriculum is designed to promote career mobility for the student. The curriculum consists of two nursing programs, Level I and Level II. A student may wish to complete Level I, the Practical Nurse Program, and be eligible to write the National Council Licensing Examination (NCLEX-PN) for licensure and practice as an LPN. Another option is to complete both Level I and Level II and be eligible to write the National Council Licensing Examination (NCLEX-RN) for licensure and practice as an RN. A practicing LPN wishing to become an RN may complete Level II only and write the NCLEX-RN for licensure and practice as an RN.

Students interested in nursing should meet with a counselor or the Director of Nursing to discuss the specific admission requirements of both levels.

Admission into and progression during the Nursing Programs are dependent upon the attainment of a "C" or better grade in each required science (NS) and nursing (NUR) course.

### LEVEL I CERTIFICATE

A student with no prior nursing education may complete Level I and be awarded a certificate. The graduate may then become eligible to write the National Council Licensing Examination (NCLEX-PN) and practice as a Licensed Practical Nurse (LPN). Admission criteria of a general biology course with a "C" or better grade, not more than 10 years old (completed in one year if high school or one semester if college and must include a lab). Scores of 18 on the ASSET Reading and 19 on the ASSET Numerical Skills Tests must also be met prior to being admitted.

The following curriculum guide is recommended.

#### FALL SEMESTER - 16 WEEKS

Basic Nursing Skills I	NUR102	7
Food in Health & Disease	NUR110	2
Concepts of Interpersonal Relationships	NUR120	2
Medical-Surgical I	NUR150	2
Pharmacology I	NUR161	1
Anatomy & Physiology I	NS103	4
Child Psychology	-SS221	3
Physical Fitness	PE110/	1

#### SPRING SEMESTER - 16 WEEKS

Basic Nursing Skills II	NUR104	12
Maternal-Child Nursing I	NUR145	3
Medical-Surgical II	NUR151	3
Pharmacology II	NUR162	1
Anatomy & Physiology II	NS203	4

#### SUMMER SEMESTER - 8 WEEKS

Clinical Practicum	NUR117	6
Nursing Seminar	NUR125	1
Medical-Surgical III	NUR152	1

AN ASSOCIATE DEGREE IN NURSING IS ALSO AVAILABLE SEE PAGE 34

**OFFICE EDUCATION  
CERTIFICATE  
CLERK TYPIST**

The objective of the clerk-typist curriculum is preparation for employment in a variety of office occupations which include the development of skills in the use of all office machinery and the knowledge needed to carry out routine office functions. Previous training in typing is desirable. A certificate will be awarded upon successful completion of the 31 credit hours listed below. Following this sequence, the program can be completed in one year. A student wishing to continue training may apply credits earned toward the secretarial or management programs.

**FALL SEMESTER**

Intermediate Typing	OE101	3
Business Mathematics	OE120	3
Business Communications I	OE129	3
Information Processing I	OE225	4

**SPRING SEMESTER**

Acct for Small Business	BA105	3
Business Communications II	OE130	3
Advanced Typing	OE202	3
Office Procedures	OE230	3
Business Calculators	OE240	3

**SUMMER SEMESTER**

Voice Transcription	OE220	3
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**OFFICE EDUCATION  
CERTIFICATE  
INFORMATION PROCESSING**

This program leads to a certificate in information processing and provides the student with a background and understanding of different types of electronic office equipment. This program is designed to prepare the student for initial employment in the information processing field. The 31 credit hours required can be completed in one year by following the sequence below.

**FALL SEMESTER**

Intermediate Typing	OE101	3
Business Mathematics	OE120	3
Business Communications	OE129	3
Information Processing I	OE225	4

**SPRING SEMESTER**

Intro to Data Processing	DP110	3
Business Communications II	OE130	3
Advanced Typing	OE202	3
Office Procedures	OE230	3
Information Processing II	OE226	3

**SUMMER SEMESTER**

Voice Transcription	OE220	3
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AN ASSOCIATE DEGREE IN INFORMATION PROCESSING IS ALSO AVAILABLE SEE PAGE 39

**OFFICE EDUCATION  
CERTIFICATE  
LEGAL OFFICE ASSISTANT**

This program leads to a certificate as a legal office assistant. The curriculum provides the student with the background and understanding of legal office assisting, practices, and procedures. The 32 required credit hours can be completed in one year by following the sequence below.

**FALL SEMESTER**

Legal Environ of Business	BA200	3
Intermediate Typing	OE101	3
Business Communications I	OE129	3
Legal Term & Transcription	OE205	3

**SPRING SEMESTER**

Acct for Small Business	BA105	3
Advanced Typing	OE202	3
Legal Office Procedures	OE206	3
Information Processing I	OE225	4
Business Calculators	OE240	3

**SUMMER SEMESTER**

Voice Transcription	OE220	3
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AN ASSOCIATE DEGREE IN LEGAL SECRETARY IS ALSO AVAILABLE SEE PAGE 37

OFFICE EDUCATION  
CERTIFICATE  
MEDICAL OFFICE ASSISTANT

This program leads to a certificate as a medical office assistant. The curriculum provides the student with a background and understanding of medical office assisting and practice in medical office procedures. The 30 required credit hours can be completed in one year by following the sequence below.

FALL SEMESTER

Intermediate Typing	OE101	3
Business Communications I	OE129	3
Medical Terminology	OE207	3
Information Processing I	OE225	4

SPRING SEMESTER

Acct for Small Business	BA105	3
Emergency Health Care	PE205	2
Advanced Typing	OE202	3
Medical Office Procedures	OE208	3
Business Calculators	OE240	3

SUMMER SEMESTER

Voice Transcription	OE220	3
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AN ASSOCIATE DEGREE IN MEDICAL SECRETARY IS ALSO AVAILABLE SEE PAGE 38

**OFFICE EDUCATION  
CERTIFICATE  
STENOGRAPHER**

This program is planned for the high school graduate who has majored in business and desires advanced studies. A student who has little or no previous business training may also wish to follow this curriculum. Upon completion of this 32 credit hour program, a certificate of achievement will be awarded. By following the sequence below, this program can be completed in one year.

**FALL SEMESTER**

Intermediate Typing	OE101	3
Shorthand I	OE103	4
Business Mathematics	OE120	3
Business Communications I	OE129	3

**SPRING SEMESTER**

Acct for Small Business	BA105	3
Advanced Typing	OE202	3
Shorthand II	OE104	4
Office Procedures	OE230	3
Business Calculators	OE240	3

**SUMMER SEMESTER**

Voice Transcription	OE220	3
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**WELDING TECHNOLOGY  
CERTIFICATE**

Welding is a skill which is essential to many industries. This program stresses the development of techniques and understanding of quality weldments. Effects of heat and stress on welded materials are studied and practiced in the laboratory. The student may develop sufficient skill for American Welding Society Certification\*. Additional welding courses are available for those who wish to develop their skills even further. Thirty-two credit hours required.

**FALL SEMESTER**

Basic Machine Operations	IT220	3
Welding Tech & Joint Prep	WE107	3
Welding & Fabrication I	WE108	3
Shop Math I	MA110	2
Blueprint Reading	TD105	2
Metallurgy & Heat Treatment	IT130	2
Basic Writing Skills	SD170	2

**SPRING SEMESTER**

Welding & Fabrication II	WE120	3
Related Welding Skills	WE122	3
Layout & Precision Measure	TD106	2
Sketching	HU121	2
Customer Relations	BA251	2
Basic Fluid Power	IT253	3

\*THE COLLEGE DOES NOT ATTEMPT TO CERTIFY WELDERS

## COURSE CODE INDEX

These two pages will help locate descriptions of individual courses, such as HU122, Introduction to Art, and LA210, Speech. Use the index below in the following manner: Find the subject matter in which you are interested; the letter prefix that follows tells where to find descriptions of the courses which cover that subject matter. For example, art course descriptions would be found under HU.

Accounting/BA	Food Service/FST
Acting/LA	French/FL
Advertising/BA	General Business/BA
Algebra/MA	Geography/SS,NS
Allied Health/AH	Government/SS
Analytic Geometry/MA	Heat Treatment Metals (App.)/IT
Anatomy/NS	History/SS
Anthropology/SS	Humanities/HU
Art/HU	Human Relations/BA
Art (Appreciation)/HU	Hydraulics/IT
Automotive Mechanics/AM	Industrial Supervision &
Biology/NS	Management/BA
Blueprint Reading/TD	Journalism/LA
Bookkeeping/OE	Law (Business)/BA
Botany/NS	Law Enforcement/LE
Business Communications/OE	Legal Secretary/OE
Business Correspondence/OE	Literature/LA
Business Law/BA	Machine (Lab) (App.)/IT
Business Mathematics/OE	Machine Shop/IT
Calculus/MA	Management/BA
Ceramics/HU	Marketing/BA
Chemistry/NS	Mathematics/MA
Child Development/CDA	Mathematics (App.)/MA
Communications/LA	Mathematics (Business)/OE
Composition/LA	Medical Shorthand/OE
Computer Programming/DP	Medical Terminology/OE
Computers/DP	Metallurgy Theory (App.)/IT
Correspondence/OE	Mold Making & Die Casting
Cosmetology/CS	(Apprentice)/TD
Criminal Justice/CJ	Music/HU
Data Processing/DP	Natural Science/NS
Die Drafting (Apprentice)/TD	Nursing (Practical)/NUR
Diesel Engine/AM	Nursing (ADN)/NUR
Directed Studies/XY	Office Practice/OE
Drafting Technology/TD	Oral Interpretation/LA
Drafting & Design (App)/TD	Painting/HU
Drama/LA	Paralegal/PL
Drawing/HU	Philosophy/HU
Economics/SS	Photography/HU
Electricity/Electronics/EL	Physical Education/PE
Emergency Health Care/AH	Physical Science/NS
English/LA	Physics/NS
Entrepreneurship/BA	Physiology/NS
Executive Secretary Studies/OE	Plastics/IT/TD
Fitness/PE	Political Science/SS

Psychology/SS  
Radiologic Technology/RAD  
Reading/SD  
Religion/HU  
Safety and First Aid/IT  
Salesmanship/BA  
Science/NS  
Sculpture/HU  
Secretarial Studies/OE  
Shop Drawing/TD  
Shorthand/OE  
Sketching/HU  
Small Business/BA  
Social Science/SS  
Sociology/SS  
Spanish/FL  
Speech/LA  
Sports/PE  
Statistics/MA  
Supervision and Management/BA  
Taxation (Business)/BA  
Technical Drafting/TD  
Theater/LA  
Tool Drafting (App.)/TD  
Transcription/OE  
Trigonometry/MA  
Typewriting/OE  
Welding (Trades (App.))/WE  
Welding Technology/WE  
Word Processing/OE  
Writing/LA, SD  
Zoology/NS

## COURSE DESCRIPTIONS

IN THIS SECTION, DESCRIPTIONS OF ALL COURSES OFFERED AT MONTCALM COMMUNITY COLLEGE ARE LISTED ALPHABETICALLY.

NUMBERS IN PARENTHESES ( ) WHICH FOLLOW COURSE TITLES REPRESENT THE TOTAL CREDITS, HOURS OF LECTURE/DEMONSTRATION, AND HOURS OF LABORATORY IN THAT ORDER. (FOR EXAMPLE, (3,2,2) REPRESENTS THREE SEMESTER HOURS OF CREDIT GIVEN FOR THE COURSE, TWO OF THE HOURS WILL BE LECTURE/DEMONSTRATION, AND TWO OF THE HOURS WILL BE LABORATORY-TYPE CLASSES.) IN SOME CASES THE INSTRUCTOR WILL ASSIGN ADDITIONAL LABORATORY HOURS. SEE DIAGRAM BELOW FOR ILLUSTRATION.

\*Number of lecture/demonstration hours

Number of semester hours of credit given

\*Number of laboratory hours

OE226 Information Processing II (3,0,4) \*\*Prerequisites: OE225, \*\*\*Co-requisites: OE220

This course consists of computer-generated graphics to include: terminology, techniques and application of computer aided drafting (CAD) engineering, tool design, architecture, and electronics. Two dimensional design drafting is stressed. Four hours lecture/laboratory combination.

\*Combined these equal the total number of classroom/laboratory contact hours.

\*\*Prerequisites: A prerequisite is a course required to have been successfully completed prior to enrollment in another course. They are indicated following the course titles. Students must have written approval from the appropriate instructional department if the prerequisite has not been met.

\*\*\*Co-requisites: A co-requisite is a course which, if not taken ahead of time, must be taken at the same time. Co-requisites are indicated following course titles. Students must have written approval from the appropriate instructional department if the co-requisite has not been met.

## ALLIED HEALTH

- AH125 Adult Foster Care in Michigan (1,1,0) Prerequisites: None**  
This is a course that covers the history and philosophy of adult foster care and its role in the continuum of services to mentally ill, mentally retarded, and aging clients. Funding, licensing, systems that impact adult foster care and the role of the caregiver will also be covered.
- AH220 Coronary Care (4,3,2) Prerequisites: None**  
This course is an introduction to the principles of nursing management of the patient with heart disease. Emphasis will be on identification of cardiac dysrhythmias and therapeutic intervention.

STUDENTS SHOULD HAVE COMPLETED AH125, ADULT FOSTER CARE IN MICHIGAN (1,1,0) AS A PREREQUISITE FOR THE FOLLOWING ONE CREDIT COURSES.

- AH110 Adult Foster Care Programming (1,1,0) Prerequisites: AH125**  
This is a skill development course that assists the adult foster care caregiver in becoming an integral part of a client's learning. Participants will be provided with information and opportunities to learn specific skills of observation, client assessment and successful teaching principles. A program instrument will be provided that allows caregivers to incorporate many variables that affect the client's learning, e.g. family, friends, physical environment of the home, the community.
- AH135 The Aging Process (1,1,0) Prerequisites: AH125**  
This course covers a description and a clarification of the aging process historical and current approaches to working with the elderly, and the role of the Adult Foster Care Program and the caregiver.
- AH136 Programs for Aged Residents (1,1,0) Prerequisites: AH125**  
As a result of this course, providers will be able to establish programs for elderly residents of adult care facilities. Included are practical tips for getting started and ensuring success. Providers will learn how to identify needs/problems, develop an individual or group program, prepare a schedule of activities, and locate resources that can assist in program planning.
- AH145 Mental Retardation (1,1,0) Prerequisites: AH125**  
This course covers the definition, causes and classification of mental retardation, historical and current approaches to working with mentally retarded, and the role of an adult foster care program and the caregiver.
- AH146 Programs for Mentally Retarded Residents (1,1,0) Prerequisites: AH125**  
This is a skill development course that presents techniques to assess and teach mentally retarded adult foster care residents. The techniques will be applicable to all ranges of learning, from basic care to skills needed for independent community living. The course will provide an opportunity for participants to design, implement, and assess programs for their present clients.

- AH155 Health Care/Incidents and Accidents (1,1,0) Prerequisites: AH125**  
 This is a skill development course that covers the techniques of emergency care specifically relevant to the adult foster care setting.
- AH160 AFC Foods and Nutrition (1,1,0) Prerequisites: AH125**  
 AFC Foods and Nutrition is designed to provide a problem-solving approach to improving resident nutritional status and caregiver kitchen efficiency. The beginning units build upon each other from nutrients to food groups to meal planning to food selection to storage and sanitation. The remaining units deal with special issues in AFC homes, such as special diets, nutrient/drug interactions, teaching/eating skills, and identifying nutrition resources.
- AH165 Facility Environmental Management (1,1,0) Prerequisites: AH125**  
 This course reviews good staffing procedures, including hiring policy, staff evaluation, inservice training, responsibility delegation, time management, staff "burn-out," and insuring proper environment conducive to resident growth. The course is specifically designed for the caregiver who has supervision of staff and provides direct resident care.
- AH170 Activity Programming for the Adult Foster Care Resident (1,1,0) Prerequisites: AH125**  
 This is a skill development course that covers development of recreation and leisure time activities as a part of the overall program for a client. The course will include developing activity for in-the-home and in-the-community groups and individuals.
- AH175 Health Care/Human Growth and Development (1,1,0) Prerequisites: AH125**  
 This course will review body systems and discuss the normal aging process, summarize common ailments, and discuss common terminology which will be useful in future courses.
- AH176 Death and Dying (1,1,0) Prerequisites: AH125**  
 This course will explore the concept of death and dying as it impacts on all types of individual residents of various ages, home environment, and families.
- AH180 Support Staff Development (1,1,0) Prerequisites: AH125**  
 This course is intended to meet the varied aspects of the needs expressed by the employees in an AFC facility. The orientation is focused on training for the cook, substitute worker, aide, laundry worker, bookkeeper, driver, housekeeper, and other persons who have contact with the residents. The philosophy of adult foster care, licensing regulations, and inspection of attitudes, understanding, and behavior toward residents will be presented.
- AH190 Attitude and Behavior Management in AFC (1,1,0) Prerequisites: AH125**  
 A practical course in how to deal effectively with difficult behaviors and attitudes. A number of allowable approaches, including behavior modification, will be considered and discussed. Examples: dealing with residents who pose a fire hazard with smoking; helping a resident overcome a negative attitude; turning hostility into helpfulness; assisting a resident to "get motivation," dealing with drug abuse problems. Other topics will also be discussed.

