



montcalm

COMMUNITY COLLEGE

SIDNEY, MICHIGAN 48885 - 517 328-2111

YOUR CAREER ORIENTED COMMUNITY COLLEGE 1974/75

montcalm

AVIATION MAINTENANCE
ARCHITECTURAL CONSTRUCTION
LANGUAGE ARTS
SOCIAL SCIENCES
PRACTICAL NURSING
RETAILING
MANUFACTURING
ARCHITECTURAL DRAFTING
WELDING
NATURAL SCIENCES
LANGUAGE
PRACTICAL NURSING
ACCOUNTING
HUMAN
TAILING
TRAINING
& DIET

CALENDAR 1974-75

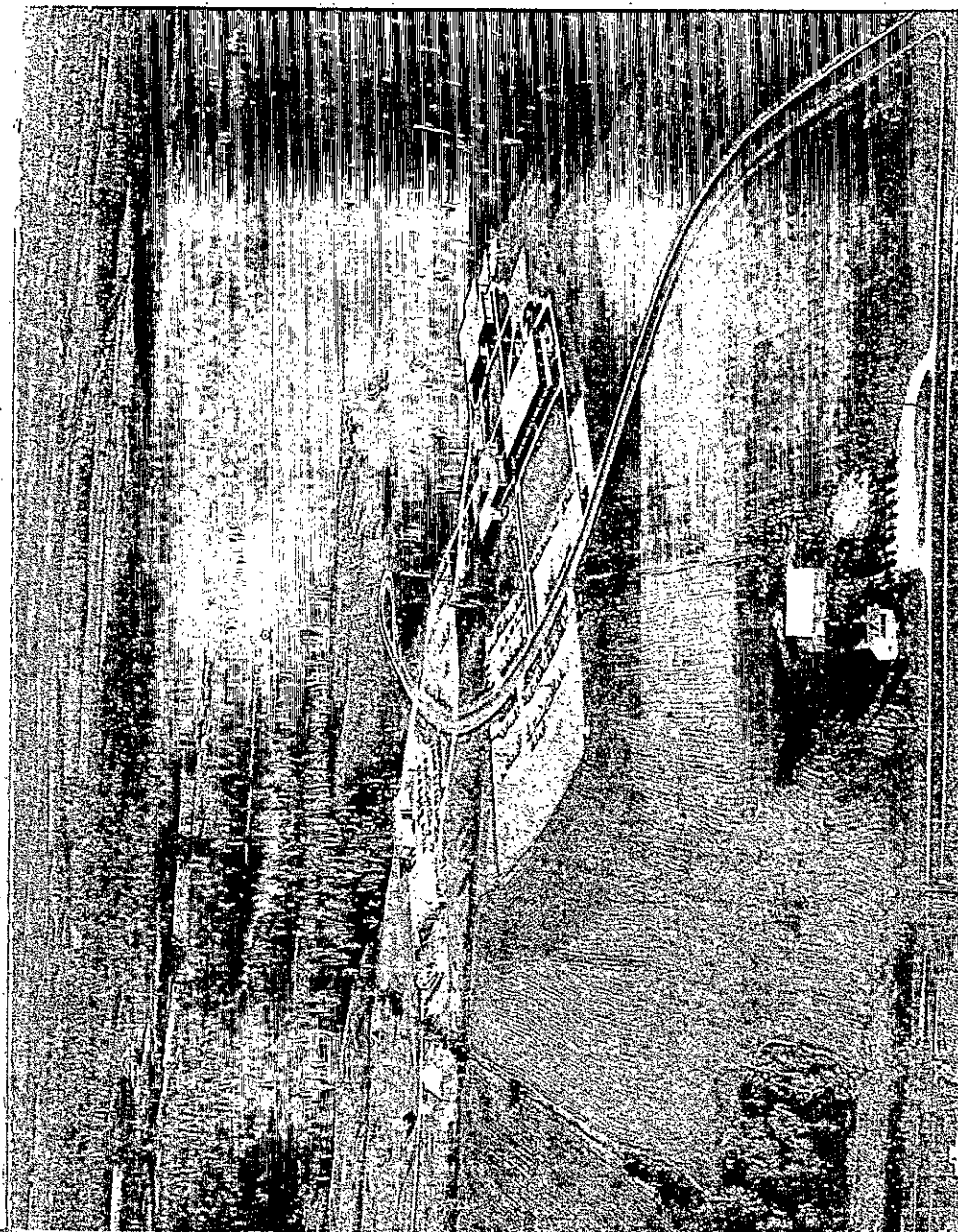
FALL SEMESTER — 1974

Faculty Conferences	August 28-29
Registration	August 28-29
Classes Begin	September 3
Thanksgiving Recess	November 28 through December 1
Classes Resume	December 2
Final Class Day	December 20
Grades Due	December 23

SPRING SEMESTER — 1975

Registration	January 2-3
Faculty Conferences	January 2-3
Classes Begin	January 7
Spring Recess	March 1 through 9
Classes Resume	March 10
Good Friday Recess	March 28
Classes Resume	March 31
Final Class Day	May 9
Grades Due	May 13
Faculty Conferences	May 15
Graduation	May 16

Admission Information: James D. Kirk
Dean of Students
Montcalm Community College
Sidney, Michigan 48885
Phone: 517-328-2111 Extension 224





Dr. Clifford J. Bedore, Jr.

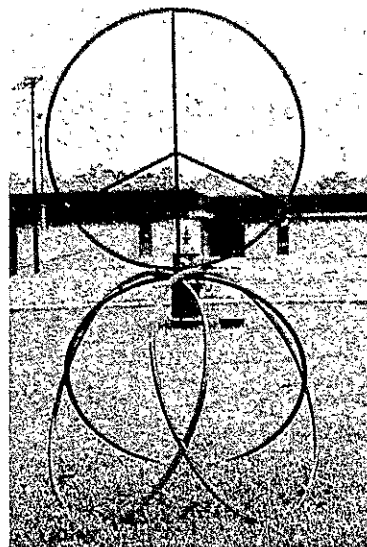
FOREWORD

The major objective of Montcalm Community College is to provide for the persons in its service area opportunities to advance their educational pursuits. The purpose of this catalog is to present to those citizens the information necessary to plan to use the services of Montcalm Community College. The college exists to provide educational services. Inquiries regarding the college are welcome. A question will usually remain unanswered unless it is asked.

Sincerely,

A handwritten signature in cursive script that reads "Clifford J. Bedore, Jr." The signature is written in dark ink on a light background.