- AH195** **Understanding and Working with the Mentally Ill (1,1,0)** Prerequisites: AH125  
 This course will describe and explain the major types of mental disorders. This will include anxiety disorders, depression, personality disorders, and schizophrenia. Also presented and discussed will be guidelines in approaching and working with residents with these disorders.
- AH196** **Programs for Mentally Ill Residents (1,1,0)** Prerequisites: AH125  
 This is a skill development course that gives the caregiver specific techniques in assisting mentally ill clients develop skills for moving toward independent living. The course will provide an opportunity for participants to design, implement, and assess programs for their present clients.
- AH200** **Emergency Medical Technician (9,6,6)** Prerequisites: None  
 This course includes orientation to the EMT, legal responsibilities, anatomy, physiology, diagnostic signs, triage, basic cardiac life support, injuries to the body, illnesses of the body, childbirth, mental health, environmental injuries, communications and emergency vehicles (including extrication). Upon successful completion the student will be eligible to challenge the Michigan Department of Public Health State Exam.
- AH202** **Emergency Medical Technician Specialist (7,5,4)** Prerequisites: Licensed Basic Emergency Medical Technician by Michigan Department of Public Health  
 This course includes orientation to EMT specialist, legal responsibilities, anatomy, physiology, review of all emergency medical technician aspects of care, acid base balance, body chemistry, intravenous therapy, fluid therapy, advanced airway management to include endotracheal intubation, esophageal obturator airway, esophageal gastric tube airway, tracheal suctioning, magill forcep usage. Also covered are communications, cardiac monitor interpretation, and recognition of cardiac dysrhythmias.

**AUTOMOTIVE MECHANICS TECHNOLOGY**  
(CREDIT/CONTACT HOURS MAY CHANGE - PLEASE CHECK)

- AM104 Automotive Tools & Hardware (1,1,0) Prerequisites: None**  
A study of the standard tools-of-the-trade; their proper and improper use and care, their several size designations, and their current sources and costs.
- AM106 Engine Servicing I (2,1,2) Prerequisites: None**  
This is a course dealing with general engine servicing and principles of operation. Emphasis will be given to proper installation, adjustment, and inspection of belts, hoses, sparkplugs, ignition points, and filters. Simple test devices will be included as well as use of human sensory perception.
- AM108 Auto Brakes and Servicing (3,1,3) Pre- or Co- requisites: AM104**  
This is a course dealing with general chassis servicing and light maintenance. Included are battery servicing, fuses, wipers, bulbs, tires, and lubrication. Emphasis will be given to rebuilding and servicing brake systems and components.
- AM114 Basic Small Engine Repair (2,1,1,) Prerequisites: None**  
This course provides a basic knowledge of the operation, maintenance, and minor repair procedures of small gasoline engines. This course is not recommended as an approved elective for the associate degree.
- AM118 Auto Maintenance for the Homemaker (2,1,1,) Prerequisites: None**  
This course is designed to furnish the non-automotive student with the necessary knowledge to recognize danger signals, handle emergency problems, make minor repairs and perform general maintenance on the automobile. This course is not recommended as an approved elective for the associate degree.
- AM124 Engine Servicing Theory II (3,3,0) Pre- or Co-requisites: AM106**  
This course covers cylinder head and crankcase details of construction, operations, and nomenclature. Methods of inspecting and rebuilding are discussed, as students are introduced to specification charts. For full benefit enroll in AM125 at the same time.
- AM125 Engine Servicing Lab II (3,0,4) Pre-or-Co-requisite: AM104, AM124 or student must have written departmental approval**  
This lab course gives students the opportunity to experience the use of special procedures, tools, measuring instruments, test devices, and specifications as applied to engine rebuilding.
- AM130 Automotive Steering and Suspension Theory (2,2,0) Pre- or Co-requisites: IT253 or student must have written departmental approval**  
This course is a study of the history, design and principles of suspension and steering systems. Included are the various methods of aligning and servicing the many varieties of systems in use today. For full benefit, enroll in AM131 at the same time.



- AM131 Automotive Steering and Suspension Lab (2,0,3) Pre- or Co-requisites:** AM104, AM130 or student must have written departmental approval  
This course is designed to furnish the student the necessary technical knowledge and the practical experience to diagnose, align, and repair front end, steering and suspension problems. All American-made and some foreign systems are covered.
- AM132 Manual Transmissions Theory (2,2,0) Prerequisites:** None  
This course covers principles, history, and methods of servicing the many varieties of manual transmissions, differentials, and drivelines in use today. For maximum gain, enroll in AM133 at the same time.
- AM133 Manual Transmissions Lab (2,0,3) Pre- or Co-requisites:** AM104, AM132, or student must have written departmental approval.  
This course gives useful practical experience in diagnosing troubles, repairing and adjusting manual transmissions, differentials, and drivelines covered in AM132.
- AM140 Automotive Electrical Systems Theory I (2,2,0) Pre- or Co-requisites:** EL100 or student must have written departmental approval  
This course includes the principles of operation, servicing, troubleshooting and repairing the several starting and charging systems in use today, including batteries.
- AM141 Automotive Electrical Systems Lab I (3,0,4) Pre- or Co-requisites:** AM104, AM140  
This course gives the student the practical experience necessary to inspect, test, service and repair all components in the cranking and charging systems.
- AM142 Automotive Electrical Systems Theory II (2,2,0) Pre- or Co-requisites:** EL100  
A very complete study of the many electrical systems (except starting, charging, and ignition) used in automobiles. Included are lighting circuits, horn circuits, directional signal circuits, power accessory systems, heating circuits, and all warning system circuits.
- AM143 Automotive Electrical Systems Lab II (3,0,4) Pre- or Co-requisites:** AM104, AM142  
This course is designed to furnish the student with the necessary technical knowledge and practical experience to inspect, diagnose, test, service, and repair all chassis electrical systems studied in AM142.
- AM160 Auto Restoration: Metal Bodywork (2,1,2) Prerequisites:** None  
A course for developing knowledge and skill in traditional metal forming, joining, and smoothing methods, as used primarily on older automobiles. Leading and preparation for painting are included, but painting is not. Students may bring their own parts to class. A materials fee is added.

- AM164 Automotive Restoration: Surface Preparation and Painting (2,1,2)**  
Prerequisites: None  
In addition to the technical aspects of surface preparation, priming, finishing materials and their application, this course deals with the special artistic touches, which make a good paint job become a work of beauty. It is intended for the meticulous craftsman. A materials fee is added.
- AM204 Automotive Parts and Service Management (2,2,0) Prerequisites: None**  
This course deals with the day-to-day operation of the parts and service departments. Included are techniques of pricing, inventory control, scheduling, estimating, quality control, service personnel and customer relations; money management, time management, parts ordering, selling, service training and customer followup.
- AM210 Automotive Engine Performance Theory I (2,2,0) Pre- or Co-requisites: None**  
This course covers the principles of operation, diagnosis, and repair of several kinds of carburetors, fuel injectors, and turbochargers as used in today's automobiles. To ensure more complete understanding, enroll in AM211 at the same time.
- AM211 Automotive Engine Performance Lab I (2,0,3) Pre- or Co-requisites: AM210, AM104**  
This course allows the student to service, diagnose, and repair automobiles, applying the knowledge gained in AM210. Use of special analytical equipment is stressed.
- AM212 Automotive Engine Performance Theory II (2,2,0) Pre- or Co-requisites: AM211, EL100, or student must have written departmental approval**  
This course is a study of the several types of ignition and emission control systems in use today. Included are principles of operation, servicing, and troubleshooting. To ensure maximum understanding, enroll in AM213 at the same time.
- AM213 Automotive Engine Performance Lab II (3,0,4) Pre- or Co-requisites: AM212**  
This lab gives students many opportunities to apply the theories gained in AM212 above. Emphasis is given to the use of special test equipment in troubleshooting and adjusting systems after rebuilding or repair.
- AM230 Automatic Transmission Theory (2,2,0) Pre- or Co-requisites: IT253, or student must have written departmental approval**  
This course is a study of the history, principles, parts, and operation of several makes of automatic transmissions. Included is an in-depth study of the hydraulic and mechanical functional aspects of the automatic. For best results, enroll in AM231 at the same time.
- AM231 Automatic Transmission Lab (2,0,3) Pre- or Co-requisites: AM104, AM230, or student must have written departmental approval**  
This course is designed to furnish the student with the necessary technical knowledge and the practical experience to diagnose and repair automatic transmission problems. All modern popular makes of automatics are covered. It encourages application of all principles learned in AM230.

- AM254 Diesel Engine Theory (3,3,0) Prerequisites: None**  
This course is a study, in theory, of basic diesel engines and related components not usually found on automotive gas engines. Included is the study of fuel injection systems, governors, turbo chargers, and superchargers.
- AM255 Diesel Engine Lab (3,0,4) Pre- or Co-requisites: AM104, AM254, or student must have written departmental approval.**  
This course is designed to furnish the student with the necessary technical knowledge and the practical experience to service, repair, and diagnose diesel engines in the truck, farm, or heavy equipment fields.
- AM260 Automotive Heating and Air Conditioning Theory (2,2,0) Prerequisites: None.**  
This course includes the several different systems and components used for heating and air conditioning in today's vehicles. Also included are testing, troubleshooting, and servicing techniques. For practical experience, enroll in AM261 at the same time.
- AM261 Automotive Heating and Air Conditioning Lab (2,0,3) Pre- or Co-requisites: AM260, AM104, or student must have written departmental approval**  
This course allows students to apply the knowledge gained in AM260 by providing several service opportunities on operating systems, using special test equipment.

## BUSINESS ADMINISTRATION

- BA105 Accounting for Small Business (3,3,0) Prerequisites: None**  
This course provides basic accounting principles and practices, from a theoretical and practical approach, with emphasis on the small business.
- BA115 Financial Accounting (4,4,0) Prerequisites: None**  
This course is an introduction to accounting fundamentals including: the meaning and purpose of accounting statements, balance sheets, and profit and loss statements; the theory of debits and credits; accounts payable and receivable; the trial balance; adjusting and closing entries; accounting for notes, interest, unearned and accrued items.
- BA116 Managerial Accounting (4,4,0) Prerequisites: BA115, Pre- or Co-requisites: DP113**  
Basic procedures for accumulating and using the accounting data needed for managerial planning, controlling, and decision making.
- BA135 Introduction to Business (3,3,0) Prerequisites: None**  
This course is an introduction to the environment, nature, and opportunities of business. The study of ownership and operation of a business includes: marketing, location and layout, personnel, finance, controls for decision making, and the legal environment of business.
- BA136 Entrepreneurship (3,3,0) Prerequisites: None**  
This course examines the nature and characteristics of the entrepreneur--the risk-taker, and the roles of business creators in American society. In addition, this course looks at the critical factors and special problems associated with the process of creating potential business ventures.
- BA200 The Legal Environment of Business (3,3,0) Prerequisites: None**  
This course is an introduction to the legal system and the common body of knowledge as it relates to the environment of business, providing emphasis on business relations with society and government.
- BA215 Cost Accounting I (3,3,0) Prerequisites: BA116**  
This course is a study of cost information systems and accumulation procedures for the purpose of budgetary planning. The recording of and preparation of factory overhead, material, and labor costs in a form acceptable in AICPA will be taught.
- BA216 Cost Accounting II (3,3,0) Prerequisites: BA215**  
Planning for profits and sales and controlling of costs and profits are covered. Emphasis will be placed on cost and profit analysis.
- BA233 Principles of Marketing (3,3,0) Prerequisites: None**  
This course is an introduction to marketing, with special emphasis upon retailing from the standpoint of both consumers and businessmen, including the establishment, financing, and organizing of merchandising institutions, as well as buying and selling procedures.

- BA234 Retailing (3,3,0) Prerequisites: None**  
This course is a continuation of BA233 with emphasis placed upon control of the store operation.
- BA235 Small Business Management (3,3,0) Prerequisites: None**  
This is a study of the operation of small business. Included in the course are topics dealing with organization, financial structure, record keeping, and promotion of small business. Also included are topics dealing with salesmanship, personnel relations, customer psychology, and business law.
- BA237 Management (3,3,0) Prerequisites: None**  
This is a study of management with three primary purposes: to cover in detail the managerial process, to understand the purposes of organizations and how they function, and to understand human behavior as it relates to organizations.
- BA246 Tax Accounting (3,3,0) Prerequisites: None**  
Local, state, and federal taxes of sole proprietorships, partnerships, and corporations are studied. Tax practices and procedures relating to assessment and collections are also covered.
- BA248 Advertising (3,3,0) Prerequisites: None**  
The role of advertising in society is investigated along with its institutions and media. The creation and planning of advertising is covered along with effective promotional activities.
- BA250 Human Relations (3,3,0) Prerequisites: None**  
This is a study of the methods of selecting and training personnel, discipline problems, morale, wages, fringe benefits, promotions, separations, and other related areas.
- BA251 Customer Relations (2,2,0) Prerequisites: None**  
This course is an exploration of the ways and means of making good first impressions, maintaining satisfaction, communicating effectively, handling complaints, and avoiding the mistakes which offend customers. Emphasis will be given to face-to-face as well as telephone contacts.
- BA252 Financial Principles (3,3,0) Prerequisites: None**  
Monetary and credit systems are covered extensively with emphasis placed on meeting the demand for funds, the factors affecting the supply of funds, and monetary and credit policies and problems.
- BA253 Principles of Investment (3,3,0) Prerequisites: BA135, or student must have written departmental approval.**  
An introduction to the securities market with special attention to corporate securities and financial policies including: limited income securities, common stock, special classes of securities, security analysis, and portfolio development policies.

- BA255 Purchasing (3,3,0) Prerequisites: BA237**  
The purchasing department's role in logistics, objectives, and contributions are studied. Coordination of purchasing with other management functions such as materials management, the computer, and ethics are studied.
- BA265 Sales Management (3,3,0) Prerequisites: None**  
This course is designed to provide the student with the necessary background in organization, management, and operation of an effective sales force. The laws of effective selling are covered extensively.
- BA268 Credits and Collections (3,3,0) Prerequisites: None**  
This course is designed to provide the student with an understanding of basic credit principles, by explanation of credit as a tool, analysis of dealer's and individuals' ability to pay, use of credit references, and development of skills and techniques normally used in a credit department for collection of past due accounts.

## CHILD DEVELOPMENT ASSOCIATE

- CDA100 Introduction to CDA (3,2,2) Prerequisites:** High school diploma or GED  
This course will examine the Child Development Associate (CDA) Credential, the Credential Award System, explore ways the student can meet the CDA Competency Standards, and provide assistance in beginning the credentialing process.
- CDA110 Child Development: Preschool Years (3,3,0) Corequisites:** Recommended that CDA100 be taken concurrently by students seeking the CDA credential  
Psychological and physical growth patterns, emotional, social and cognitive skills from birth to age six. Includes behavior, discipline, ages and developmental stages, and acquisition of skills in recognizing and interpreting child behavior.
- CDA120 Preschool Curriculum (3,2,2) Prerequisites:** CDA110  
This course will explore the curriculum guides needed in preschool education concentrating on the social, emotional, creative, physical cognitive skill development and needs of preschool children.
- CDA130 Administration of Early Childhood Programs (3,2,2) Prerequisites:** None  
An in-depth study of the role of the early childhood program administrator in such areas as food services, health, and safety; implementation and supervision of an early childhood program; business techniques necessary to operate a successful early childhood program.

## CONSUMER EDUCATION

- CE033 Basic Income Tax Preparation (5,5,1) Prerequisites: None**  
The H & R Block Income Tax Course enables the student with no prior knowledge to begin to gain a solid and working understanding of the intricacies surrounding most income tax returns. Study includes illustrated lectures, discussions and the practical use of tax forms. There are 27 three-hour classes. Students who successfully complete the course are awarded the H & R Block certificate of achievement. The five (5) hours credit may be used only for general credit and are not applicable to any business requirement for one- or two-year business curricula.
- CE040 Red Cross Multimedia First Aid & CPR (1,1,0) Prerequisites: None**  
This course will provide fundamental principles and skills in basic first aid and accident prevention. Participants will also be prepared, through knowledge and skill development, to meet the needs of most situations in which CPR is needed and medical assistance is not excessively delayed.
- CE100 Basic Consumerism (3,3,0) Prerequisites: None**  
This is a course in developing basic consumer principles and skills to meet the ever-challenging and ever-changing demands of day-to-day living in a free enterprise economic system. The course emphasizes consumer protection, resource management, decision-making, planning for food buying, purchasing health services, insurances, using community resources and credit.



## COSMETOLOGY

- CS100 Introduction to Cosmetology (3,3,0) Prerequisites: None**  
This course is an orientation to the science of cosmetology and includes cosmetology laws and rules as well as sterilization and sanitation techniques and policies. Basic hair shapings and finger waving will also be covered in this course. Students will be required to register with the Michigan State Board of Cosmetology during the first week of class.
- CS101 Beginning Hairstyling (3,3,0) Prerequisites: CS100**  
Student will gain more experience in finger waving and learn the basics of pin-curling, shampooing, manicuring and facials. The use and care of cosmetology equipment will also be covered.
- CS102 Beginning Hair Cutting and Permanent Waving Theory (3,3,0) Prerequisites: CS101**  
This course will provide further training in the elements of basic hairstyling and an introduction to hair shaping, permanent waving and scalp and hair treatments. Basic electrical theory as related to cosmetology and the use of thermal and specialized electrical equipment will also be covered.
- CS103 Beginning Hair Coloring and Professional Development Theory (3,3,0) Prerequisites: CS102**  
This course will cover basics in hair coloring, chemical hair relaxing, wiggery and professional development and ethics.
- CS110 Introduction to Cosmetology Lab (4,0,8) Co-Requisites: CS100**  
This course provides students with laboratory experiences in the science of cosmetology and includes cosmetology laws and rules as well as sterilization and sanitation techniques and policies. The student will practice basic hair shapings and finger waving.
- CS111 Beginning Hairstyling Lab (4,0,8) Co-Requisites: CS101**  
This course will provide students with laboratory experiences in the practice of finger waving, and the practice of basic pin-curling, shampooing, manicuring, and facials. The use of cosmetology equipment will be stressed.
- CS112 Beginning Hair Cutting and Permanent Waving Lab (4,0,8) Co-Requisites: CS102**  
This course provides students with laboratory experiences in basic hairstyling and hair shaping, permanent waving and scalp and hair treatments. Basic electrical theory as related to cosmetology will be applied and the use of thermal and specialized electrical equipment will be practiced.
- CS113 Beginning Hair Coloring and Professional Development Lab (4,0,8) Co-Requisites: CS103**  
This course will provide students with laboratory experience in haircoloring, chemical hair relaxing, wiggery and professional development and ethics.

- CS200 Advanced Hairstyling (3,3,0) Prerequisites: CS103**  
 This course will provide students with an introduction to cosmetic chemistry. Students will receive training in advanced hairstyling and shaping.
- CS201 Advanced Hair Coloring and Permanent Waving (3,3,0) Prerequisites: CS200**  
 This course is a continuation of advanced hairstyling with special emphasis on coloring and permanent waving. The basics of trichology will also be presented.
- CS202 Advanced Hairstyling II (3,3,0) Prerequisites: CS201**  
 This course continues to develop the student's technical skills in hairstyling, shaping, coloring and permanent waving. A continuation of the science of trichology will further be developed.
- CS203 Cosmetology Salon Management and Board Review Theory (3,3,0) Prerequisites: CS202**  
 This course will provide training to students in salon management techniques, professional ethics, and job preparation skills. A review of all theoretical and practical experiences will be covered in a 35-hour segment of this course, designed to prepare students for the State Board Licensing Examination.
- CS210 Advanced Hairstyling Lab (5,0,10) Co-requisite: CS200**  
 This course will provide students with laboratory experiences in cosmetic chemistry at the introductory level. Students will practice advanced hairstyling and shaping.
- CS211 Advanced Hair Coloring and Permanent Waving Lab (5,0,10) Co-requisites: CS201**  
 This course will provide students with laboratory experiences in advanced hairstyling with emphasis on coloring and permanent waving. The student will become familiar with the basics of trichology.
- CS212 Advanced Hairstyling Lab II (5,0,10) Co-requisites: CS202**  
 This course will provide students with further laboratory experiences in the technical skill of hairstyling, shaping, coloring, and permanent waving. Further study in the science of trichology will be stressed and further development of all basic skills learned through our program will be improved.
- CS213 Salon Management and Board Review Lab (5,0,10) Co-requisites: CS203.**  
 This course will provide students with training in salon management techniques, professional ethics and job preparation skill in the laboratory setting. A review of all theoretical and practical experiences will be covered in a 35-hour segment of this course, which is designed to prepare students for the State Board Licensing Examination. Special emphasis will be placed on the Pre-Board Examination.

CS250 Cosmetology Instructional Internship (16,9,22) Prerequisites: Student Must Have Written Departmental Approval and Current Cosmetology License. This course is taught on a tutorial basis in an active school setting, giving the student experience in a large variety of training situations. Only one student is enrolled at a time, and he/she is expected to devote approximately 28 hours per week throughout the 18 week course. Emphasis will be on methods of presentation, record keeping, safety, regulations, and customer/student relations.

## CRIMINAL JUSTICE

- CJ100 Introduction to Criminal Justice (3,3,0) Prerequisites: None**  
This course provides the student with a broad overview of the history and scope of the American Criminal Justice System.
- CJ110 Introduction to Corrections (3,3,0) Prerequisites: None**  
This course is designed for persons employed in or interested in a career within the broad field of correctional administration. This course will review where corrections in America originated, where it is today, where it seems to be going, and some of the issues which need to be resolved. Emphasis is to be placed on the multi-faceted approach to corrections in our contemporary society.
- CJ115 Stress Management for Correctional Officers (1,1,0) Prerequisites: None**  
PENDING CURRICULUM COMMITTEE APPROVAL  
This course focuses on the physical and psychological effects of a criminal justice career on the practitioner, as well as his/her family. A variety of stress management strategies and techniques will be discussed, and the student will be required to select and demonstrate those which he/she feels most appropriate for him/her.
- CJ120 Corrections Institutions/Facilities (3,3,0) Prerequisites: None**  
This course provides the student with a concentrated overview of correctional institutions and facilities. It is designed primarily for students intending to pursue a career in the criminal justice system or for those already employed within the system. It has relevance to other students pursuing a social science orientation. The course explores federal, state, county, and local facilities, including maximum, close, medium, and minimum custody facilities. It addresses community facilities, co-educational facilities, and the safety and security requirements and considerations related to each. Constitutional and managerial issues are stressed. The course includes historical developments and philosophy, sociological concepts, definitions and concepts, and their application. The interplay of policy, procedures, management, law, and facility design is stressed.
- CJ125 Police Administration and Operations (3,3,0) Prerequisites: None**  
This course is for students pursuing careers in the criminal justice system or for those already employed within the system. This course explores the evolution of administrative theory with special emphasis on its impact and application at the operational level of law enforcement agencies.
- CJ130 Criminal Investigation (3,3,0) Prerequisites: None**  
This course includes the basic principles of modern criminal investigation techniques including crime scene search, collection and preservation of evidence, follow-up investigation, police criminalistics, and court preparation and testimony.

- CJ135 Report Writing for Line Officers (1,1,0) Prerequisites: None**  
 This course provides the student with the skills needed to complete the forms used to document prisoner misconduct and other significant events in a criminal justice setting.
- CJ210 American Criminal Law (3,3,0) Prerequisites: None**  
 This course is for persons seeking employment in the criminal justice system. Included are the historical development and philosophy of criminal law, legal definitions, concepts, and their application to the criminal justice system.
- CJ220 Legal Issues in Corrections (3,3,0) Prerequisites: None**  
 This course provides the student with a broad overview of legal issues related to corrections in the United States. It is designed primarily for students intending to pursue a career in the criminal justice system or those already employed within the system. It has relevance to all students pursuing a social science orientation. The course explores legal conflicts arising from the rights of the accused, the convicted, society, and those who work within the system. Constitutional limitations are stressed, as is the impact of law on correctional practice. The course includes historical developments and philosophy, as well as definitions, concepts, and their applications.
- CJ230 Juvenile Delinquency (3,3,0) Prerequisites: None**  
 This course is designed for students interested in or already employed within the criminal justice system. This introductory course includes: theories of delinquency causation, examination of the family relationship and juvenile delinquency, the juvenile justice system, and delinquency prevention programs.
- CJ240 Introduction to Security Systems (3,3,0) Prerequisites: None**  
 This course is designed for persons employed in or interested in a career within the broad field of public and private security administration.
- CJ250 Client Relations in Corrections (3,3,0) Prerequisites: None**  
 This course is designed to acquaint the student with the principles of human relations as they relate to the criminal offender. Topics to be covered will include the meaning and function of culture, minorities, discrimination, and affirmative action; attitude formation, human relations skills, and professional responses to human behavior.
- CJ260 Client Growth and Development (3,3,0) Prerequisites: None**  
 This course is designed to acquaint the student with the conditions which promote the growth and development of criminal offenders. The course will differentiate between normal and criminal behavior; will trace the social, psychological, and biological development of offenders; identify specific problems related to offenders; and propose a set of intervention strategies.

CJ290 Criminal Justice Practicum (5,0,20) Prerequisites: Approval of CJ Coordinator

This course is a planned program of internship, observations, study, and work in selected criminal justice agencies. It supplements previous classroom study with participation in criminal justice systems of the United States and foreign nations.

## DATA PROCESSING

- DP110 Introduction to Data Processing (3,2,2) Prerequisites: None**  
This course covers the fundamental concepts and applications of computers; the impact of the computer on human events and social institutions; the control, predictions, and implications of future computer developments. The logic of computer control using BASIC programming language will be introduced.
- DP111 Computer Applications in Health Care (3,2,2) Prerequisites: None**  
The purpose of this course is to introduce nursing and allied health students to computer applications in health care. Emphasis of the course is on basic computer literacy skills and hospital applications of computers. The student will examine the use of computers in health care and the impact of technology on health care delivery. Topics in the course include computer hardware and software, computer applications in health care, future trends, and ethical issues. Lab experience is designed to provide the student with an opportunity to interact with a computer using various software packages.
- DP112 Introduction to BASIC (1,1,0) Prerequisites: DP110, or student must have written departmental approval.**  
This is a BASIC language introduction. It is intended for students who have had no prior exposure to programming and may not feel quite ready to start right into the full effort of DP116. Only the very elementary statements of BASIC will be covered with some hands-on use of the microcomputers to give a first exposure to their use. Students who have completed DP110 prior to the Fall of 1987 should consider taking this course.
- DP113 Introduction to the IBM PC and Compatible PC's (1,0.5,1) Prerequisites: None**  
This course provides a brief introduction to the use of the IBM or compatible machines using the current operating system software and an introduction to the use of application software on these machines.
- DP115 Introduction to Computer Programming (3,2,2) Prerequisites: DP110, OE120,**  
This is the first computer programming course. Microcomputers and the programming language "BASIC" are the primary tools. Included are programming concepts and problem-solving techniques, structured basic programming; files and file manipulation techniques, understanding and using built-in features and available software. Programming assignments will reflect personal, business, and scientific applications.  
**NOTE: THIS CLASS IS NO LONGER OFFERED**
- DP116 Microcomputers: Operating Systems and Applications (3,2,2,)**  
Prerequisites: DP110 or student must have written departmental approval. This course will introduce the student to the operating systems used on today's microcomputers. The main emphasis will be on MS-DOS (Micro-Soft Disk Operating System), which is used on the IBM-PC and its compatibles. The student will also be introduced to some commercial application software, file management, report generation, word processing, and spreadsheets. The FFS series from Software Publishing Company will be used on both the Apple and IBM-PC.

- DP121 Introduction to Computer Language/Fortran (3,2,1) Prerequisites: DP110.**  
FORTRAN is a computer language used to communicate commands to a computer. Completion of the course will enable students to flowchart problems and then program this information as instructions for the computer. Topics include: write statement, read statement, format statement, do-loops, arrays, sub-routines, and addition I/O statements.
- DP122 Introduction to Pascal (3,2,2) Prerequisites: DP110 or student must have written departmental approval.**  
This course provides an elementary understanding of the principles and techniques of writing computer programs in PASCAL. Topics covered will include: problem solving, algorithm development, structured programming techniques, module design, and dynamic storage concepts.
- DP215 Advanced Programming in BASIC (3,2,2) Prerequisites: DP110, DP122 or student must have written departmental approval.**  
Advanced Programming in BASIC is a follow-up course to DP115. This course will cover additional and more in depth topics in programming in the BASIC language.
- DP220 COBOL Programming (3,2,2,) Prerequisites: DP110, DP115 or DP122**  
This course provides an elementary understanding of the principles and techniques of writing computer programs in COBOL. Features and capabilities of COBOL will be used in solving business-related problems. Topics covered will be: computer programming, flowcharting, data storage, and procedural study. (FORMERLY DP120)
- DP225 RPG II Programming (3,2,2) Prerequisites: DP110, DP115 or DP122**  
RPG II Programming provides an elementary understanding of the principles and techniques of writing business-related programs in RPG II. The course will be heavily oriented to hands-on programming. Topics covered will be: program design, flowcharts/pseudocode, report generation, editing, file concepts and use, table processing, and other features of RPG II. (FORMERLY DP125)
- DP230 Microcomputer Spreadsheets (3,2,2) Prerequisites: DP116 or student must have written departmental approval.**  
An introduction to electronic spreadsheets using microcomputers. Popular spreadsheet applications programs available for use on microcomputers will be discussed including the concepts, use and implementation of a broad spectrum of problems.
- DP235 Microcomputer Data Base Applications (3,2,2) Prerequisites: DP116.**  
This course will introduce the student to the concepts of data base management and the application of a typical Data Base Management System to an organization's information needs utilizing microcomputers. The course will make extensive use of microcomputers in the laboratory with DBASE III software.



- DP240 **Systems Concepts/Design (3,3,0) Prerequisites: ~~DP120~~**  
Systems development methodology as applied to the analysis, design and implementation of manual and computerized systems. Topics include; the role of the System Analyst; system investigation; design of systems output, input, files, processing and controls; project management and implementation. Students will have the opportunity to participate in the analysis and design of a simulated business system.
- DP290 **Programming Project (3,1,4) Prerequisites: DP240, BA135, BA116.**  
A comprehensive laboratory project requiring the student to conduct a detailed analysis and implementation of a data processing application program or system.

## ELECTRICITY/ELECTRONICS

- EL100 Concepts in Electricity (3,2,2)** Pre- or Corequisites: MA100.  
The purpose of this course is to give a student a basic knowledge of electrical components, AC and DC circuits, and electrical measuring instruments. Other topics include schematic symbols, power, capacitance, inductance, impedance, magnetism, electro-magnetism, transformers, and motors. This course emphasizes a "hands-on" approach, with the use of modern components and equipment.
- EL101 \*Basic Electricity (PROPOSED) (3,2,2)** Prerequisites: Student must pass the ASSET Numerical Skills Test, Co-Requisites: MA100.  
This course introduces the student to electricity fundamentals, DC circuit laws, magnetism and magnetic devices, and basic measurement techniques. Elementary mathematical analysis techniques along with use of the scientific calculator are included. Laboratory experiments will analyze concepts covered in lectures, develop proper electrical measurement techniques, and offer an introduction to soldering.
- EL102 \*Basic Electronics (PROPOSED) (3,2,2)** Prerequisites: EL101, Corequisite: MA104.  
This course is a continuation of EL101 studying AC circuits and components including capacitors, inductors and transformers. Basic circuit laws discussed in EL101 are extended to AC. Characteristics of solid state devices including operation of diodes and transistors are also included. Laboratory experiments will analyze concepts covered in lecture. Instrumentation includes oscilloscopes, signal generators, and frequency counters.
- EL110 Electronic Circuit Analysis I (3,2,2)** Prerequisites: EL100, MA104.  
Electronic Circuit Analysis is a course in the use of mathematics as a tool in analyzing working and defective circuitry. Although primarily lecture, some lab time is used for demonstrations and class assignments.
- EL120 Electronic Devices (3,2,2)** Prerequisites: EL110, Co-requisites: MA102.  
The student will study many electrical and electronic components, including inductors, capacitors, transformers, diodes, transistors, and integrated circuits. Applications such as filters, resonant circuits, and basic amplifier configurations will be used to reinforce the student's knowledge.
- EL141 Microprocessors I (3,2,1.5)** Prerequisites: None  
This course is an introduction to microcomputer structure and programming, with the Motorola 6800 microprocessor used for examples. Topics include number systems and codes, microcomputer basics, computer arithmetic, an introduction to programming, and the 6800 microprocessor. Laboratory time is provided for developing and executing machine language programs.