Dr. Clifford J. Bedore, Jr.
President



PEACE . . .

DIVERSITY
WITHIN UNITY . . .

RELEVANCY OF
PROGRAMS . . .
THAT'S MCC.



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HISTORICAL REVIEW

As the result of the efforts of a group of concerned citizens, the Montcalm Community College idea passed through the study stages and became a reality by means of an election held March 2, 1965. The newly-elected Board of Trustees, provided with a one mill tax levy and a will to confront the task, selected a president and a business manager who began their official work in August of 1965. The processes of selection of a site and an architect were completed in early fall of 1965. Construction bids for the first building were opened in September of 1966 and the first buildings were dedicated September 26, 1967.

In order to emphasize the strong community commitment to vocational education, the third professional to join the Montcalm Community College staff on February 1, 1966, was a Dean of Vocational/Technical Studies. The first full-time programs of Montcalm Community College were vocational programs which started on August 29, 1966. By late fall of 1967, all of these programs were housed on campus. In the fall of 1972 over 49% of the registered credit hours reported were in vocational/technical courses.

In August, 1966, the Learning Resources Director began assembling materials for a comprehensive study center for Montcalm Community College.

On July 1, 1967, with the arrival of the first Dean of Students, the formal counseling, admissions and registration program began. Student activities such as student newspaper, choir, student government and interscholastic athletics began during the fall semester of the 1967-68 academic year.

The position of Academic Dean became a part-time position in January of 1968 and has been a full-time position since the fall of 1968.

Because of the recognized role of community involvement in a community college and the pressing priorities demanded of other administrators, on February 1, 1969, the position of Director of Community Services was filled. This division assumed responsibility for coordinating needs of various groups from the community and the resources of the college. The results have been adult education courses, non-credit courses, short courses, conferences, and cultural activities. The development of off-campus teaching centers has been another direct result of efforts by the Community Services Division.

The staff of Montcalm Community College has been involved in a program of self-appraisal and institutional analysis designed to facilitate an examination by a team to be sent to the campus by the North Central Association of Colleges and Universities. It is currently expected that this visit will occur in the fall of 1973 and that the result should be full accreditation by the end of the 1973-74 academic year.

The college staff, Board of Trustees, and citizens of Montcalm Community College District will strive to maintain the college as an institution dedicated to the service and well-being of the community it serves.

THE EDUCATIONAL PLAN

EDUCATIONAL OBJECTIVES

Montcalm Community College subscribes fully to the following institutional objectives:

1. To provide vocational and technical study leading to occupational competence at the semi-professional and skilled levels; also to assist in upgrading the skills of unemployed persons.
2. To provide academic study at the freshman and sophomore levels transferable to senior institutions and acceptable toward a baccalaureate degree.
3. To provide assistance for all students through social, vocational, and educational counseling and guidance.
4. To provide general education for those who study primarily to become more knowledgeable about their cultural, social, and scientific environment.
5. To provide adult and continuing education, both through the regular curriculum and through study designed to meet specific objectives.
6. To provide a center for community service through exhibits, lectures, concerts, and similar cultural activities; also, to provide facilities in which community groups may carry on similar projects.
7. Through an organized program of student activities, to provide for growth in social skills and the development of responsible community citizenship.

Being aware that the above objectives describe a comprehensive community college, the staff and trustees of Montcalm Community College are utilizing them as guidelines in the development of this college.

However, to describe the objectives of Montcalm Community College solely in such general terms is stating only one aspect of the goals. The important purposes are better defined in terms of the people who will participate in the educational program, the instructors and students—the community of learners mentioned above. Only to the extent that the educational needs of students are met will the objectives of Montcalm Community College be realized.

In establishing the programs, certain assumptions have been made regarding these needs:

1. At least 50% of the student body will request programs in the vocational/technical fields.
2. At least 10% of the enrolled students will successfully transfer to senior institutions to complete work on a baccalaureate degree, and some of these will be in technical programs at Montcalm Community College.
3. All students—youth and adult, academic and vocational/technical, transfer and non-transfer—will expect to understand a great deal about today's complex society after completing study at this institution.
4. All students will anticipate a quality collegiate program of studies—including skillful teaching, opportunities for creative thinking, and the challenge to become self-directive in their academic life.
5. Each student at Montcalm Community College expects that the chief outcome of his educational experience at this institution will be the skill, mental awareness, and persistent desire to become a lifetime learner.

Both the institution and personal objectives stated above become a mandate to those in whom the responsibility for the development of this college has been vested. These will consistently form the master guidelines against which decisions regarding the program of studies, building design, and provisions for student life are measured.

ACCREDITATION

Almost from the moment the first President began his work with Montcalm Community College, the institution has aggressively followed the prescribed steps which will lead to accreditation under the North Central Association of Colleges and Secondary Schools. By late 1965, the Association had appointed Dr. Daryl Pendergraft of the State University of Northern Iowa as the Consultant/Examiner for this college.

To expedite the transfer of Montcalm Community College students to four-year institutions during the normal period of five or more years before accreditation, Michigan public and private colleges and universities have assured—in writing—the acceptance of academic credits at full value for which a grade of "C" or better has been earned at Montcalm Community College.

While technical and vocational courses are designed primarily to promote occupational competency for students enrolled in the programs, certain State universities have agreed to appraise these Montcalm Community College credits for possible transfer where they are appropriate to a student's program.

Montcalm Community College was awarded status as a Candidate for Accreditation by the North Central Association in April of 1969, in the minimum time possible. Montcalm Community College has completed the extensive self-study which will need to be updated for a visitation in the fall of 1973. Following this visitation, a decision will be rendered by the Association concerning the application for accreditation. Montcalm Community College is moving, successfully and on schedule, toward full accreditation.

Montcalm Community College holds full membership in the American Association of Junior Colleges, the North Central Council of Community and Junior Colleges, the Michigan Community College Association and the Association of Community College Trustees.

EDUCATIONAL PHILOSOPHY

Montcalm Community College has a basic educational philosophy of which the student should be aware. The college is committed to the following premises:

1. That setting personal goals is a lifelong process, and success in life often depends upon fulfilling those goals which one has set for himself. Also, that goal-setting is often a shaping and re-shaping process in which the student is an active participant who must find a greater awareness of himself in society. Further, that while the short time spent at Montcalm Community College does not fulfill many lifetime goals, the daily close contact between instructor and learner helps establish goals and plan how to achieve them.
2. That all educational pursuits are of equal dignity. As Governor George Romney remarked at the Montcalm Community College Groundbreaking Ceremonies on September 26, 1966, "All work is good, whether it is done with the head or the hands." The college foresees that its student body will be about equally divided between the academic and vocational/technical divisions and anticipates the same high level of accomplishment in both. Further, it is believed that a person whose major emphasis lies in one division would benefit from educational experiences in the other.
3. That General Education, as presented by Montcalm Community College and described later in this catalog, is a most effective means of providing for knowledgeable citizenship through the understanding of our physical, social and cultural world. Further, that the General Education approach is also effective in providing the basic groundwork for upper division collegiate study after transfer to senior institutions.
4. That stimulating, exciting and challenging teaching is vital to learning.
5. That instruction at Montcalm Community College must provide the basis for continuous life-long learning.
6. That high standards of moral and spiritual character are an essential attribute for personal well-being.

INSTRUCTIONAL FACILITIES

The 1967-68 academic year became the time for transition from teaching classes in rented or borrowed facilities to full-scale, on-campus operation in buildings designed especially for Montcalm Community College. During the year students and their instructors began using the Two-Story Academic building, the Vocational Shop building, and then the Learning Resources Center. Also completed was the Heating Plant/Service building.

The Learning Resources Center is the central study area of the college and is an integral part of the educational program. The physical facilities provide individual study carrels, group seating, conference rooms, an electronic listening laboratory for both individual and group audio study, and a separate reading laboratory. The materials collection includes a carefully chosen and growing book collection of over 16,000 volumes, approximately 250 periodicals and newspapers, microfilm titles for back issues of needed journals, and several hundred disc and tape recordings.

In addition to regular classrooms, the Two-Story Academic facility features three demonstration/lecture rooms for the sciences, each adjacent to a well-equipped laboratory; a business secretarial wing with laboratories for business machines and shorthand transcription; the practical nursing facilities; the drafting and design room; and the art room.

Another addition to the campus is the One-Story Academic building, first put into use on August 25, 1969. In addition to a number of regular classrooms, its special features include two lecture/demonstration halls seating 100 and 135 persons respectively, with one small group seminar room immediately adjacent.

Early planning for instructional facilities at Montcalm Community College provided for a building which would accommodate both technical degree and vocational programs of study. However, facilities for a number of the classroom-oriented occupational studies—practical nursing, business education, drafting—were integrated into the Two-Story unit. During the 1966-67 year it became obvious that there was a rapidly growing need for instructional space related for the industrial/mechanical skills. Consequently, planning began in January, 1967, for the Vocational Shop building which was ready for use by automotive mechanics, welding, industrial technology and apprenticeship beginning in January, 1968. The 1971 addition doubled the floor space permitting space for aircraft mechanics and residential construction laboratory.

The Barn Theatre has been developed for drama activities of campus and community groups. Several miles of nature trails have been developed for nature study.

Other projects, as yet unannounced, are in the preliminary planning stages.

ADMISSION TO THE COLLEGE

Applicants shall possess a high school diploma or, if over the age of 18 years, shall submit to an educational equivalency examination as prescribed by the Director of Admissions.

Exceptions to the above, in keeping with the "Open Door Policy" of Montcalm Community College, may be made at the discretion of the Director of Admissions and/or the Admissions Committee.

ADMISSIONS PROCEDURE

The following procedure is followed by all students enrolling for the first time at Montcalm Community College.

1. Submit an application (available at your high school office or the College Dean of Students Office). Include a check for the \$5 registration fee.
2. Request that your high school office forward one copy of your transcript of grades and standardized test results to the Dean of Students.
3. Only full-time students are required to submit a report of physical examination. Exceptions are: Practical Nursing students, students entering MCC through Vocational Rehabilitation, and students planning on participation in Physical Education. These students must submit a report of physical condition regardless of the number of credit hours for which they are enrolled. An MCC physical examination form must be secured from the Dean of Students' Office, completed by your family physician, and returned to the Dean of Students.
4. The American College Test (ACT) is recommended but not required of students entering the College. Students who anticipate later transferring to four-year institutions should continue to register for the ACT.
5. Male students: MCC will need to know your Selective Service Board name and your own lottery number. Your admission, registration, and continuing enrollment status will be reported to the proper Board by the College.
6. Students transferring from other post-secondary schools should also have a transcript of college work sent to the Dean of Students. Students who were enrolled in the previous semester or summer session need not reapply for admission. Students making last-minute plans to attend Montcalm Community College may enroll on a tentative basis. It will not be possible, however, to grant official credit for courses completed unless all admissions requirements are met.

EXPENSES

TUITION

Resident of Montcalm Community College District:	\$11 per credit hour
Michigan Non-Resident Students:	\$20 per credit hour
Out-of-State Students:	\$30 per credit hour

While these are the minimum charges for non-resident Students as designated by the Michigan Community College Law as amended, the net cost will be \$16 for a Michigan out-of-district Student and \$25 for a non-resident of Michigan. Scholarships to accommodate this difference are available upon signed application by the student regardless of need or other conditions; as provided in paragraphs one and two of Act 84 of the Public Acts of 1973 of the State of Michigan.

PLEASE NOTE: The Trustees of Montcalm Community College sincerely desire to keep the cost of attending this institution as low as possible for the student. However, tuition charges are a direct reflection of the present economy, and the costs of operating a college are—like the economy itself—changing rather rapidly.

If a tuition change becomes necessary for the following academic year, all present students and new 1974-75 applicants will be notified immediately by letter.

Residents and non-residents and out-of-state students are defined as follows:

Resident Students:

1. Students now living with their parents or legal guardian, providing the parents or legal guardian reside within the boundaries of Montcalm Community College District.
2. Students under 18 years of age whose parents are not living or for whom there is no legal guardian, providing they reside within the boundaries of Montcalm Community College District.
3. Single students under 18 years of age who have resided within the boundaries of Montcalm Community College District for at least six months immediately prior to the first day of classes.
4. Married students under 18 years of age who have resided within the boundaries of Montcalm Community College District for at least six months immediately prior to the first day of classes.

Non-Resident Students:

1. Single students 18 years of age or over and married students who have not resided within the boundaries of Montcalm Community College District for at least six months prior to the first day of classes.
2. Students under 18 years of age whose parents or legal guardians do not reside within the boundaries of Montcalm Community College District.

Michigan Residence Defined:

In determining the Michigan residence status the college will apply the following rules:

1. The residence of a student who is a minor follows that of his parents or legal guardian except that a minor student who comes to this institution from another state or country cannot be registered as a resident of this state on the basis of having a resident of this state as guardian except by permission of the Board of the Institution in each individual case. Six months after the parents of a minor leave the state, the minor becomes a non-resident student.
2. A person who is at least 18 years of age at the time of registration in the institution and who has resided in this state six months next preceding the date of registration without being registered at a state-supported college or university during that period is deemed a resident of this state for the purpose of such registration.