\*Course descriptions are subject to change pending Curriculum Committee approval

- EL160 Electronic Test Equipment (3,2,2,)** Prerequisites: EL241  
This course will explore the use of test equipment in electronic servicing. A variety of servicing examples will be used ranging from audio amplifiers to computer systems. Many practical troubleshooting hints will be offered, including the use of the human senses.
- EL210 Electronic Circuits (3,2,2)** Pre- or Co-requisites: EL120  
This course is a study of electronic component applications. This will cover basic power supplies, regulated power supplies, amplifiers, including: audio, RF, and power types, and some basic digital and pulse circuitry. Construction and analysis of these circuits will be included in the laboratory experiments, along with proper soldering and desoldering techniques.
- EL230 Digital Electronics (3,2,2)** Prerequisites: EL120  
This course is a study of techniques used in building and analyzing digital circuitry. Course topics include numbering and coding systems, digital integrated circuits, Boolean algebra, combinational and sequential logic circuits, digital counters, and computer fundamentals.
- EL241 Microprocessors II (1,.5,1)** Pre- or Co-requisites: EL141, EL230  
This course continues EL141's discussion of microprocessors, with emphasis on circuits required in computer interfacing. Basic keyboard and display interfacing will be discussed in lecture and built in lab.
- EL251 Industrial Electrical Maintenance I (2,1,1)** Prerequisites: EL100 or written departmental approval.  
This course is for those who have an understanding of electrical basics and want to learn more about industrial motors and their controls. Included are a study of the National Electrical Code, wiring symbols and diagrams, motors, and basic control circuits.
- EL252 Industrial Electrical Maintenance II (2,1,1)** Prerequisites: EL251  
This course builds on knowledge and skills taught in EL251 and is for students having a good understanding of basic industrial motor circuits. Included is a study of the National Electric Code, timing circuits, speed control, reduced voltage starting and troubleshooting.
- EL253 Industrial Electrical Maintenance III (2,1,1)** Prerequisites: EL252  
This course will emphasize programmable controllers, their use, selection, setup, and servicing. This course is designed to give the electrician an understanding of the programmable controller, its logic functions, its installation, and troubleshooting.
- EL254 Industrial Electrical Maintenance IV (2,1,1)** Prerequisites: EL253, or student must have written departmental approval.  
This course builds on the student's knowledge of programmable logic controllers by using them to program a robot. Also included is a study of robot types, components, safety, maintenance, and off-line computer programming.

- EL261 Electronic Communications (2,0,3) Prerequisites: EL210**  
Electronic Communications is a course in communications systems, such as AM and FM radio, television, and digital data links. Antenna systems are also included. This is an advanced course for those students interested in employment as a radio, television, or telephone technician.
- EL271 Microprocessor Interfacing (3,0,4) Prerequisites: EL241**  
This course is a continuation of the study of microprocessors. The course will be primarily concerned with standard peripheral devices, and how they are interfaced into a microprocessor system. In addition, more advanced microprocessor systems, such as the 6800, will be studied.
- EL281 Robotics and Industrial Electronics (3,0,4) Prerequisites: EL241**  
This course is a study of industrial robots, which includes their classification, operation, programming, and functional analysis. Additional topics include motors, sensors, and control systems.

## FOOD SERVICE TECHNOLOGY

- FST100 Introduction to Food Service (3,3,0) Prerequisites: None**  
This course provides students with an introduction to the Food Service Industry. A study of the many divisions of the industry, their function and relationship to careers for the student will be covered. The course will provide information on each of the many types of food service and the employment potential found in each.
- FST101 Food Service Sanitation (2,2,0) Prerequisites: None**  
This course provides an in depth analysis of guidelines for effective food service sanitation. The course will provide information and methods to help the food service manager apply sanitation procedures to food handling functions.
- FST110 Food Production Skills—General (4,2,4) Prerequisites: FST101**  
This course presents the various food production methods geared toward quantity food production. The class will include basic terminology and special consideration of safety and sanitation in a "hands on" type experience. The course will include preparation of all types of meals.
- FST120 Food Production Skills—Entree (4,2,4) Prerequisites: FST101**  
A continuation of FST110 with special emphasis on preparation of both luncheon and dinner entrees.
- FST130 Meat and Portion Control (2,1,2) Prerequisites: FST101**  
This course provides a study of meat, its relationship to menu and how costs can affect menus. The student will be able to identify meat cuts and the methods of preparation for each. Special emphasis on meat quality and its significance to customer satisfaction and profitability will also be covered.
- FST140 Nutrition and Menu Planning (3,3,0) Prerequisites: None**  
This course presents a study of normal nutrition and how food is absorbed into the body. Students will study menu planning with a special emphasis on nutritional value and menu attractiveness. Special projects in all areas of menu planning will be included to ensure students will gain experience that will assist them in the food service industry.
- FST200 Equipment Design, Layout, Selection (2,1,2) Prerequisites: None**  
In this course students will study the equipment and facilities available to the food service industry. A student project will consist of the overall design and equipment layout for maximum productivity and the selection of the actual equipment based on desired function, quality and performance of a specific food service facility.

- FST201 Food Service Management (3,3,0) Prerequisites: None**  
In this course students will study the manager's role in the operation of a food service establishment. The course will include both the study of people and their performance as well as management controls and their relationship to the successful management of a food service operation.
- FST210 Food Production Skills—Bakery (4,2,4) Prerequisites: FST101**  
A continuation of FST110 and FST120, with special emphasis on preparation of all baked products, including cake and pastry decoration.
- FST220 Food Production Skills Catering (4,1,5) Prerequisites: FST101**  
In this course the student will study the types and methods of catering operations. Special emphasis will be placed upon obtaining practical experiences in the planning of menus and preparation of hors d'oeuvres and other items appropriate for various themes.
- FST230 Food Purchasing (3,3,0) Prerequisites: None**  
In this course students will study the standards of quality and quantity in purchasing as applied to all phases of the food service operation. Students will gain experience in the proper selection of all types of food service equipment ranging from place settings in the dining room to a broiler in the kitchen. All types of food and grocery selection will also be covered. Particular emphasis will be placed on standardized procedures and specifications for each purchase.

## FOREIGN LANGUAGES

- FL120** Elementary French I (4,4,0) Prerequisites: None  
Fundamental training in basic language skills stressing oral and written expression as well as aural comprehension. Open to students with no French background or one year of high school French. Students electing this class should plan to take FL121 second semester.
- FL121** Elementary French II (4,4,0) Prerequisites: FL120  
A continuation of Elementary French 120
- FL130** Elementary Spanish I (4,4,0) Prerequisites: None  
This is the first half of a two semester beginning Spanish course. This course is designed primarily around conversational approaches to the language, but does include instruction in the basics of Spanish grammar. Lectures and written exercises will supplement an emphasis on the oral recitation and classroom conversation. In addition, pertinent aspects of Hispanic culture will be examined.
- FL131** Elementary Spanish II (4,4,0) Prerequisites: FL130  
A continuation of Elementary Spanish 130.

## HUMANITIES

- HU100** **Fundamentals of Music (3,3,0)** Prerequisites: None  
This course includes the development of the techniques necessary to the understanding and knowledge of music fundamentals. Students shall have the opportunity to develop basic skills in reading and writing music, along with sight singing, ear training, rhythmic organization, and keyboard familiarity.
- HU101** **Music Appreciation (3,3,0)** Pre- or Co-requisites: HU100 recommended  
An introduction to the various styles of music, this course is designed to increase the student's understanding, awareness and enjoyment of music through the development of proper listening habits. Class presentations will include records and demonstrations.
- HU110** **Music in the Elementary Classroom (3,2,1)** Prerequisites: None  
This course is designed to increase the student's awareness of music programs for the elementary grades. Creative experiences, use of appropriate materials and methods pertinent to the elementary classroom, and the development of music fundamentals is emphasized.
- HU111** **Teaching Drawing to Children (1,1,.5)** Prerequisites: None  
This is a basic drawing course for people interested in learning to draw what they see. Topics covered are contour, light and shadow, perspective, and proportions of the human figure. A method of instruction appropriate for use with children or the adult beginner in art is also taught.
- HU112** **Teaching Ceramics to Children (1,1,.5)** Prerequisites: None  
This is an introductory hands-on course in working with clay. Students will learn many handbuilding techniques for making pottery and sculpture, decorating and glazing techniques, and the loading and firing of electric and sawdust kilns.
- HU113** **Teaching Sculpture to Children (1,1,.5)** Prerequisites: None  
This course provides instruction and practical experience in the creation of various types of sculpture. Emphasis will be given to modeling, carving, and assembling techniques using low cost materials suitable for children or the adult beginner in art.
- HU114** **Teaching Painting to Children (1,1,.5)** Prerequisites: None  
This course provides instruction and practical experience in the use of color, composition, and various painting media to create paintings. Materials and techniques suitable for children or the adult beginner in art are emphasized.
- HU115** **Teaching Printmaking to Children (1,1,.5)** Prerequisites: None  
This course provides instruction and practical experience in the use of various printmaking media and techniques to create designs and prints. Materials and techniques suitable for children or the adult beginner in art are emphasized.



- HU118 Art Materials and Methods-Studio (1,.5,.5) Prerequisites: None**  
This course will provide students with the opportunity to use various art materials and techniques to make art objects. Films and examples will be shown and demonstrations will be given by the instructor when new ways of working are introduced.
- HU119 Teaching Art Appreciation to Children (1,1,0) Prerequisites: None**  
Topics covered in this course will include lecture/discussion of works of art using prints or actual art objects, experiments involving perception and the elements and principles of design, and demonstrations of the methods and materials used by artists to create art forms.
- HU120 Introduction to Art (2,1,2) Prerequisites: None**  
This course provides the student who has very little background in art with the basic information about color, design, composition, and the use of art materials and techniques needed for courses in drawing, painting, and ceramics.
- HU121 Sketching (2,1,1.25) Prerequisites: None**  
This is a course in basic free-hand drawing techniques including shading, perspective and proportions. Students will learn to accurately sketch a variety of three-dimensional forms. Emphasis will be placed on using the sketch as a method of communication.
- HU122 Drawing I (3,1,3) Prerequisites: None**  
This course includes instruction in basic drawing techniques including shading, perspective and the proportions of the human face and figure. Studio work will provide the student with drawing experiences using a variety of subjects and materials.
- HU123 Drawing II (3,1,3) Prerequisites: None**  
This course will further develop the basic traditional drawing skills already acquired in beginning drawing. Students will use a variety of materials to draw models in the studio.
- HU124 Lettering & Calligraphy (3,2,2) Prerequisites: None**  
An introductory course in typography. This course will present the history of typestyles, their classification and identification. Designing lettering for specific purposes and indicating type of advertising layouts will be discussed and practiced. The course will include an introduction to calligraphy.
- HU125 Painting I (3,1,3) Studio, Prerequisites: None**  
This course includes basic instruction in color mixing and the techniques of painting with oils or acrylics. Studio work is in the student's chosen medium.
- HU126 Painting II (3,1,3) Studio, Prerequisites: HU125**  
This course places emphasis on composition and color theory.
- HU130 Ceramics I (3,1,3) Studio, Prerequisites: None**  
This course includes instruction in the basic materials, techniques, and aesthetics of working in clay. Studio work consists of forming, decorating and glazing hand built pottery and sculpture.

- HU131 Ceramics II (3,1,3) Studio, Prerequisites: HU130**  
This course places emphasis on further development of hand built forms or learning the basic techniques of throwing on the potter's wheel and exploring different decorating and glazing techniques.
- HU150 Beginning Photography (3,2,2) Prerequisites: None**  
This course is an introduction to basic photographic techniques which include camera use, developing, printing, enlarging, and matting of black and white photographs.
- HU155 Advanced Black & White Photography (3,2,2) Prerequisites: HU150 or student must have written departmental approval.**  
This course is a continuation of the basic black and white course to help expand the elementary principles and skills learned. Methods of manipulating the finished image, such as toning, will be learned. Techniques of retouching will be explored and practiced. This is a more in depth look at the effects of exposure and development on black and white films.
- HU185 Special Ensemble I (1,0,1) Prerequisites: None**  
Ensemble groups are appropriate for musicians who enjoy performing in small select vocal ensembles. Participants will be selected after successfully auditioning with the music director. Each ensemble will meet approximately twice a week and the rehearsal schedule will be arranged sometime after the first week of each semester. These ensembles may include women's, men's and/or mixed singing groups.
- HU186 Special Ensemble II (1,0,2) Prerequisites: None**  
This course is a continuation of HU185.
- HU191 Choir I (1,0,2) Prerequisites: None**  
This course offers students interested in the performing arts an opportunity to further develop musical talents. The choir performs at several campus and community events throughout the academic year. Opportunity is also provided to perform with small vocal ensembles whose members are selected from choir personnel.
- HU192 Choir II (1,0,2) Prerequisites: None**  
This course is a continuation of HU191.
- HU195 Jazz Band I (1,0,2) Prerequisites: None**  
This group is made up of instrumentalists having previous band experience. The class offers instrumental musicians the opportunity to continue their education on their particular instrument in the jazz medium. The jazz band performs at several campus and community events throughout the academic year.
- HU196 Jazz Band II (1,0,2) Prerequisites: None**  
This course is a continuation of HU195.

- HU200 Humanities I (4,4,0) Prerequisites: None**  
The purpose of this course is to develop the student's understanding of the artistic, literary and philosophical nature of man. Viewed historically, selected topics integrate material from the fields of art, literature, music, philosophy and religion.
- HU201 Humanities II (4,4,0) Prerequisites: None**  
This course is a continuation of HU200. Completion of HU200 before enrolling in HU201 is recommended but not required. Humanities II places emphasis on the modern historical development of thought in art, literature, music, philosophy, and religion.
- HU220 Introduction to Philosophy (3,3,0) Prerequisites: None**  
This course is designed to acquaint the student with some fundamental questions concerning the nature of man and the way in which the most profound thinkers of the past and present have dealt with those questions. Though not a prerequisite, the completion of HU200 before enrolling in Introduction to Philosophy is strongly recommended.
- HU222 Bioethics (3,3,0) Prerequisites: None**  
This course is designed for the study of some of the major ethical theories and their relevance to the decision-making process in the biologically or health-care related fields. Topics to be included in this course are issues related to: 1) conception/birth, 2) life/death, and 3) patient's or individual's rights, etc.
- HU225 Art for the Elementary Teacher—Lecture and Studio (2,1,2)**  
Prerequisites: None  
This course combines instruction in the practice and philosophy of teaching arts and crafts to children, with studio work in a variety of materials and techniques suitable for their use.
- HU227 Painting III (3,1,3) Studio, Prerequisites: HU126**  
This course places emphasis on exploration of traditional or experimental painting techniques.
- HU228 Painting IV (3,1,3) Studio, Prerequisites: HU227**  
This course places emphasis on development of individual expression.
- HU230 Watercolor Painting (2,.5,1.5) Prerequisites: None**  
This course includes basic instruction in color mixing and the techniques of painting with watercolor.
- HU232 Ceramics III (3,1,3) Studio, Prerequisites: HU131**
- HU233 Ceramics IV (3,1,3) Studio, Prerequisites: HU232**
- HU240 American Art Seminar (1,0,1) Prerequisites: None**  
In this course, students will read and report orally on major American artists and movements. The artists' works will be examined critically in class. Subsequent class discussions will explore the derivations, significances, meaning, and trends evident in their artistic expressions.

- U241 American Art Seminar II (1,1,0) Prerequisites: None**  
In this course students will read and report orally on major American artists and movements of the Twentieth Century. The artists' works will be examined critically in class. Subsequent class discussions will explore the significances, meanings, and trends evident in their artistic expressions.
- U245 French Impressionism (1,1,0) Prerequisites: None**  
This course offers an opportunity to explore the artists, techniques, and environments of the Impressionist movement in painting. It took place in France, one hundred years ago, and is one of the most beautiful and popular periods in art history.
- U250 Color Photography (3,2,2) Prerequisites: HU150, or student must have written departmental approval.**  
This course is a basic color photography experience. Techniques of film development, color printing, and color balance of color prints will be explored.
- U287 Special Ensemble III (1,0,2) Prerequisites: HU185**  
This course is a continuation of HU186.
- U288 Special Ensemble IV (1,0,2) Prerequisites: HU186**
- U293 Choir III (1,0,2) Prerequisites: HU191**  
This course is a continuation of HU192.
- U294 Choir IV (1,0,2) Prerequisites: HU192**  
This course is a continuation of HU293.
- U297 Jazz Band III (1,0,2) Prerequisites: HU195**  
This course is a continuation of HU196.
- U298 Jazz Band IV (1,0,2) Prerequisites: HU196**  
This course is a continuation of HU297.