3. The residence of a wife follows that of her husband, except that a woman student who is a resident under paragraphs 1 or 2 may continue to register as a resident of this state although subsequently marrying a non-resident student or other non-resident.
4. No person is deemed to have gained a residence in this state while a student at any institution in this state.
5. A person in the service of the United States, and his wife or minor children, who have met the six-month residence requirements in paragraph 2, may register as residents of this state.
6. An alien lawfully admitted for permanent residence in the United States and who has obtained his permanent visa, and his wife or minor children, who have met the other requirements herein for residence, may register as residents of this state.
7. A full-time member of the "teaching staff," and a member of the teaching staff whose appointments require at least three contact hours of teaching each week in regularly assigned formal classes, and their dependents, may register as residents of this state.
8. Discretion to adjust individual cases within the spirit of these regulations is vested in an officer appointed by the Board of this institution.

Dual Residency

In cases of dual residency, the residence from which the federal income tax return is filed shall determine residency.



Nursing students enjoy low-cost, high-quality training!

PAYMENT OF TUITION AND FEES

Tuition and fees are due and payable in full on the day of registration.

Students unable to pay the tuition and fees should consult with the Business Office concerning a loan no less than three weeks prior to the enrollment date.

No other credit arrangements can be made through the college.

Refunds will be made by check as follows:

1. Refunds for students over 18 years of age will be made payable to the student and mailed to the address given by him, except in paragraph 2. below.
2. Students under special scholarship and/or loan programs administered by Montcalm Community College will receive no refund; the refund will be returned to the donor. Those scholarships given directly to the student and not administered by the college will be refunded as in paragraph 1. above.

Tuition charges for college credit apprenticeship programs shall be made in accordance with the residency requirements for all other students. The student activity fee charge shall not be in effect for apprenticeship students nor for any shared-time high school student who may be enrolled.

Non-credit course fees shall be established and assessed for each course.

FEES

Registration Fee each semester \$5.00
Submitted with application for admission.

Matriculation Fee \$10.00
Payable once only at the time of initial registration at Montcalm Community College. Students taking less than 12 credit hours of work during their initial semester need not pay the Matriculation Fee. However, this must be paid by the time the student has registered 12 credits of study at Montcalm Community College.

Student Activity Fee, per semester \$10.00
For students registered for 7 or more hours, except apprentices and shared-time.

Class Fees \$10.00 (13 hours or more)
7.50 (10-12 hours)
5.00 (7-9 hours)
2.50 (4-6 hours)
1.00 (0-3 hours)

SCHEDULE FOR TUITION REFUNDS FOR ON-CAMPUS CLASSES

If withdrawal takes place:

During first week	full refund of tuition only
During second week	75% refund of tuition only
During third week	50% refund of tuition only
During fourth week, or thereafter	no refund

SCHEDULE FOR TUITION REFUNDS FOR OFF-CAMPUS CLASSES

No refunds after first night of classes.

FEES ARE NOT REFUNDABLE.

FINANCIAL AID

The financial aid policy of Montcalm Community College reflects the desire of the College for a cosmopolitan student body of the highest possible promise. No student should fail to apply for admission to the College because of financial considerations.

In general, the College attempts to aid neediest students first, recognizing both the needs and resources of the College and the needs of the individual applicant. Montcalm Community College is a member of the College Scholarship Service Assembly and subscribes to the principles of financial aid of the organization. Before any financial assistance can be given to a student, a Confidential Form must be filled out and sent into the College Scholarship Service so a needs analysis can be determined.

The College believes in the self-help concept in financing the college education and assumes every family will make all reasonable sacrifices in financing their son or daughter's education before applying to the College for assistance. The College awards the package form of financial aid, usually combining scholarships with job and/or loan to meet each student's need.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS

This Federal program of assistance is intended for students "who for lack of financial means of their own or of their families, would be unable to obtain such benefits without such a grant." The grants must be matched with assistance of an equal amount in a package which may include other grants, loans or college-sponsored employment.

LOANS

The College has been approved by the Michigan Higher Educational Assistance Authority for participation in the financial aids program sponsored by the Michigan Legislature. Through this program loans to individuals for higher education purposes are guaranteed by the Legislature which pays the interest charges during the time of college attendance. Several local Montcalm area banks are participants in the Authority and application for the MHEAA loans should be made directly with them. High School counselors and Montcalm Community College counseling staff have information regarding member banks.

In addition the College is under the loan provisions of the National Direct Student Loan. The National Direct Student Loan is a continuation of the National Defense Loan Program authorized by Title II of the National Defense Act of 1958. To be eligible for this loan a student must demonstrate financial need through the College Scholarship Service and carry at least eight credit hours.

WORK/STUDY

Priority in making this Federal program's awards is given to those students having "greatest financial need." A number of on-campus and off-campus jobs are available to students enrolled and carrying at least eight credit hours.

BASIC GRANT PROGRAM

The Basic Grant Program is one of the major new programs authorized by the Higher Education Amendments of 1972. The intent of this Program is that every eligible student be entitled to Federal Grant assistance as a matter of right. To determine eligibility for this program the student must fill out an application for Determination of Expected Family Contribution. This form is readily available at colleges, high schools, post offices and several other public offices.

SCHOLARSHIPS AND GRANTS

The MHEAA program also provides for a program of scholarships for which the College has been declared a participating institution. Students taking the qualifying examination may designate Montcalm Community College as the institute at which their scholarships will be used.

A number of local scholarships are offered each college year. Some of these scholarships do not require a Confidential Statement to be on file. Contact the Financial Aid Office to inquire about these scholarships. Groups showing particular interest in helping area students attend Montcalm Community College include:

- Agora Scholarship
- Alice Ann Beckmeyer Scholarship
- Alvin M. Bentley Foundation
- Farm Bureau
- Ferris Township Scholarship
- Greenville Federation of Women
- Greenville Junior Chamber of Commerce
- Greenville Lions Club
- Stan and Marion Kemp Scholarships
- Stanton American Legion
- Stanton Womens Club
- United Memorial Hospital Guild
- VFW Lester J. Sitts Post 5065 and Auxiliary Academic Scholarship

Many new local scholarships are made available each year.

BOARD OF TRUSTEES SCHOLARSHIPS

*Two scholarships, one to a student pursuing a vocational curriculum and one to a student pursuing an academic program are presented to students from each of the seven area high schools.

*One full tuition scholarship is awarded to a student of each of the seven area high schools who has demonstrated outstanding academic and citizenship ability during their high school years and who has enrolled at the College.

*Two full tuition and fees Adult High School Scholarships are awarded to students in each of the high schools in the Montcalm Community District having a high school completion program for adults. The Scholarship is for seven semester credit hours to be used the following school year. Scholarship recipients are selected by the Area High School Community Education Director.

*An athletic scholarship provides one full tuition scholarship to a student from each of the area high schools.

*Persons who are residents of the MCC District, and who are 60 years of age or older, may enroll in college credit classes *without paying any tuition*. Only the minimal fees will be charged.

ACADEMIC REGULATIONS

ACADEMIC REGULATIONS

Certain academic policies, regulations and practices prevail at Montcalm Community College. These provide the basic framework within which a student's achievement and academic status are expressed. Their appearance here is to be interpreted as official policy of the College enabling the community of learning to function.

SEMESTER SYSTEM

Montcalm Community College operates on the basis of two semesters per year. The first semester begins right after Labor Day and is completed by the Christmas holidays. The second semester opens in early January and ends about mid-May. Six and eight-week summer school sessions are usually offered by the College.

CLASSIFICATION OF STUDENTS

Freshman—A student who has completed less than twenty-five semester hours of study.

Sophomore—A student who has successfully completed at least twenty-five semester hours of study but who has not yet qualified for an Associate Degree or a certificate.

Full-time—By legal definition, one who carries twelve or more semester hours of study. However, the student must bear in mind the number of credit hours required for an Associate Degree and his common desire to graduate after four semesters of study.

Part-time—A student carrying less than twelve semester hours.

GRADUATION REQUIREMENTS

Students working toward a certificate or diploma in a vocational/technical field must complete all established requirements for the award, including at least a 5.00 grade point average on a 12.00 point scale.

Those pursuing an Associate Degree must complete not only the required semester credits, but also the proper sequence of courses as herein presented, with an overall 5.00 grade point average.

Transfer students who have earned credits at other institutions of higher education may request that these credits be applied toward an Associate Degree at Montcalm Community College. However, 24 credits of the total presented for graduation must be earned at Montcalm Community College, and the student must be enrolled at this institution during the final semester before receiving his degree.

SELECTION OF PROGRAM OF STUDY

Selection of a student's program of study takes place at the admission counseling interview prior to registration and/or the start of classes. During the counseling interview the student will be advised of specific course requirements necessary for completion of his program.

Exceptions to specific program requirements will be made only by the Dean of the appropriate division of the College or the Dean of Students and/or his designated representative. Exceptions must be authorized in writing.



The vocational/technical building and power plant as seen from the administration building.

CLASS ATTENDANCE

It is the policy of Montcalm Community College that all students shall attend all classes in the courses for which they are registered. Absence from classes shall, in no way, relieve the student from completion of assigned work.

The matter of regular class attendance shall be resolved between each instructor and his students. Some absences—for reasons of illness, field trips and other like occurrences—if unavoidable, should have advance arrangements made whenever possible for completion of work.

VETERANS

Montcalm Community College has been approved for study under the "G.I. Bill" by the Veterans Administration.

Applications for entitlement to G.I. Bill benefits and information regarding study for ex-servicemen and women at Montcalm Community College are available at the Admissions Office.

DRAFTEES

A student who is drafted into the service of the United States by regular draft board procedures during any semester shall be entitled to full refund of tuition and fees paid for that semester provided he is not able to complete the course work required to enable him to be given a grade. The student must present satisfactory evidence that he has, in fact, been drafted and must apply for refund during that semester.

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 course work by the close of a semester for reasons beyond his 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. The following procedure is observed:

1. An "I" mark shall be entered on the record when a course of study is incomplete at the termination of the scheduled semester.
2. An "I" mark shall remain without alteration indefinitely or until such time as the requirements of the course are satisfied and warranted in writing by the instructor to the Dean of Students.
3. An "I" mark shall not be averaged with other grades to establish a grade point average (GPA).

GRADING SYSTEM

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

Grade	Honor Point Value	
A+	12	
A	11	
A-	10	
B+	9	
B	8	
B-	7	
C+	6	
C	5	
C-	4	
D+	3	
D	2	
D-	1	
E	Failure	0
W	Withdrew while passing	0
F	Withdrew while failing	0
I	Incomplete	0
*V	Audit	
N	Preceding a grade indicates credit is not recommended for transfer—terminal credit only	
S	Satisfactory (Granted in Community Education courses only.)	

**Audit applies to the situation where a person pays tuition for a course but is not required to complete assignments or examinations.*

HONORS

Each semester a Dean of Student's Honor List will be issued including only those students enrolled for at least 12 semester hours and who have no "Incompletes" recorded for that semester. The students on this list will have attained a Grade Point Average from 9.00 through 9.99.

The President's Honor List will include those whose GPA for that semester is 10.00 or higher and meet the above conditions.

The Dean of Students' Scholars will include only those students who have a cumulative GPA from 9.00 through 9.99 and have completed at least twenty-four (24) semester hours and having no Incompletes for their total period of enrollment. The President's Scholars will be those students with a cumulative GPA of 10.00 or higher and who meet the above conditions.

ACADEMIC PROBATION AND DISMISSAL

For students pursuing an Associate Degree, College Transfer or Certificate: All students who hope to earn an Associate Degree or Certificate in either the academic or vocational/technical studies, or who hope to transfer to a four-year institution, will be subject to the following grade point regulations:

1. Students who achieve less than a 1.00 Grade Point Average (D- average) during their first semester at Montcalm Community College will be dismissed for academic reasons. Students dismissed may refer to item 5 below.
2. Failure to achieve at least a 4.00 Grade Point Average (C- average) at the end of the first semester will result in the students being placed on academic probation.
3. A student will continue on probation until his cumulative Grade Point Average has been raised to 5.00 or above.
4. While on probation, a student must achieve a 5.00 Grade Point Average each semester. Failure to do so will result in academic dismissal.
5. A student subject to academic dismissal may follow one of three courses of action:
 - a. He may accept the dismissal.
 - b. He may request assistance in the Counseling Center, primarily to explore the advisability of a change in curriculum. If such a change is decided upon, the counselor will make his recommendation in writing concerning the student's status. Written approval for continuing in a program will be sought from the Dean of the Division into which the student wishes to enter.
 - c. A student dismissed from Montcalm Community College for academic reasons may appeal before the Dean of Students for special consideration.
6. Students dismissed for academic reasons, either from Montcalm Community College or any other college, may be required to wait for a full semester before re-entering the College.
7. Students transferring into Montcalm Community College shall be subject to all regulations stated above from the beginning of their enrollment.