## INDUSTRIAL TECHNOLOGY

- IT100 Machine Tool Theory (2,2.25,0) Prerequisites:** Student Must Have Written Departmental Approval.  
This is a lecture course consisting of the definition, history, operation and application of the various tool room machines. Emphasis is placed on specific and special operations such as threading, taper turning, indexing, electro-chemical machining, and cutting tool geometry. Other non-traditional machining will be mentioned. The machinist handbook will be reviewed and used throughout the course as a reference for information needed in the operation of machine tools.
- IT102 Basic CNC Operation (2,2.25,0) Prerequisites:** Student Must Have Written Departmental Approval.  
This course provides a hands-on experience in programming Computer Numerical Control systems used with machine tools. Topics covered include: circular and linear interpolation, absolute programming, Preparatory (G) and Miscellaneous (M) functions. Students will write their own programs and transfer them from the computer to the CNC machine and make the parts.
- IT104 Statistical Process Control (1,1,0) Prerequisites:** None  
Commonly known as SPC, this course will include a brief history of SPC; a few of the statistical concepts which support it; an explanation of why it works; and why it is becoming more popular. Emphasis will be given to sampling methods, control charts, case studies, and tips for getting SPC started in the plant environment.
- IT105 Statistical Problem Solving (1,1,0) Prerequisites:** IT104, or Student Must Have Written Departmental Approval  
This course will include a brief refresher on the basic statistical concepts learned in IT104; a more indepth explanation of the relationship between process variation and process problems; includes advanced application toward a better understanding of machine and process capability in terms of improvement through reductions in the common causes of variation. Emphasis will be applied to problem-solving techniques for correcting process nonconformities.
- IT120 Plastics Technology (2,2.25,0) Prerequisites:** None  
This course explores several types, characteristics and uses of modern plastics. It includes demonstrations of handling, forming, and blending techniques.
- IT121 Plastic Injection Molding (2,2,0) Prerequisites:** None  
Students learn to properly set-up, operate, adjust, and make minor repairs to an injection molding machine, through both classroom and hands-on experience. They also learn about the common molding materials, the major characteristic of each, and the effects of recipe changes.

- IT130 Metallurgy and Heat Treatment (2,2.25,0) Prerequisites: None**  
 Studied in this course are properties of metals and the tests to determine their use, chemical metallurgy, producing iron and steel, physical metallurgy, shaping and forming of metals, properties and non-ferrous alloys, study of properties of steel, surface treatments, powder metallurgy, and classifications of steels. Stress, strain, and strength of materials will be included throughout the course.
- IT155 Industrial Safety and First Aid (2,2.25,0) Prerequisites: None**  
 This course covers basic industrial safety practices, and includes samples of lessons learned the hard way. Personal and plant safety topics include: fire, electrical, moving machinery, lifting, vision and hearing, and overhead work. An eight hour basic first-aid section is taught by a certified Red Cross instructor, and successful students are eligible for Red Cross Certification.
- IT220 Basic Machine Operations (3,2,2) Prerequisites: None**  
 This course covers the theory and practice in the operation of typical machine tools as well as the use of bench tools and layout equipment. The course is designed to provide practical knowledge of machine processes rather than machine shop skills.
- IT221 Advanced Machine Operations (3,2,2) Prerequisites: IT220**  
 This course covers advanced operations on grinders, mills, presses and lathes. Students will set up and perform machining operations using typical machine shop equipment. They will be assigned special projects to insure a full understanding of the operation of this equipment.
- IT253 Basic Fluid Power (3,2,2) Prerequisites: None**  
 The purpose of this course is to provide you with a basic understanding of fluid power. Topics include hydraulic principles, cylinders, pumps, valves, reservoirs and accessories, fluids and pneumatic principles. In addition, hydraulic and pneumatic symbols and formulas will be stressed. Laboratory work will include demonstrations and a series of forty-three projects using specialized fluid power trainers.
- IT254 Advanced Hydraulics (3,2,2) Prerequisites: IT253**  
 The purpose of this course is to provide the student with additional training in advanced hydraulics. Topics include hydraulic motors, specialized hydraulic valves, servo systems accumulators, flow meters, closed loop systems, plumbing and sealing services, system design, and trouble shooting. In addition, more time will be spent on hydraulic symbols and formulas. Laboratory work will include demonstrations and a series of twenty projects using specialized hydraulic trainers.
- IT260 Manufacturing Processes (2,2,0) Prerequisites: None**  
 This is a study of the modern methods and processes used in manufacturing a product. Individual and group tours of industry, viewing several video tapes, and a survey of technical literature comprise the basis for this course.

IT270 Industrial Quality Control (2,2.25,0) Prerequisites: None  
This course defines the changing quality concepts of modern-day industry; further defines quality organization, quality costs, data collection, process control, customer relations, and product reliability. It encompasses theory and practical application of Statistical Process Control (SPC).

## LANGUAGE ARTS

- LA100 Freshman English I (3,3,0)** Prerequisites: None  
This course includes college-level writing instruction, with emphasis on exposition, argumentation, research techniques, grammar, and punctuation.
- LA101 Freshman English II (3,3,0)** Prerequisites: LA100, or student must have written departmental approval.  
This course is an extension of Freshman English I, with emphasis on exposition, argumentation, research techniques, grammar, and punctuation.
- LA160 Journalism (3,3,0)** Prerequisites: None  
This is an introduction course which includes the basic techniques in writing, the principles of effective news writing, a survey of newsroom organization and practical experience provided through laboratory sessions. (Normally offered only at the prison extensions.)
- LA161 Journalism Lab I (1,0,2)** Prerequisites: None  
This course provides practical experience on a newspaper.
- LA162 Journalism Lab II (1,0,2)** Prerequisites: None  
This course provides advanced practical experience on a newspaper.
- LA200 American Thought and Literature I (3,3,0)** Prerequisites: None  
This course introduces the student to American literature through the "thematic" approach. The student, while required to know the traditional historical framework, actually reads modern literature as well as the older literature, guiding his/her reading according to the recurring themes, problems, and "continuing causes" which have concerned Americans from the beginning to the present day.
- LA201 American Thought and Literature II (3,3,0)** Prerequisites: None  
This is a survey of American literature arranged according to thematic concerns (recurring themes, problems, "causes"), which emphasizes writing of the twentieth century.
- LA210 Speech (3,2,1)** Prerequisites: None  
This is an introductory course in public speaking, designed mainly to provide practice in speaking with interest and purpose before an audience. Through presenting a series of brief talks before peers, the student will become familiar with the basic principles of speech organization, preparation, and delivery.
- LA212 Oral Interpretation (3,2,1)** Prerequisites: None  
Through analyzing and reading aloud selected prose, poetry, and drama, students will improve their own understanding of these works and increase their ability to communicate with others. The course will relate interpretative reading to other areas of speech: public address, television, theater, speech improvement, and the teaching of literature.



- LA220 English Literature from the Beginning to 1798 (3,3,0) Prerequisites: None**  
This is a systematic study of English literature which stresses the principal authors and their works. Reading and discussion will include representative writings of the period from the beginning to the end of the eighteenth century and will also survey current critical approaches.
- LA221 English Literature from 1798 to Present (3,3,0) Prerequisites: None**  
This is a systematic study of English literature which emphasizes the principal authors of the nineteenth and twentieth centuries. Readings and discussion will include representative works and will also review current critical attitudes.
- LA230 Short Story (3,3,0) Prerequisites: None**  
This is a study of the strengths and limitations of the short story, which the student learns to read with delight and understanding.
- LA235 Children's Literature (3,3,0) Prerequisites: None**  
This is a survey of literature for children in the elementary grades, aimed at developing techniques for using books with children, storytelling, and the criteria for book selection.
- NOTE: FOR ONE-CREDIT MODULES OF THIS CHILDREN'S LITERATURE COURSE, SEE LISTINGS UNDER LA295.**
- LA240 The Novel (3,3,0) Prerequisites: None**  
This is a study of the novel with dual intent: to increase the benefits one receives from reading through systematic discussion of each novel; and to better understand how the "more than casual" reader approaches fiction through study of the several schools of literary criticism.
- LA250 Creative Writing (3,1,2) Prerequisites: None**  
The purpose of this course is to allow students to sharpen their ability to use the English language in expressing creative thought in any or all of the traditional genres. The student will be encouraged to greater achievement in types of writing already tried and will be expected to attempt work in new areas. A workshop atmosphere with common exchange of ideas will prevail.
- LA260 Drama (3,3,0) Prerequisites: None**  
This course is an introduction to drama as a literary form and requires the student to read representative writings of the period from classical times to present.
- LA261 Drama—As a Performing Art (3,1,2) Prerequisites: None**  
Students are involved in the producing, acting, staging, and directing of plays.
- LA270 Poetry (3,3,0) Prerequisites: None**  
This course compares contemporary and classic examples of poetry to historically durable examples of structure and content.

**LA280 A Survey of Black American Literature (3,3,0) Prerequisites: None**  
This is a chronological survey of Black American writing from 1760 to the present with emphasis on twentieth century examples of poetry, fiction, drama, and autobiography.

**THE FOLLOWING LA295 COURSES ARE 1 CREDIT HOUR MODULES OF CHILDREN'S LITERATURE. ANY THREE OF THESE MODULES MAY BE CONVERTED INTO CREDIT FOR CHILDREN'S LITERATURE (LA235). THE STUDENT WISHING TO MAKE THIS CONVERSION MUST CONTACT THE REGISTRAR TO DO SO.**

**LA295 Children's Literature: The Younger Child, Preschool - 8 Years (1,1,0)**  
A one-credit module of Children's Literature (see LA235)

**LA295 Children's Literature: The Middle (8-12) Years (1,1,0)**  
A one-credit module of Children's Literature (see LA235)

**LA295 Children's Literature: Young Adults (1,1,0)**  
A one-credit module of Children's Literature (see LA235)

**LA295 Children's Literature: Fairy Tales (1,1,0)**  
A one-credit module of Children's Literature (see LA235)

## MATHEMATICS

- MA100 Elementary Algebra (3,3,0)** Prerequisites: Passing score on ASSET Numerical Skills Test.  
This course is a review of the properties of the basic number systems, using the tools of beginning algebra. Additional topics include first degree equations and inequalities, special products and factoring, graphs and linear systems, radicals and quadratic equations.
- MA102 Trigonometry (3,3,0)** Prerequisites: MA104, passing score on ASSET Intermediate Algebra Test or written departmental approval  
The right triangle is studied to introduce the trigonometric functions. These functions are also studied as circular functions of real numbers. Other topics include graphing, identities, inverse functions, Law of Sines, Law of Cosines, complex numbers, and exponential functions.
- MA104 Intermediate Algebra (3,3,0)** Prerequisites: MA100, passing score on ASSET Elementary Algebra Test, or written departmental approval.  
This course will provide students with the algebraic skills, including manipulation and proofs, necessary for the study of college algebra and analytic geometry. Topics covered include the usual topics through quadratics plus the exponential and logarithmic functions, the binomial theorem, sequences, systems of equations, complex numbers, permutations and combinations with an introduction to probability.
- MA110 Shop Mathematics I (2 credit hours, 36 clock hours)** Prerequisites: Passing score on ASSET Numerical Skills Test.  
This course covers the arithmetic of common fractions, decimals, percents, square roots, measurement and the use of simple formulas. CHANGES PENDING
- MA111 Shop Mathematics II (2 credit hours, 36 clock hours)** Prerequisites: MA110.  
The arithmetic of precision measuring instruments, applied arithmetic, applied geometry, geometric constructions, and the use of the calculator are covered in this course. CHANGES PENDING.
- MA112 Shop Mathematics III (2 credit hours, 36 clock hours)** Prerequisites: MA111.  
Solid geometric applications, shop trigonometry, and an introduction to the use of computers in design and machining are covered in this course. CHANGES PENDING
- MA116 Managerial Mathematics (3,3,0)** Prerequisites: MA104, passing score on ASSET Intermediate Algebra Test, or written departmental approval.  
This is a study of mathematics relating to various business situations involving matrix algebra, sets, probability, linear programming and statistics.
- MA151 Math for Elementary Teachers (3,3,0)** Prerequisites: MA100, passing score on ASSET Elementary Algebra Test, or written departmental approval.  
This course will provide the elementary teacher with the necessary background to teach mathematics in the elementary school. Such subjects as the origin of systems of numeration, sets, systems of whole numbers, bases other than 10, systems of integers, and rational and real numbers will be discussed.

- MA159 College Algebra** (3,3,0) Pre or Co-requisites: MA102, or written departmental approval.  
Topics include basic algebraic concepts, linear and quadratic equations and inequalities (singular and systems), relations and functions, matrices and determinants, exponential and logarithmic functions, complex numbers, polynomials and rational functions, second degree equations, sequences, series, mathematical induction, combinatorics and probability.
- MA160 Analytic Geometry** (3,3,0) Prerequisites: MA159 or written departmental approval.  
This course covers the straight line, the circle, conics, algebraic curves, transcendental curves, parametric equations, planes and lines, and quadratic surfaces.
- MA190 Elementary Statistics** (3,3,0) Prerequisites: MA100, passing score on ASSET Elementary Algebra Test, or written departmental approval.  
This course introduces students to basic statistical techniques. Topics include mean, standard deviation, frequency, probability, binomial distribution, normal curve, sample means, confidence limits, hypothesis testing, chi-square, linear correlation, and regression.
- MA250 Calculus I** (4,4,0) Prerequisites: MA160 or written departmental approval.  
This course covers functions and continuity, limits, differentiation, integration, definite integrals, and inverse functions.
- MA251 Calculus II** (4,4,0) Prerequisites: MA250.  
This course covers definite integral applications, integration techniques, L'Hopital's Rule, improper integrals, sequences and series. Also included are conics, plane curves, parametric equations, and polar coordinates.

## NATURAL SCIENCES

- NS100 Biological Science (4,3,2) Prerequisites: None**  
This course provides a basic general education in some major biological sciences (botany, ecology, genetics, and zoology) and also a basis for the individual to relate to his total environment. It presents an opportunity for the student to evaluate his own interest and potential in the biological sciences.
- NS101 Physical Science (4,3,2) Prerequisites: None**  
The purpose of this course is to provide basic general education in the physical science areas of physics and chemistry so that the student will be better able to understand and evaluate the results of scientific and technological achievement and their impact upon society. It also provides a basis for the student to evaluate his/her own interest and potential in the physical sciences.
- The science department recommends that students who have weak high school science backgrounds or who have been out of school for several years should take NS100-101 sequence before enrolling in any other college science classes. Other students should select from the biological and physical science courses listed below in order to fulfill the science requirements at Montcalm Community College. (NS102, NS108, and NS120 are not lab courses and therefore will not fulfill the science requirements for an associate in arts and sciences.)
- NS102 Physical Geography/Earth Science (3,3,0) Prerequisites: None**  
A study of the earth-sun relationship, climatic factors on the earth, the geographic grid, land forms, rocks, and minerals. An opportunity will also be provided to gain skills in map reading. The course will also include the study of the earth's natural resources and man's impact on these resources.
- NS103 Anatomy and Physiology I (4,3,2) Prerequisites: NS100, or the student must have written departmental approval.**  
This course introduces students to the basic structural and functional aspects of the human body. The contribution of each body system to the total well-being of the individual, as well as the interdependence of the body systems is emphasized. Specific topics studied include: anatomical terminology, chemistry, cells, tissues, cellular metabolism, skeletal system, muscular system, digestive system, and nervous system. Laboratory exercises include dissection and physiological experiments pertinent to the topics covered.
- NS105 Introductory Chemistry (4,3,2) Prerequisites: None**  
This course is for students entering nursing, dental hygiene, home economics, other allied health science fields and for non-science majors. Students will become familiar with basic principles of chemistry as applied to the health sciences and with nuclear chemistry, organic chemistry, and biochemistry. (Students working toward a bachelor's degree should take the two-semester college chemistry course—NS220-NS221.)

- NS108 Problem-Solving (3,3,0) Prerequisites: None**  
 This course in general problem-solving skills deals with the techniques used in solving a variety of problems that occur in all aspects of college courses and in all walks of life. This is an elementary course which assumes no prior knowledge beyond basic reading, writing, and arithmetic skills.
- NS110 Botany (4,3,2) Prerequisites: NS100** or student must have written departmental approval.  
 This is a survey of the plant kingdom from the simplest to the more complex. Students will study plant structure, classification, and ecological relationships. Students will have an opportunity to submit a collection from the local flora and special attention will be given to taxonomic principles and collection procedures along with the use of keys. The major portion of class time is spent out-of-doors.
- NS111 Introduction to College Physics I (3,2,2) Prerequisites: MA100**  
 This is the study of forces, motion, energy, properties of materials and sound.
- NS112 Introduction to College Physics II (3,2,2) Prerequisites: NS111**  
 Thermodynamics, electricity and magnetism, optics and modern physics will be explored.
- NS115 Zoology (4,3,2) Prerequisites: NS100** or student must have written departmental approval.  
 This is a general survey of the animal kingdom including comparative studies of the structure, function, and behavior of representatives of animal groups. Laboratory work includes dissection of representative animals from each phylum.
- NS120 Environmental Geography (3,3,0) Prerequisites: None**  
 An introduction to human use of the earth's surface and an inquiry into selected environmental problems from man's use of the physical landscape.
- NS201 Microbiology (4,3,2) Prerequisites: NS100 and NS101,** or the student must have written departmental approval of equivalent biology and chemistry background.  
 This is a study of the biology of various micro-organisms, including viruses, bacteria, fungi, algae, and protozoa. The interactions of certain pathogenic micro-organisms and their animal, human and plant hosts are studied as well as microbial ecological relationships in general.