DROPPING/ADDING CLASSES

In order to officially drop/add a class or classes, students must follow this procedure:

1. Students must get a Drop/Add form from the Registrar in the Business Office. This form may be obtained beginning with the first day of classes.
2. After the student has properly filled out the Drop/Add form, the student will take the form to the instructor of the class you wish to drop/add for his signature and return the form to the Registrar.
3. It is important to officially drop/add in order that the student may not get an incorrect grade or be attending a class for which he will not get credit.
4. Should it seem necessary for the student to drop all classes and withdraw from the College, the above procedure should be used so the transcript of classes taken will reflect a proper withdrawal.

STUDENT SERVICES

The College Student Services are designed to aid the student in planning well his college life. The Dean of Students' Office is one which attempts to consider the needs, priorities, and possibilities of each person. Efforts are constantly made to assure each student of his rights and obligations.

COUNSELING

Students will plan each semester's program with the assistance of the counseling staff. However, each student should become familiar with his curriculum requirements. Students planning to transfer should review the graduation requirements not only of Montcalm Community College but also of their intended transfer institution. Students are encouraged to discuss their program and vocational/technical goals with the counseling staff and members of the college faculty.

In addition to educational/vocational planning, the counseling staff looks forward to discussing with students the wide range of questions that probe all our lives: questions that tend to tilt life for us socially, personally or academically.

CAREER GUIDANCE

Career guidance is provided at Montcalm Community College with specific emphasis on helping students develop an understanding of their abilities, interests, values and needs and on helping students explore various career options which are available to them. Included also is a systematic decision-making process and use of career information sources.

SPECIAL NEEDS

A special needs program is available for students who, for a variety of reasons, find themselves in need of supplemental assistance. Developmental reading skills and tutorial services are the two main components of this program. Veterans should also keep in mind that their G.I. Bill benefits will allow tutoring in addition to their regular financial entitlements. Students may contact a counselor for this service or may be referred by an instructor.

PLACEMENT

The College employs a Placement Counselor whose primary task is to assist students completing training at M.C.C. in finding suitable employment. He also posts job opportunities for people desiring part-time and summer employment. Students should register with the Placement Counselor for quick reference to prospective employers. The Placement Counselor also assists students in proper transfer to other training institutions.

A library of college catalogs is available in the Counseling Office to assist counselors and students in planning proper transfer to four-year institutions.

STUDENT LIFE

The academic and social atmosphere in which a student lives, works and plays is a vital part of the college experience.

Students, as citizens in the College community, find that a large measure of the management of student affairs is in their own hands. The student body elects representatives to the Student Government, and students actively participate in the maintenance of the discipline that is essential in an academic community, and share in the formulation of other College policies.

The first obligation for responsibility falls upon the student himself. He must devote himself to his academic commitments. A normal load of course work at Montcalm Community College requires 12 to 20 hours of attendance in lectures, recitations, laboratories, or seminars each week. To this must be added the hours of preparation for classwork, to make a total work week averaging 48 hours. The student is obligated to plan his time carefully to meet the level of accomplishment expected in his course work.

The College is well aware that the degree of intellectual capacity, social awareness and cultural appreciation by which the graduating student differs from the entering freshman is a result not only of the student's academic or vocational program but also of all the influences and activities that the student experiences while a member of the College community. This participation may encompass involvement in activities directly relating to the formation of College policies, academic concerns, procedural patterns, and social programs. Theatrical and musical organizations, varied clubs and interest groups, and athletics add other dimensions to student development.

ORGANIZATIONS

The following extracurricular activities are normally available to interested students. It is common for new groups and organizations to be formed each year, and for some to become inactive, depending upon current student interest.

Archery	Drama	Stage Band
Bridge Club	Folk Singing	Student Government
Cheerleading	Intramurals	Student Newspaper
Choir	Ski Club	Veterans Club

STUDENT CONDUCT

Student life at Montcalm Community College is based on the broad principle of personal honor, and the College insists on high standards of honesty and considerate conduct from each of its students.

STUDENT CODE

Within the limitations which govern an ordered community, the College accords students freedom of inquiry, expression and action. Freedom is not to be interpreted as license, for a corollary of freedom is responsibility.

Citizenship in the Montcalm Community College plan involves respect for the dignity and rights of each individual, respect for public and personal property, and personal and academic honesty.

Since regulations are necessary in any community, guidelines have been established in the form of a Student Code which accords students the greatest possible freedom consistent with the welfare of fellow students and of the institution. Violation of this Code may result in dismissal from the College.

MONTCALM COMMUNITY COLLEGE HAS AN AREA GUIDANCE CENTER

Director - Donald C. Burns
Counselor - James W. Lucka
Secretary/Librarian - Lillian Downing

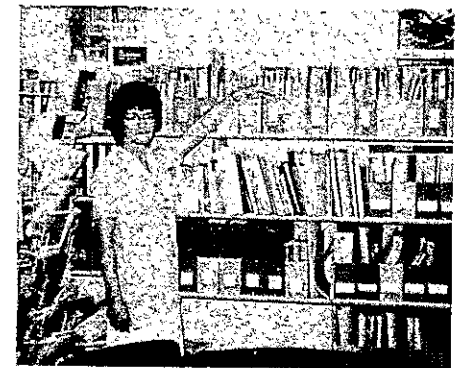
which provides:

A CAREER INFORMATION LIBRARY, for college students and local high school students, as well as community adults.

The library is stocked with the latest information in some 20,000 careers. The secretary/librarian in the Center, who has organized and catalogued the materials for easy use, is available on a daily basis to help persons who are seeking information.



Lillian Downing, secretary-librarian, assists Joyce Kelly in finding some information.



The Center is located in the administration building.

AN ADULT GUIDANCE AND COUNSELING SERVICE for the community, with an emphasis on career planning.

These services include a variety of testing (ability, interest, aptitude, etc.) as well as individual or group counseling. A counselor is available at the Center on a daily basis and, through the cooperative efforts of local community school directors, these guidance services are scheduled evenings in the local schools.



Nyama Newkirk talks with Don Burns concerning her career plans.