- NS203 Anatomy and Physiology II (4,3,2)** Prerequisites: NS103, and NS105, or NS120 or the equivalents or student must have written departmental approval. (NS103 "Equivalent" must be a laboratory course.) This course is a continuation of NS103. Specific topics studied include: continuation of the nervous system, integumentary system, somatic senses, endocrine system, respiratory system, blood, cardiovascular systems, lymphatic system, urinary system, water and electrolyte balance reproductive system, and human genetics. Laboratory exercises are performed throughout the semester as well as clinical applications and pathophysiology when appropriate. Emphasis continues to be on ~~th~~ homeostatic mechanisms pertinent to lecture topics. *homeostat, c*
- NS208 Nature Study (4,2,3)** Prerequisites: None  
This is a field course which provides students with a background of information enabling them to go into the out-of-doors with a degree of confidence knowing they will be able to recognize and know something about many of the common plants and animals found in the local area. The laboratory used is the out-of-doors and the purpose of the course is to aid students to better understand the environment in which they find themselves.
- NS220 College Chemistry I (4,4,2)** Prerequisites: NS101, transferable high school chemistry, or the student must have written departmental approval. Fundamental theories, principles, and problems of chemistry will be emphasized.
- NS221 College Chemistry II (4,4,2)** Prerequisites: NS220 or NS105 with B+ or better grade.  
This course is a continuation of NS220. Organic chemistry and biochemistry will be introduced and the last five weeks will cover qualitative analysis.
- NS230 Introductory Physics I (4,3,2)** Prerequisites: Student must have written departmental approval.  
This course is for students interested in the life sciences, e.g. biology, medical technology, pre-medicine, pre-dentistry, etc. The course covers concepts of light, force and motion, and energy as they apply to biological mechanism and instrumentation.
- NS231 Introductory Physics II (4,3,2)** Prerequisites: NS230  
This course is a continuation of NS230 and covers fluids, elasticity of matter and membranes, sound, electromagnetism, quantum theory, and radioactivity.

## NURSING

**NUR102 Basic Nursing Skills I (7,3,11)** Prerequisites: Admission to Nursing Program.

This course is designed to provide students with the basic knowledge and skills essential for efficient bedside nursing. The student is expected to begin the process of applying nursing theory to meet the basic needs of the patient. Course includes simulated lab experience and actual clinical experience.

**NUR104 Basic Nursing Skills II (12,1,22)** Prerequisites: Successful progression from first semester.

This course is designed to assist the student in performing more in depth nursing procedures than in NUR102. Skills of a more technical nature will be emphasized. The goal will be to develop a concept of the total nursing process. Students will care for geriatric, medical-surgical, pediatric and obstetric patients.

**NUR110 Food in Health and Disease (2,2,0)** Prerequisites: Admission to Nursing Program.

Basic nutrition facts are presented with their relationship to health. The student becomes familiar with food nutrients, good nutrition, and variations of diet therapy.

**NUR117 Clinical Practicum III (6,0,12)** Prerequisites: Successful progression from second semester.

This course is the final clinical course in Level I of the nursing program. The student will draw from previous clinical experience in applying the nursing process. Each student will participate in the total process of administration of drugs to patients.

**NUR120 Concepts of Interpersonal Relationships (2,2,0)** Prerequisites: Admission to Nursing Program.

The person, as a nurse and as a patient, is studied in this course to help students identify and meet emotional needs. Theories of communication are introduced and communication skills are practiced. At the completion of this course, the student will be able to identify basic dynamics of human behavior and begin to utilize the tools of therapeutic communication.

**NUR125 Nursing Seminar (1,1,0)** Prerequisites: Successful progression from second semester.

Current issues and trends in nursing related to education, nurse practice acts, and professional organizations will be the focus of this course.



**NUR145 Maternal-Child Nursing I (3,3,0)** Prerequisites: Successful progression from first semester.

This course is a study of the psychologic and physiologic bases of maternity care. The client and her significant others' needs for support during ante, intra, and post partum periods are emphasized. Parental-infant bonding and education for childbirth and parenting are stressed topics. Complications during pregnancy and in the newborn period are related to the processes underlying these problems. The class also includes the study of health care problems of children, the proper assessment for each, and the identification of appropriate nursing measures.

**NUR150 Introduction to Medical-Surgical Nursing (2,2,0)** Prerequisites: Admission to Nursing Program.

This introductory course in medical-surgical nursing presents the causes and effects of disease, body defenses, and prevention of disease. Common specific, long-term illnesses are discussed, with appropriate nursing actions.

**NUR151 Medical-Surgical Nursing II (3,3,0)** Prerequisites: Successful progression from first semester.

This course presents the more common medical and surgical conditions, and the treatment involved in providing nursing care. The course is intended to present the concept of assessing and meeting the total needs of the patient including the patient's return to a normal functional life.

**NUR152 Medical-Surgical Nursing III (1,1,0)** Prerequisites: Successful progression from second semester.

A continuation and review of the previous Medical-Surgical Nursing courses.

**NUR161 Introduction to Pharmacology I (1,1,0)** Prerequisites: Admission to the Nursing Program.

This course introduces basic principles of pharmacology, safety, and dosage calculation as related to the administration of medications.

**NUR162 Pharmacology II (1,1,0)** Prerequisites: Successful progression from first semester.

This course presents information on medications, according to their classifications necessary for the nurse to know in order to utilize the nursing process in caring for patients.

**NUR200 Role Transition (2,2,0)** Prerequisites: Acceptance to the second year of the nursing program.

This course is designed to facilitate students' adaptation to the associate degree nurse role. The focus will be on utilization of the nursing process, assessments, nursing diagnoses and writing nursing care plans.

**NUR225 Leadership Role in Nursing (3,1,4)** Prerequisites: Successful progression from second year, second semester.

This course was designed to assist the student, within the framework of the nursing process, to develop professional leadership skills, to delegate appropriate tasks to others, to set priorities in nursing practice, and to further develop independent accountability.

**NUR245 Maternal-Child Nursing II (6,2,8)** Prerequisites: Successful progression from second year, first semester.

This course is a study in more detail than NUR145 of the physiologic and psychologic bases of maternity care. Parental-infant bonding and education for childbirth and parenting continue to be stressed. The high-risk mother and infant problems with necessary treatments, including nursing care, are presented. Embryology and genetic problems are considered.

**NUR251 Advanced Medical-Surgical Nursing (10,4,12)** Prerequisites: Admission to second year of the Nursing Program.

Using the nursing process in giving care to adults who are acutely ill or have multiple health problems is the focus of this lecture/clinical course. Nursing intervention in assisting the client and family in their holistic adaptive responses to illness and stress is discussed. Emphasis is placed on the nurse's role in disease prevention, health maintenance, and teaching. Information is designed to build upon the theory learned in all other prerequisite courses and will enable the student to apply previously learned knowledge and skills.

**NUR255 Community Mental Health (6,2,8)** Prerequisites: Successful progression from second year, first semester.

This course will introduce the student to man's psycho-social adaptation to stressors in his environment. Recent developments in treatment modalities, such as family therapy, behavior modifications, and reality orientation, will be presented. The nurse, using nursing process to work with patients with varying degrees of dysfunction in a wide variety of settings, will be discussed. She/he will work with clients in a mental health center, day care center, substance abuse center, and/or a psychiatric hospital setting. The content is focused on helping the student enhance her/his understanding of human behavior during both sickness and health, and to acquire skill in interpersonal relationships.

**FN281 Basic Concepts of Pharmacology and the Administration of Medicine (4,4,2)**  
Prerequisites: None (Open to Licensed Practical Nurses or those who are eligible to write licensure exam.)

This course offers advanced instruction in the field of pharmacology and safety factors essential to dosage and drug administration. The course is offered with the approval of the National Association for Practical Nurse Education and Service, Inc. (NAPNES). The student must take a Pharmacology test and achieve on this national final test a specified percentile to be issued a certificate from NAPNES. Thirty-two (32) hours of supervised clinical practicum will be arranged with the student's employer\* so that practical application of classroom instruction will be experienced (66 contact hours of instruction, 32 clock hours of clinical practicum arranged).

\*Students must be employed to fulfill the requirements of this course.

## OFFICE EDUCATION

**OE100 Beginning Typing (3,2,2)** Prerequisites: None  
This is an introduction to and a mastery of the typewriter keyboard. Personal and business letters, elementary tabulation, simple outlines, and manuscript writing are included.

**OE101 Intermediate Typing (3,0,4)** Prerequisites: OE100 or written departmental approval  
This is a course in the writing of business letters with practice in proofreading, tabulation, special communication forms, reports, and application/employment procedures. Open-lab course.

**OE102 Machine Shorthand (4,3,2)** Prerequisites: OE100  
This is a course which introduces the theory and operation of the Stenograph Shorthand Machine. This course is designed to develop a knowledge of stenographs, computer-compatible theory, machine dexterity, fluent reading ability and the ability to take dictation.

**OE103 Shorthand I (4,4,1)** Prerequisites: OE100  
This is a course in the elementary principles of Gregg Shorthand.

**OE104 Shorthand II (4,3,2)** Prerequisites: OE103  
This course includes intensive training in theory of shorthand, the development of shorthand outlines, and the ability to take new-matter dictation.

**OE105 Refresher Course in Gregg Shorthand (2,2,1)** Prerequisites: OE103 or written departmental approval  
This course is designed for the student who needs review in the theory of Gregg shorthand. Emphasis is placed on basic alphabetic principles, word beginnings and endings, blends, brief forms, and phrases. The student will also take dictation and transcribe.

**OE120 Business Mathematics (3,3,0)** Prerequisites: None  
This course reviews fundamental arithmetic processes and their business and consumer applications, and includes cash and trade discounts, markups, depreciation, inventory, valuation, interest calculations, payroll deduction, metric system, statistics, and probability.

**OE129 Business Communications I (3,3,0)** Prerequisites: OE100  
Basic communications skills are developed through a review of language structure. Attention is given to grammar, English for business use, vocabulary, punctuation, capitalization, and numbers.

**OE130 Business Communications II (3,3,0)** Prerequisites: OE129  
This is a study of effective correspondence in business.

- OE150 \*Typewriting Improvement (PROPOSED) (1,1.5,0) Prerequisites: OE100**  
 This course is designed for the student wishing to improve typewriting speed and accuracy skills. It includes pretesting, diagnosing problem areas, typing extensive drills, and posttesting.
- OE175 Records Management (3,0,4) Prerequisites: OE100**  
 This course presents the principles of the alphabetic, numeric, geographic, and subject systems of records management, as well as records maintenance, decision-making, and career opportunities in the field of records management. Open-lab course.
- OE202 Advanced Typing (3,0,4) Prerequisites: OE101 or written departmental approval**  
 This course presents continued speed-building techniques, advanced production typewriting techniques, skill in business letters, tabulations, manuscript writing, legal documents, and business forms. Open-lab course.
- OE203 Advanced Shorthand (4,0,4) Prerequisites: OE101, OE104**  
 Further development of the ability to write new-matter dictation with increasing emphasis on speed and accuracy in transcription. Open-lab course.
- OE205 Legal Terminology and Transcription (3,0,4) Pre- or Corequisites: OE101**  
 This is a study of legal terminology as transcription skills are developed. This course will help the student develop a marketable skill in the use of office transcribing machines. Client and court documents will be prepared. Open-lab course.
- OE206 Legal Office Procedures (3,0,4) Prerequisites: OE101, OE205**  
 This is a study of the duties and responsibilities of the legal secretary. The student will complete assignments which include such diverse items as general office duties, non-court documents, and court documents. Open lab course.
- OE207 Medical Terminology (3,0,4) Prerequisites: None**  
 This is a study of medical terminology, which is designed to assist the beginning medical secretarial student in mastering medical terms. With an understanding of basic terms, the student can proceed to functional vocabulary while pursuing a career specialty. Open-lab course.
- OE208 Medical Office Procedures (3,0,4) Prerequisites: OE101, OE207**  
 This is a course covering the duties of the medical secretary which involves bookkeeping, insurance, medical ethics, legal responsibilities, scheduling, and record keeping. In addition, the student will develop a marketable skill in the use of office transcribing machines. Case histories, reports, and medical correspondence will be transcribed. Open-lab course.

\*Course descriptions subject to change pending Curriculum Committee approval

- OE220 Voice Transcription (3,0,4) Pre- or Co-requisites: OE202**  
Development of transcription skill is stressed with the operation of cassette-tape transcribers. Emphasis is placed on typing skills, the correct use of grammar and punctuation, and building efficient transcription skills. Open-lab course.
- OE225 Information Processing I (4,4,1) Prerequisites: OE101**  
This is a lecture course which introduces basic concepts, terminology, and the emergence of information processing into the modern office. Spelling, grammar, punctuation, and vocabulary are drawn together in practical application on IBM-compatible microcomputers. New career paths, which have emerged as a result of information processing, are also covered.
- OE226 Information Processing II (3,0,4) Prerequisites: OE225, Corequisites: OE220**  
Development of increased keyboarding skills on the NBI shared-logic word processor is emphasized in this open-lab course. Students are introduced to information processing simulation procedures through handwritten, rough-draft, and dictated documents. Open-lab course.
- OE227 Information Processing III (3,0,4) Prerequisites: OE225, OE220**  
Advanced-level concepts and varied office simulations are stressed in this course. Students will develop skills in information processing, database, and spreadsheet applications on the IBM-PC microcomputer. In addition, students develop the skill of dictating using cassette dictation equipment. Open-lab course.
- OE230 Office Procedures (3,3,1) Prerequisites: OE101**  
This is a course in which subject matter and skill development are drawn together in practical application. The following concepts are stressed: telephone techniques, editing, composing, processing mail, filing, reprographics, information processing, travel, communications, interviewing, and career paths in the modern office.
- OE240 Business Calculators (3,0,4) Prerequisites: OE120**  
This is an introductory course in the operation of the electronic display and electronic printing calculators. The instruction applies the basic functions of the machines with practical applications to business problems. Open-lab course.
- OE290 Field Experience (3,0,6) Prerequisites: OE206, OE208, or OE230 (Permission of instructor required)**  
This is a course consisting of a carefully planned cooperative work experience in the office. To receive credit for the course, the student must meet the following requirements: (1) complete approved work experience arranged by the instructor, (2) show evidence of satisfactory progress through employer reports and instructor visitations at the office site, and (3) complete a minimum of 96 clock hours during the semester. (Permission of instructor required.)

## PHYSICAL EDUCATION

- PE101 Golf (1,0,2) Prerequisites: None**  
This course teaches the fundamental techniques of golf.
- PE102 Bowling (1,0,2) Prerequisites: None**  
This course teaches the fundamentals of bowling, which will include equipment selection, stance, approach, delivery, scoring, and rules.
- PE103 Personalized Body Conditioning (1,0,2) Prerequisites: None**  
This is a course involving supervised lifting of weights and body conditioning. Two tracks are possible: track one is for weight lifting; track two is a personalized conditioning program involving aerobics for athletes and others.
- PE104 Archery (1,0,2) Prerequisites: None**  
This course is designed to teach the fundamentals of archery. Fundamentals covered include equipment selection, safety procedures, archery games and rounds, and shooting techniques.
- PE105 Sports Fundamentals (1,0,2) Prerequisites: None**  
This course will provide the student with the basic knowledge needed to more fully enjoy watching and participating in volleyball, basketball, softball, racquetball and badminton. The semester will be divided into five sections, each dealing with a specific sport. The student will be given a broad overview of each sport, including rules, basic techniques and skills.
- PE106 Volleyball (1,0,2) Prerequisites: None**  
This course teaches the basic skills of volleyball, including the serve, the forearm and overhand pass, the spike and the block. Students will learn the rules and the offensive and defensive strategies of the game. Emphasis will also be on conditioning exercises to improve the player's strength, flexibility, and endurance.
- PE107 Cross Country Skiing (1,0,2) Prerequisites: None**  
Students will learn the fundamental principles of cross country skiing. This will include proper equipment selection, use and maintenance. The primary learning process will be via skiing in the field.
- PE108 Social Dancing (1,0,2) Prerequisites: None**  
This course will teach the student basic steps in modern social dancing (swing, foxtrot, cha-cha, waltz, disco, etc.) and the courtesies necessary for developing poise and confidence on the dance floor.
- PE109 Folk Dancing (1,0,2) Prerequisites: None**  
This is a general course designed to develop skills and techniques in the various country and folk dances.