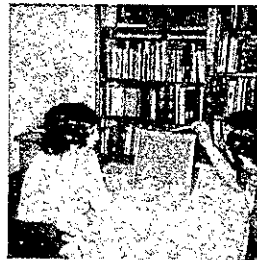
Glen Bachman, community school director at Montabella, discusses evening counseling session with Jim Lucka.

A CAREER DEVELOPMENT RESOURCE SERVICE for area school personnel.

The Center organizes and supervises a minimum of three workshops during each academic year. The specific content for these workshops, which focus on the areas of guidance and career education, is determined by an advisory committee and previous workshop attendees. The Center Staff also responds, on a consultive basis, to the career education and guidance concerns of area school personnel.



Sue McFarland, Central Montclair High School counselor, discusses her careers class with Jim Lucka.

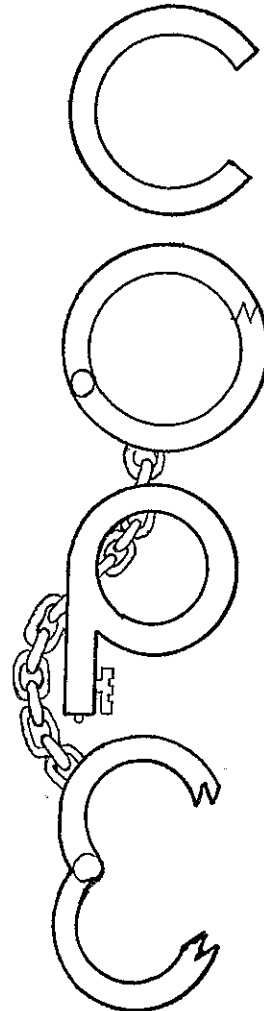


Tammy Edgecombe and her counselor at Greenville High School, Barry Nobles, use the Viewdeck from the Center.

There is no charge to students, adults or school personnel who wish to use the services of the AREA GUIDANCE CENTER.

COPE

(College Opportunity—Prison Extension)



A significant number of M.C.C.'s students do not appear on the Sidney campus. These are all "full-fledged" college students, but they temporarily reside within the wall of two state prisons in Ionia.

Recognizing these men as potential students, M.C.C. began offering credit courses in the Michigan Reformatory in 1968 through the Community Services Division of the college. Since that early beginning the prison program has grown to include hundreds of COPE students served by a full-time staff which includes a director, an academic counselor, a placement counselor, a learning resources assistant and a secretary.

Regular college faculty and adjunct teachers from area institutions currently staff from 25 to 30 classes each semester at the reformatory and the medium security Michigan Training Unit. The COPE schedule of courses enables students to pursue a Basic Studies Degree, an Associates of Arts Degree, one of several vocational/technical degrees or certificates, or one of M.C.C.'s paraprofessional programs.

The goal of the COPE staff is to live up to the meaning implied in the acronym, to help these men cope with the difficult futures they face. Outstanding cooperation from the Corrections Department, support from political leaders, and HEW Title III funding are opening the way to realization of this dream.

COMMUNITY SERVICES

The Community Services concept is based upon the LIFETIME learning philosophy: that it is possible to learn throughout a person's entire lifetime. Through its community services program, the community college offers a variety of services beyond its well established degree and certificate programs. Community Services at Montcalm Community College provides for self-improvement and community development. Community development involves the improvement of the economic, social and political life of the community. The Community Services Division offers non-credit short courses, cultural enrichment activities, including a special events series, exhibits, community chorus, community players and a community outreach program. Other activities include a speakers bureau, public forums on issues, conferences and workshops, radio programs, services to senior citizens, Manpower Development Training and liaison with the Community, including agencies and organizations.

Community use of college facilities and campus tours is encouraged. These are to be scheduled through the Office of Community Services.

Community Services constitute a response of the community college to the needs of the community. The complexities of urbanization, minority group problems and racial tension, economic and technological changes, environmental decline, cultural and leisure time needs, and poverty are examples of some of the challenges facing communities. Community Services becomes the cutting edge whereby the community college attempts to meet the challenge of the changing community.



Mary White, recent graduate of MCC, addresses a MOMS' Conference.

"Sir Slob and the Princess," a recent dramatic production at MCC, featured (from left) Jean Eastman, Chris Christensen, Jenny McLachlan, Seri Kraus, June Staffen, Ken Mays, Michelle Staffen, Jerry Barnes, Ruth Hansen and Greg Erskin.



The Michigan State University "Beaumont String Quartet" provide enriching entertainment in Auditorium One at MCC.

PROGRAMS OF STUDY

The programs of study offered at Montcalm Community College are described on the following pages under the general headings: Academic, Basic Studies and Vocational/Technical. These three headings are used here because it is possible for a student to earn an Associate Degree within each grouping. The prospective student will note that this section of the catalog contains only groups of courses leading to certificates or degrees. A detailed description of each course follows in the next section of the Catalog.

PLEASE NOTE: All courses listed in the Programs of Study are identified by a departmental code (examples: LA, TD, etc.) and a course number. Course descriptions appear in the next section of this catalog with departmental codes as follows:

ACADEMIC

Foreign Language
Humanities
Language Arts
Mathematics
Natural Science
Physical Education
Social Science

FL
HU
LA
MA
NS
PE
SS

VOCATIONAL/TECHNICAL

Apprenticeship Training
Architectural Trades
Automotive Mechanics
Aviation Mechanics
Business Education
Industrial Technology
Practical Nursing
Technical Drafting
Trade-Technical Education
Welding Practices

AP
AT
AM
AV
BE
IT
PN
TD
VE
WE

ACADEMIC PROGRAMS

Montcalm Community College is dedicated to the idea of providing a variety of program offerings which are designed to allow the students to pursue studies appropriate for their needs and abilities.

The students who wish to pursue the Bachelor's Degree or beyond may begin their college education at Montcalm Community College in a transfer program that is planned to meet specific requirements. For those who wish to prepare for more immediate employment, the college offers programs in several occupational fields with technical programs that are designed to this end.

The College recognizes that the student may change his educational goals while attending Montcalm Community College. Counselors and instructors will work with the student in selecting a program that best meets his needs.

GENERAL EDUCATION PROGRAM

The heart of the academic program is the general education program which is required for those students earning the Associate Degree in Arts & Sciences.

Courses in the general education program are inter-disciplinary in nature and are designed to provide for the student a broad base of understanding in the area of Communication, Natural Science, Social Science and the Humanities.

It is the goal of Montcalm Community College to equip the student to conduct himself as an intelligent citizen in a complex world. Equally important, it is expected that the General Education Curriculum will create a desire for graduates to continue learning beyond their graduation from Montcalm Community College.