- PE110 Introduction to Physical Fitness (1,1,1) Prerequisites: None**  
This course will provide the student with a generalized overview of physical fitness. The course will bring together terms often seen in print separately but seldom explained in relationship to each other, such as: cardiovascular, aerobics, stress, cholesterol, nutrition, lifetime sports and others. Students will assess their own fitness level and develop individualized lifelong plans for improved health.
- PE111 Karate I (1,0,1) Prerequisites: None**  
This course is designed to teach the student the basic kicks, punches, and blocks of karate.
- PE112 Karate II (1,0,2) Prerequisites: PE111**  
This is a continuation of PE111. Students completing this course will be encouraged to attempt the tests for their lower degree belts.
- PE113 Cross Country Skiing/Beginning Tennis (1,0,2) Prerequisites: None**  
This course is designed to allow participation in winter and spring physical activities. Fundamental cross country skiing principles will be learned in the first half of the spring semester and the basic skills of tennis will be learned in the second half.
- PE114 Personal Self-Defense (1,1,1) Prerequisites: None**  
Students learn basic self-defense strategies in avoiding potential dangers. Methods of instruction include techniques for avoiding and averting physical harm as well as the presentation and discussion of concepts and philosophies about personal self-defense.
- PE115 Advanced Personal Self-Defense (1,.5,1) Prerequisites: PE114**  
Students learn advanced techniques in personal self-defense using methods of defense found in Karate, Judo, Aikido, Kendo and other martial art forms.
- PE116 Racquetball (1,0,2) Prerequisites: None**  
This course teaches the student the fundamental skills needed to play racquetball for fun and physical conditioning.
- PE118 Bicycling (1,0,2) Prerequisites: None**  
This course teaches the student how to select, adjust, maintain, and use equipment properly. The student will also learn safety and riding techniques. Students are expected to log 150 to 200 miles during the semester.
- PE119 Beginning Tennis (1,0,2) Prerequisites: None**  
This course teaches the basic skills of tennis, including serve, forehand and backhand ground strokes. Students will also learn the rules and strategy of the game. A class tournament will be held during the last week of class.
- PE120 Intermediate Tennis (1,0,2) Prerequisites: PE119**  
This course further refines the skills (ground strokes, serving, volleying) and knowledge (rules, strategies, and techniques of participation) of the beginning tennis player.



- PE121 Sports Officiating (1,0,2) Prerequisites: None**  
 This course presents the rules of major sports, officiating techniques, relationship with players and school officials and game administration. The major emphasis is to stimulate students into becoming registered officials with the State Association.
- PE122 Beginning Skiing (1,0,2) Prerequisites: None**  
 This course teaches the basic ski maneuvers. Students will be instructed through wide-stance parallel turns. This course includes information on ski maintenance and waxing, a study of different types of skis and bindings and offers a basic knowledge of ski equipment.
- PE123 Intermediate Skiing (1,0,2) Prerequisites: PE122**  
 This course includes all intermediate ski maneuvers with special emphasis on parallel skiing plus an introduction to ski racing, including a study of different types of courses with styles. Ski maintenance and technical information on skis and bindings will be studied also.
- PE124 Advanced Skiing (1,0,2) Prerequisites: PE123**  
 This course teaches the fundamentals of ski instruction and advanced ski techniques. This course will consist of the theory of ski mechanics, theory of teaching skiing, theory of basic ski maneuvers, practice teaching and advanced ski techniques.
- PE130 Beginning Swimming (1,0,2) Prerequisites: None**  
 This course will cover the backstroke, breaststroke, butterfly, sidestroke, crawl and human stroke. The course will also include safety, rescue and drownproofing.
- PE131 Intermediate Swimming (1,0,2) Prerequisites: PE130**  
 This course is designed to improve the swimmer's skill in the basic swimming strokes. Water safety, diving, water games, and elementary teaching techniques will also be covered.
- PE133 Advanced Lifesaving and Water Safety (1,0,2) Prerequisites: PE131**  
 This course will train the student to work as a lifeguard in those situations where a Red Cross Advanced Lifesaving and Water Safety certificate is required.
- PE134 Water Safety Instructors Certification (1,0,2) Prerequisites: PE133**  
 This course will train the student to work as a Red Cross certified swimming instructor. Basic stroke evaluation as well as teaching techniques and water safety will be covered.
- PE135 Skin and Scuba Diving (2,1,2) Prerequisites: None**  
 This course teaches the student those skills needed to become a safe scuba diver. Students successfully completing the course will be encouraged to take certification tests.

**PE140 Advanced Open Water & Rescues Diving (2,1,2)** Prerequisites: Student must be at least 15 years of age; scuba diving certification; and, current CPR certification.

The course is designed to provide the student with the theory and practical application in advanced and rescue diving.

**PE205 Emergency Health Care (2,2,0)** Prerequisites: None.

This course covers first aid for wounds, shock, burns, poisoning, etc., as well as CPR. Students successfully completing the course will qualify for the Red Cross Standard First Aid certification.

**PE231 Swimming Fitness (1,0,2)** Prerequisites: PE131 or student must have written departmental approval.

This course will provide the student with the knowledge and guidance to improve health and physical fitness through exercise and training in a swimming program. This conditioning course will cover the advantages and benefits of swimming; principles of training, evaluation and motivation; minor health annoyances and stroke mechanics.

## PARALEGAL STUDIES

**PL100 Introduction to Paralegal Studies (3,3,0) Prerequisites: None**

This course provides the student with a broad overview of paralegal services. It is designed primarily for students intending to pursue a career in law, short of becoming a lawyer. It has relevance to all students interested in the legal system. The course explores paralegal duties, responsibilities, and challenges. The course includes career opportunities as well as practical applications of legal philosophy, research methodology, and related subjects. A key part of the course focuses on developing an appreciation of the American legal system's processes and operations. The student will also become exposed to legal research, terminology, and legal writing.

**PL110 Legal Research and Writing (3,3,0) Prerequisites: LA100**

This course is designed to teach students the sources of law and how to research legal issues using these sources. The course will require the students to write a legal memorandum and a legal brief using the required format for each paper. Students will learn how to analyze legal issues and prepare careful, crafted, written presentations of their research and analysis.

**PL215 Litigation I: Pretrial Matters (3,3,0) Prerequisites: PL100**

This course is the first of two courses designed to familiarize the student with litigation process. It provides the student with an in-depth study of pre-trial considerations necessary for litigation, including jurisdiction, venue, statutes of limitations, pleas, discovery, and other pre-trial matters.

**PL216 Litigation II: Trial and Appellate Procedures (3,3,0) Prerequisites: PL215**

A continuation of PL215. This course provides the student with an in-depth study of trial considerations and procedures. Evidence, interviews, client preparation, jury selection, arguments, instructions to the jury, verdicts and other pertinent trial-related activities will be covered. Emphasis is on the role of the legal assistant in trials and appeals.

## SKILLS DEVELOPMENT

- SD100 Human Potential (1,1,0)** Prerequisites: None  
Attention will be given to increasing personal acceptance and understanding of self and others through structured small group activities.
- SD108 Problem Solving (3,3,0)** Prerequisites: None  
This is a course in general problem-solving skills. The techniques used in solving a variety of problems that occur in all aspects of college courses and in all walks of life will be covered. This is an elementary course which assumes no prior knowledge beyond basic reading, writing, and arithmetic skills.
- SD110 Career Development (1,1,0)** Prerequisites: None  
This is an overview of career/life style planning. Values, skills, interviews, occupational information, resumes, interest inventories, decision making and placement are topics that are covered in this course.
- SD120 Dealing with Stress (1,1,0)** Prerequisites: None  
This course is designed to introduce the student to the topic of stress and how it affects behavior and to help the student identify alternative methods of dealing with stress.
- SD130 Women's Awareness (1,1,0)** Prerequisites: None  
This course is designed to offer women new skills for improving self-awareness and understanding and to increase their ability to plan and set goals. Such topics as women in history, stereotyping in our society, career options and family relationships will be discussed.
- SD140 Reading for Fun and Profit (1,0,1)** Prerequisites: None  
This course is designed to help students develop a keener appreciation of reading: (1) for fun--leisure time activity which is not only entertaining, but also thought provoking; and, (2) for profit--activity that can help one develop a fuller personality, grow intellectually, become more aware of the world and one's place in it, and enhance one's self worth and one's value to others in society. Students study a selection of reading material and meet periodically with each other and the instructor to discuss, interpret, and evaluate that material.
- SD145 Keyboarding (1,0,2)** Prerequisites: None  
This course is an introduction to the computer keyboard. The concept of typing the alphabet, numbers, and symbols by touch is stressed. Open-lab course.
- SD150 Developmental Reading I (1,0,1)** Prerequisites: None  
The purpose of this course is to assist students in the development and improvement of reading skills. In a lab format, students will receive testing to identify reading skill levels, programmed materials to improve reading skill levels and individual assistance from a reading specialist as needed. A grade of "S" (satisfactory) will be used to indicate satisfactory completion of the course.

Ill the student services office located in the basement of the building.

Grand Rapids

- SD151 Developmental Reading II (1,0,1) Prerequisites: None**  
This course is designed for students who have successfully completed SD150 and wish to develop more sophisticated reading skills.
- SD152 Developmental Reading III (1,0,1) Prerequisites: None**  
This course is designed for students who have successfully completed SD151 and wish to develop more sophisticated reading skills.
- SD153 Developmental Reading IV (1,0,1) Prerequisites: None**  
This course is designed for students who have successfully completed SD152 and wish to develop more sophisticated reading skills.
- SD156 Efficient Study (2,2,0) Prerequisites: None**  
For the student seeking a thorough review of the principles of efficient study, this course provides instruction and practice in textbook study, note-taking, test-taking, study environment and memory techniques.
- SD158 Efficient Reading (1,0,1) Prerequisites: None**  
This course is designed to enable students to develop faster and more flexible reading rates, as well as improve comprehension and vocabulary skills. Basic techniques covered will be reading in thought units, varying rates to purpose, identification of main idea, and relationship patterns, and vocabulary development through use of context. Individual growth in rate and comprehension will be measured by the use of timed pre and post tests.
- SD160 Developmental Mathematics I (1,0,1) Prerequisites: None**  
This course is recommended to students not intending to enroll in courses requiring advanced math proficiency, but who wish to develop basic arithmetic skills. Emphasis is placed on computations with whole numbers, fractions, decimals, percentages, and the metric system. In a lab format, students work individually to complete units for which a specific weakness has been diagnosed. A grade of "S" will be used to indicate satisfactory completion of the course.
- SD161 Developmental Mathematics II (1,0,1) Prerequisites: None**  
This course is available to students who have successfully completed SD160 and would like to continue developing basic arithmetic skills.
- SD162 Developmental Mathematics III (1,0,10) Prerequisites: None**  
This course is recommended to students intending to specialize in business, natural science, mathematics, automotive, secretarial, or nursing programs. In addition to computations with whole numbers, fractions, decimals, percentages, and the metric system, students will receive instruction in consumers applications of basic mathematics, exponential notation, square roots, signed numbers, plane geometry, and solving equations.
- SD163 Developmental Mathematics IV (1,0,1) Prerequisites: None**  
This course is available to students who have successfully completed SD162 and would like to continue developing their math skills.

**SD170 Basic Writing Skills (2,0,2) Prerequisites: None**

This course provides the successful student with the skills necessary to write concise, correctly punctuated sentences using standard English. In a lab format, students learn to write complete sentences utilizing the common sentence patterns employed in English. Major aspects of the course will be: grammar as it relates to punctuation and clarity, spelling, and sentence combining.

**SD175 Improving Reading and Writing (3,3,0) Prerequisites: None**

This course offers the student an opportunity to improve communication skills in both reading and writing. Throughout the course, the relationship between good writing and reading for comprehension will be stressed. Emphasis will be placed on grammar, sentence structure, vocabulary development, spelling and paragraph construction.

## SOCIAL SCIENCES

- SS110 Introduction to Social Science I (4,4,0) Prerequisites: None**  
This course introduces the student to the interdisciplinary approach to the study of society and human behavior. Methodology, the development of skills necessary to study and research in the social sciences, is emphasized. Attention is given to the study of power, its use and distribution, as an overall framework for examining the nature of our society's strengths and weaknesses. Materials will be drawn primarily from economics and political science. Special emphasis will be given to the rights and responsibilities of citizenship and the form and functions of government at the National, State and Local level.
- SS111 Introduction to Social Science II (4,4,0) Prerequisites: None**  
This course is a continuation of SS110. (Completion of SS110 is recommended before enrolling in SS111, but is not required.) Materials will be drawn from history, anthropology, sociology and psychology as the study of society and human nature continues emphasizing selective aspects of culture and contemporary social problems.
- SS215 Principles of Economics (3,3,0) Prerequisites: None**  
This is a one-semester survey course in introductory economics. Although this course provides exposure to both macroeconomics and microeconomics, greater attention is given to macroeconomics, which is related to issues of national economic policy. Studies include foundations of economic analysis, the public economy, national income, stabilizations, growth, employment, and taxes.
- SS220 General Psychology (3,3,0) Prerequisites: None**  
This course familiarizes the beginning student with the basic concepts and methods used by psychologists to study human behavior. Among the subjects covered are experimental methods, human growth and development, intelligence, perception, learning, motivation and emotion, personality disorder and therapy, and group behavior. Daytime, on-campus sections of this course are taught using a modified Keller Plan approach; other sections follow a more traditional classroom lecture-discussion format.
- SS221 Child Psychology (3,3,0) Prerequisites: None**  
Students in this course study psychological theory and experimental findings as they apply to understanding and influencing children's growth and development. Emphasis is placed upon such basic concerns as the effects of heredity and environment, the processes of maturation, intellectual growth and development, and childhood anxiety.
- SS230 Sociology (3,3,0) Prerequisites: None**  
This course familiarizes beginning students with the basic concepts and methods used by sociologists to study society. Among the topics covered are culture, social structure, social class, institutions, demography, deviance, and social change. Emphasis is placed upon acquainting the student with the sociological perspective of human behavior and our modes of social organization.

**SS235 Social Problems (3,3,0) Prerequisites: None**

Students in this course study the sociological approach to social problems. Subjects covered include mental illness, crime, poverty, family and community disintegration, violence, ecology and current events.

**SS240 Political Science (3,3,0) Prerequisites: None**

This course is an introduction to politics and government as they operate at the federal level. Although in many ways it is a basic traditional survey sequence in American Government, the course goes by the traditional examinations of government institutions (the executive, the legislature, and judiciary) to explore how the complex web of ideas, groups, personalities, and processes interact with those institutions to arrive at public policy. Within the larger context of the evolution of our present political system and the ongoing debate between liberals and conservatives, we will attempt to discover how the following areas relate to power, influence, and decision-making in American politics: Our political culture, our Federal structure; the Constitution; public opinion, political socialization, campaigns and voting; pressure groups and lobbying; political parties, civil rights and liberties, and international affairs. This course points out problem areas and inequities in development of our lives. This course relies on both historical and contemporary examples, stressing the present-day practice of politics to illustrate and explain the principles and processes outlined above.

**SS250 United States History to 1865 (3,3,0) Prerequisites: None**

This course will critically examine America's past from the period before the European takeover and domination of the North American continent until the time at which a young, but increasingly powerful United States is ripped apart by Civil War. The conflicts between individualism and collectivism, nationalism and sectionalism, as well as those conflicts between social classes and between ethnic groups are examined as themes throughout this course. Attention is given to social history, which involves the effort to explore history "from the bottom-up": through the eyes and everyday experiences of common, working class people, whose preoccupation is not with the Great Events of the day, but with the day-to-day business of living. This course will focus on the following periods in an effort to contribute to the understanding of America's infancy and early youth: America before the European invasion; native American cultures; early settlements; the variety of colonial experience and regional differences; independence, war, and nationhood; the Constitution; economic growth; an emerging American culture; territorial expansion and manifest destiny; nationalism and sectionalism; North/South Conflict; and the Civil War.



- SS251 United States History Since 1865 (3,3,0) Prerequisites: None**  
 This course is a continuation of SS250, with a similar emphasis on social history and the conflicts between individualism and collectivism, between social classes, and between ethnic groups as outlined above, as well as new conflicts between liberals and conservatives, isolationists and imperialists, centralists and localists, that remain with us today. The course focuses on the following periods in our effort to understand the factors that influence America's present behavior: racism, reconstruction, and Jim Crow; involvement; social, political and economic reform in the Progressive period; the World Wars; the Depression and the reform of capitalism; the Cold War and the age of affluence; the turbulent sixties, the self-indulgent seventies and the age of scarcity.
- SS255 Michigan History (3,3,0) Prerequisites: None**  
 This course presents the beginning student with a broad overview of the history of the Wolverine State. Several themes (immigration, exploration, technology, mobility, abundance, exploitation) will be explored, especially as they relate to the broader picture of national history--indeed our study of Michigan might serve as a case study of all America. Several important overlapping periods of Michigan history will be examined in detail: from the early French explorations and fur trade, through the British occupation, the logging boom, statehood, growth of commerce and shipping, agricultural development and the Age of the Automobile with the consequent industrialization and growth of the tourist industry. In addition, every effort will be made to focus on local aspects of the state's history, as they relate to themes and periods above.
- SS258 Sex in History (3,3,0) Prerequisites: None**  
 This course proposes to examine human sexual behavior in historical context. In that sense the course is an overview of change and continuity in sexual attitudes, norms, and practices in several civilizations, from prehistory to the present day, as well as how they have been reflected in art and literature, both classic and popular. The first section of the course will chronologically explore sexual custom in Greece and Rome, discuss the influence of Christianity, look at China, India and the Arab world, and then focus on Europe and the Americas through the Victorian Age. The second section will involve a more in-depth look at the complex interrelationship between male and female roles in modern America.
- SS260 Cultural Anthropology (3,3,0) Prerequisites: None**  
 In this course students will study about different cultures, particularly preliterate ones. Subjects studied will include food-gathering and settlement patterns, status and kinship systems, economic and political organization, religion, language, art, and special concepts and methods used by cultural anthropologists.

## TECHNICAL DRAFTING AND DESIGN

- TD100 Technical Drafting (3,1,4) Prerequisites: None**  
This laboratory/lecture course includes the knowledge and manipulative skills needed for work with drafting instruments, to create linework, lettering, geometric construction, sketching, multiview projection, sectioning, basic dimensioning, isometric, oblique and perspective projection.
- TD105 Blueprint Reading (2,.5,1.75) Prerequisites: None**  
This course is a technical blueprint reading course for manufacturing and tool and die apprentice training. The class is structured around a workbook approach to learning, with lecture sessions preceding workbook assignment sessions. Topics covered include lines on blueprints, basic auxiliary projection, sections, section lining, dimensioning, sub assembly and assembly drawings, stock list, revisions, title blocks, general notes, and assembly dimensions.
- TD106 Layout and Precision Measurement (2,.5,1.75) Prerequisites: TD105**  
This course is a technical blueprint reading course with practical application. The class is structured around a workbook approach to learning, with lecture sessions preceding workbook assignment sessions. Topics covered include: general tolerancing, geometric and positional tolerancing and symbols, fits between mating parts, weldment blueprint reading and weldment assembly. The student will be required to check manufactured parts against part prints with precision measuring devices.
- TD110 Descriptive Geometry (3,1,4) Prerequisites: TD100**  
This is a laboratory/lecture course consisting of one hour of lecture and four hours of supervised laboratory instruction each week. Topics covered include projection of points, lines and planes, revolution of objects, intersection of planes and solids, and projection of oblique and true view surfaces.
- TD120 Shop Drawing (2,.5,1.75) Prerequisites: None**  
This is a condensed course covering the basic principles and techniques of shop drafting, stressing the essentials of lettering, instrument usage, technical terms, applied geometry, freehand sketching, orthographic auxiliary and section drawings, and dimensioning practices. Isometric and oblique pictorial drawings are also included.
- TD130 Technical Drafting II (3,1,4) Prerequisites: TD100**  
This is a lecture/laboratory course and includes one hour of lecture theory directly related to four hours of instructor supervised laboratory sessions. The course includes dimensioning, (English and metric) tolerancing, threads, springs, representation of screws, nuts, bolts, dowels, fastening devices, geometric and positional tolerancing, and detailing of assembly drawings.

- TD135 Tool and Die Design I (2,.5,1.75)** Prerequisites: TD120 or TD100  
This course is structured primarily for the tool and die apprentice student. Lectures will be followed by reinforcing laboratory sessions which will consist of sketching sheet metal die components. Emphasis is not on line quality and technique, but merely the communication of ideas and design graphically. Topics covered include: basic discussion of tools, dies and punches; blanking force; standard die sets and die components; drop through blank dies; combination blank and pierce return dies; and various types of positive knock-out designs. The student will be required to maintain a notebook, which will be reviewed by the instructor at the end of the course and returned for future reference.
- TD136 Tool and Die Design II (2,.5,1.75)** Prerequisites: TD135  
This course is structured primarily for the tool and die apprentice student. Lectures will be followed by reinforcing laboratory sessions, which consist of sketching sheet metal components related to the classroom discussion. Topics covered include basic flat part progressive dies, stock guides, pitch gauges, stock feeders, roller guides, ball bearing guide pins and bushings, strip layout; availability of various standard punches, dies, and components; and knowledge and review of tool and die standardized components and catalogs. Students must maintain notebooks which will be reviewed by the instructor at the end of the course and returned for future reference.
- TD137 Tool and Die Design III (2,.5,1.75)** Prerequisites: TD136  
This course is structured primarily for the tool and die apprentice student. Lectures will be followed by reinforcing laboratory sessions, which consist of sketching sheet metal die components related to the classroom discussion. Topics covered include mathematical sheet metal blank development, sheet metal draw development and redraw sleeves, progressive dies, various types of cam piece dies, pilot pins, keeper blocks for pads and slides. The student will be required to maintain a notebook which will be reviewed by the instructor at the end of the course and returned for future reference.
- TD140 Plastic Mold Design I (2,.5,1.75)** Prerequisites: TD120 or student must have written departmental approval.  
This course covers the fundamentals of plastic molding, plastic product design, types of molds, toolmaking processes, equipment and methods, materials for model making and designing and drafting practices. Also studied are compression and transfer molds, injection molds for thermoplastics, cold mold design, extrusion dies for thermoplastics, blow mold construction and design, mold design for expanded polystyrene, and special fixtures.
- TD141 Plastic Mold Design II (2,.5,1.75)** Prerequisites: TD140  
This is a continuation of TD140.
- TD142 Plastic Mold Design III (2,.5,1.75)** Prerequisites: TD141  
This is a continuation of TD141.

**TD215 Product Design (3,2,3)** Prerequisites: TD100, or written departmental approval

This course is designed to provide the drafting technology student with the ability to analyze, design, and develop solutions to mechanical design problems. The instructional approach is to encourage the student to conceptualize and communicate using engineering graphics, mathematics, and technical science. Emphasis is placed on "manufacturability" and "producibility" of a particular new product design.

**TD230 Jig and Fixture Design (3,1,4)** Prerequisites: TD130

This is a laboratory/lecture course and includes four hours of drafting practice and one hour of drafting lecture theory directly related to the laboratory work. The course includes the design of the following jigs and fixtures: plate jig, drill jig, closed tumble fixture, leaf type jig, indexing jig and milling fixture. Use of standard components from various catalogs is also covered.

**TD250 Computer Aided Drafting (3,2,2)** Prerequisites: Student must have written Departmental approval.

This course consists of computer-generated graphics to include terminology, techniques and application of computer aided drafting (CAD) tool engineering, tool design, architecture, and electronics. Two dimensional design drafting is stressed. Four hours lecture/laboratory combination.

## WELDING TECHNOLOGY

- WE107 Welding Technique and Joint Preparation (3,1,3) Prerequisites: None**  
This course gives the person who has a basic understanding of welding a chance to brush up on existing welding skills and pick up some proper technique, rod selection and learn the basics of out-of-position welding.
- WE108 Welding and Fabrication (3,1,3) Prerequisites: WE107**  
This is a study of the five basic joint designs utilizing the oxyacetylene and arc process with emphasis on the 1, 2, 3, and 4 F positions.
- WE110 Automotive Welding (2,1,2) Prerequisites: None**  
This course is intended to give students of automotive maintenance an understanding of the basic techniques, machine operations and safety rules pertaining to soldering, welding, and brazing of lighter gauge materials.
- WE120 Welding and Fabrication II (3,1,3) Prerequisites: WE108**  
For the returning student, this course will let the student pick up where he/she left off. Continuing on the 1, 2, 3, and 4 G weldments, testing welds by means of destructive and non-destructive methods will be used.
- WE121 Advanced Welding (3,1,3) Prerequisites: WE120**  
This course consists of qualification type weldments in accordance with A.W.S. welding code, using S.M.A.W. process. Also included in this course is a study of T.I.G. and M.I.G. procedures.
- WE122 Related Welding Skills (3,1,3) Prerequisites: WE121**  
Designed to cater to the needs of students whose curriculum calls for a related course in welding. This course covers the area of oxyacetylene flame cutting.
- WE124 Agriculture and Construction Welding (1,.5,1.5) Prerequisites: None**  
This course is intended for those who must make their own repairs on machinery. Topics include: basic arc welding, basic gas welding, cast iron brazing, hard-surface application, flame cutting, and control of heat related stresses. Small student-furnished projects will be allowed but must be removed after each class.
- WE125 TIG Welding (2,.5,1.75) Prerequisites: None**  
This course is designed around the needs of industry, where gas-tungsten arc welding (TIG) is emphasized. Both classroom and lab will concentrate on the TIG process, with some oxyacetylene welding being used for manipulative practice.

## DIRECTED STUDY

**XY292 \*Cooperative Work/School Experience** PROPOSED (4,1,15 or 5,1,20)  
Prerequisites: 30 credits with a 2.0 grade point average, plus departmental approval according to department standards  
A course in which each student holds a job which is related in some way to her/his field of study. Performance on the job is monitored and guided by the employer and College personnel. Attendance at one-hour weekly seminar and submission of a final report are also required.

**XY295 Modular Course** (1 or 2 credit hours) Prerequisites: None  
Modular courses are one or two hour units of study which contain part of an existing course. Such courses respond to special, often one-time needs.

**XY299 Directed Studies** (1 or 2 credit hours) Prerequisites: Student must have written departmental approval.  
Directed study courses are usually thought of in connection with advanced students or those who have exhausted regular college offerings. The average student pursuing an associate degree would not find time for this type of credit. The concept does not apply to remedial studies.

The directed study cannot be used near the end of the semester to fill requirements, it must be planned in advance. Careful attention must be given to the description of the work proposed because there is no other course outline or description on file to document the experience.

A student interested in Directed Study must contact an instructor who will sponsor the proposed activities. That teacher will complete the written plan on proper forms and will seek approval from the instructional administrator before any work begins. The student must enroll in an appropriately labeled section of Directed Studies 299, e.g., HU299, SS299, etc.

in the student services office located in the Administration building.

\*Course description subject to change pending Curriculum Committee Approval

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Financial Aid Officer  
Director of C.O.P.E.  
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Registrar  
Dean of Liberal Arts and Business  
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Placement Representative  
Special Needs Program Supervisor  
Office Education Lab Supervisor  
Natural Science Lab Supervisor  
Programmer  
Assistant to the President

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Campbell, Robert, B.S.  
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Fox, Richard, M.A.  
LeGree, Lawrence, M.S.  
Lucka, James, M.A.  
Minnick, Robert, M.A.  
Morford, Leslie, M.A.  
Moutsatson, Peter, M.A.

Business Data Processing  
Food Service Technology  
Business Studies  
Business Data Processing  
Drafting Technology  
Nursing Education  
Social Science  
Nursing Education  
Electronics Technology  
Language Arts  
Humanities (Art)  
Automotive Mechanics  
Automotive Mechanics  
Counselor  
Counselor  
Social Science  
Business Studies

FACULTY (CONT'D)

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Pastoor, John, B.A.  
Peacock, James, B.A.  
Roy, Janice, M.A.  
Smith, Kenneth, M.A.  
Snook, Daniel, M.A.  
Stearns, Donald, M.A.  
Walden, Joanne, M.A.  
Witter, Marilyn, R.N., M.A.

Social Science  
Language Arts  
Criminal Justice  
Mathematics  
Natural Science  
Developmental Studies  
Natural Science  
Office Education  
Nursing Education



MONTICALEM COMMUNITY COLLEGE CALENDAR

Spring, 1988

Registration

December 8 and 9	Students enrolled Fall 1987
January 12, 13, and 14	Open to all students
January 18 through 27	Late registration
January 16	Classes begin
March 27 through April 3	Spring break
April 1 (Good Friday)	No classes/College closed
May 13	Classes end
May 13	Graduation

Summer, 1988

Registration

May 3 and 4	Returning Students
June 8 and 9	Open to all students
June 13 through 16	Late registration
June 16	Classes begin
July 4 (Independence Day)	No classes/College closed
August 5	Classes end

Fall, 1988

Registration

August 22 and 23	Returning students registration and new student orientation and registration
August 24	Open to all students
August 25 through September 6	Late registration
August 25	Classes begin
September 5 (Labor Day)	No classes/College closed
November 24 and 25 (Thanksgiving)	No classes/College closed
December 19	Classes end

Spring, 1989

January 14 - May 12

Fall, 1989 (Tentative)

August 24 - December 18

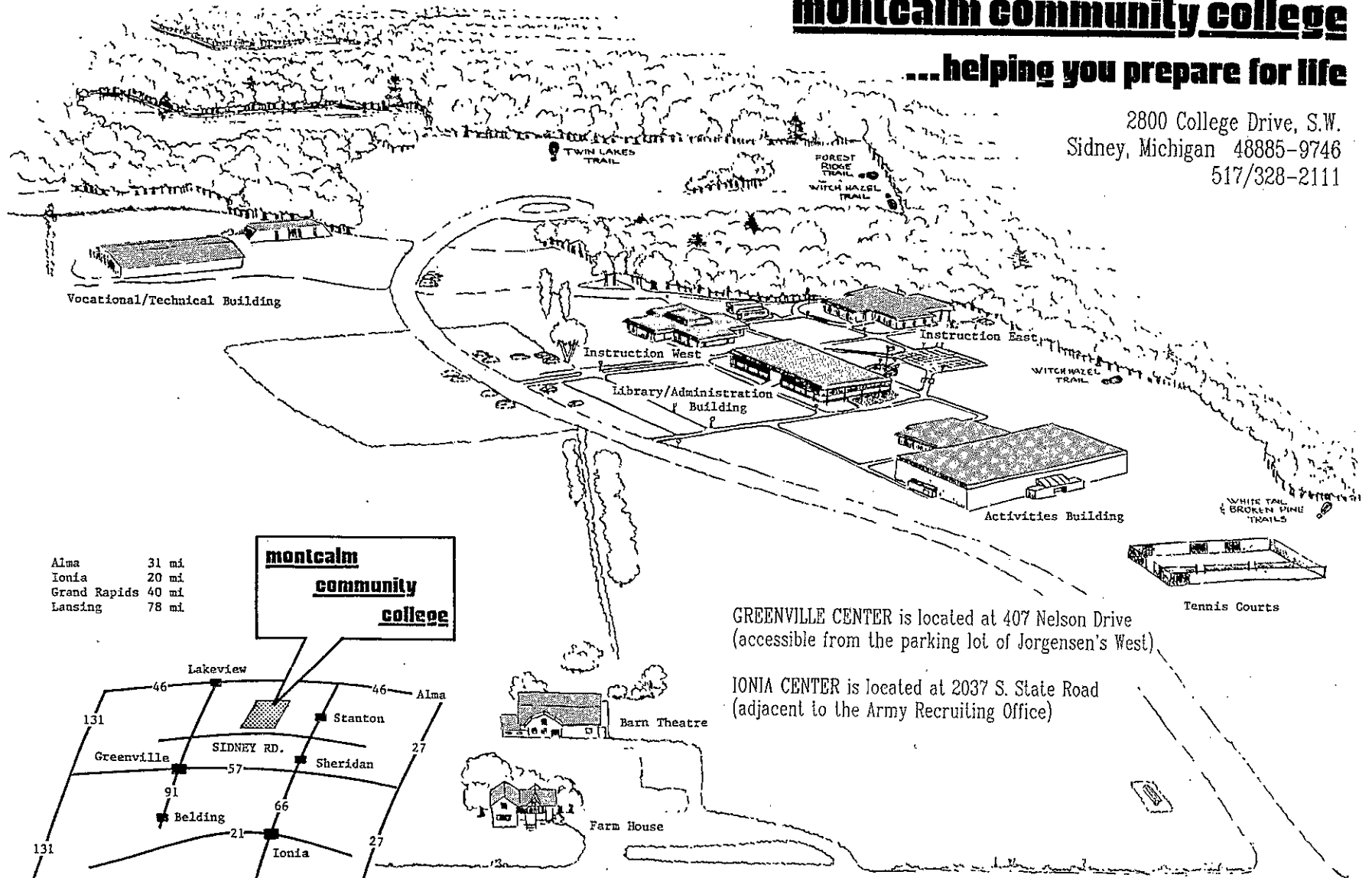
Spring, 1990 (Tentative)

January 13 - May 11

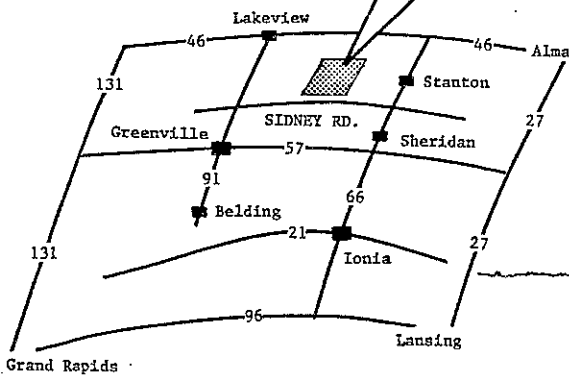
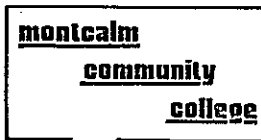
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2800 College Drive, S.W.  
 Sidney, Michigan 48885-9746  
 517/328-2111



Alma 31 mi  
 Ionia 20 mi  
 Grand Rapids 40 mi  
 Lansing 78 mi



GREENVILLE CENTER is located at 407 Nelson Drive  
 (accessible from the parking lot of Jorgensen's West)

IONIA CENTER is located at 2037 S. State Road  
 (adjacent to the Army Recruiting Office)

NOTE TO STUDENTS: Campus maps identifying classroom locations are available in the Student Services Office located in the Administration building.