DEGREE OF ASSOCIATE IN ARTS AND SCIENCES

The following courses are required for all students pursuing the Degree of Associate in Arts and Sciences.

Course Title	Course No.	Semesters	Credits
Man's Communication	LA100-101	2	6
*Man's Biological & Physical World	NS100-101	2	8
Man's Social World	SS100-101	2	8
Man's Creative World	HU200-201	2	8
Contemporary Problems	SS200-201	2	2
Total General Education Credits			32

*Students may take alternate science courses. See the counselor concerning the science requirements for your program.

In addition to the above required general education courses, the student may complete the degree requirements of twenty-eight additional hours by selecting elective courses from the Academic or Vocational/Technical areas. Sixty (60) semester credit hours are required for graduation.

TRANSFER PROGRAMS

For the student who wishes to transfer to a four-year institution, Montcalm Community College offers up to two years of many four-year programs.

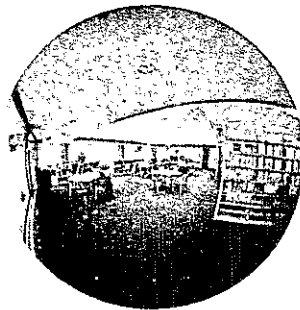
Listed here are a few of the programs which the student may start at Montcalm Community College and transfer to four-year institutions.

Accounting	Medical Technology
Biology	Physical Education
Business Administration	Physics
Chemistry	Pre-Dentistry
Economics	Pre-Law
Elementary Education	Pre-Medical
Engineering	Pre-Optometry
English	Pre-Veterinarian
General Education	Psychology
History	Public Administration
Humanities	Secondary Education
Law Enforcement	Secretarial Practice
Liberal Arts	Speech
Mathematics	Zoology

The student who is planning to transfer to a four-year institution should plan carefully with a counselor and utilize the catalog of the college to which he plans to transfer. Careful planning is important so that he fulfills lower division requirements of that college.

It is advisable that the student work with the counseling staff throughout his career at Montcalm Community College to make sure that he is selecting the appropriate courses. It is the responsibility of the student to select these appropriate courses.

Students are shown using the resources of the MCC library.



BASIC STUDIES

The Basic Studies program provides for certain students, who because of specific occupational or educational experiences or future goals require, an individually structured course of study which is not yet offered in either the vocational/technical or academic programs of the College, to earn an Associate Degree. This curriculum must be approved by the Dean of Students Office.

Degree requirements include the following:

Course Name	Course No.	Credit Hours
Man's Communication	LA100 & 101	6
Man's Social World	SS101	4

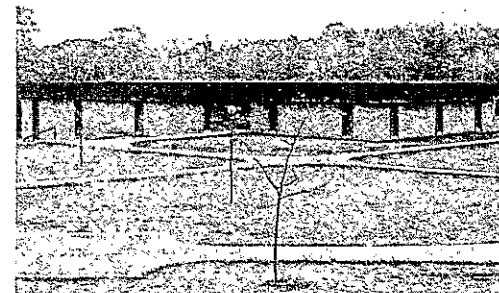
At least ONE of the following:

Man's Social World	SS100	4
Man's Biological World	NS100	4
Man's Physical World	NS101	4
Man's Creative World	HU200	4
Man's Creative World	HU201	4

General Academic Electives to total four to six additional academic semester credit hours.

Optional Electives:

1. The remaining 40 to 42 semester hours may be selected from the vocational/technical courses offered by the college, or—
2. An additional General Education Course (as listed above) and four to six academic electives plus additional vocational/technical electives to obtain the necessary sixty semester credit hours required for graduation.



This two-story building is used for classes in the Sciences, Business Education, Practical Nursing, Mathematics and Architectural Drafting.

PARAPROFESSIONAL PROGRAMS

There is a growing recognition of the need for trained paraprofessionals to assist and work with the professionals in the fields of social service, corrections and education. The trained paraprofessional is playing an increasingly important role in our society.

Montcalm Community College is currently offering three of these paraprofessional programs. The programs are designed so that a student can earn a certificate at the end of one-year equivalent of full-time study. The student may also earn an associate degree by completing two years of full-time equivalent study.

The programs are organized so that they will accommodate people working to get into these fields or an enrichment training for those already employed.

Each of the three programs identified may be pursued on a full or part-time basis.

A basic tenant of each of the three programs is field experience which enables the student to be placed in a field work situation. The student receives college credit for this experience.

The majority of the courses in these programs are transferable to another institution for the student who wishes to pursue further education. It is strongly recommended that the student planning to transfer to another college consult with the counseling staff.

CORRECTIONS SPECIALIST CERTIFICATE PROGRAM

The purpose of this program is to broaden the horizons and provide enrichment experience for those people working in the corrections field. It provides a combination of Academic and job-related courses for this purpose. The courses taken on the Certificate program will apply to the two-year associate degree program.

Course Name	Course No.	Credit Hours
Man's Communication	LA100	3
Man's Communication	LA101	3
Speech	LA210	3
Man's Social World	SS100	4
Man's Social World	SS101	4
Introduction to Corrections	SS140	3
Sociology	SS230	3
Observation Lab or Supervised Field Experience	SS190	3
Corrections Practicum	SS145	4
Total Hours		<u>30</u>

CORRECTIONS ASSOCIATE DEGREE PROGRAM

This program is designed to complement the certificate program by providing greater depth in the Academic related fields and enabling the student to complete the requirements for an Associate of Arts degree.

Course Name	Course No.	Credit Hours
Psychology	SS220	3
Social Problems	SS235	3
Political Science	SS240	3
Man's Biological World	NS100	4
Man's Physical World	NS101	4
Man's Creative World	HU200	4
Man's Creative World	HU201	4
Contemporary Problems	SS200&201	2
Elective		3
Total Hours		<u>30</u>

SOCIAL SERVICE ASSISTANT CERTIFICATE PROGRAM

The Social Service Assistant program has been formulated for the student who is seeking employment with a community service agency. It is also planned as an enrichment experience for those who are currently working in a community service agency. It includes a combination of courses introducing the student to the role and function of social services with related Academic studies.

Course Name	Course No.	Credit Hours
Man's Communication	LA100	3
Man's Communication	LA101	3
Speech	LA210	3
Man's Social World	SS100	4
Man's Social World	SS101	4
Introduction to Social Service	SS130	3
Observation Lab or Supervised Field Experience	SS190	3
*Beginning Typing	BE100	3
Elective		4
Total Hours		30

*The student who has attained a proficiency in typing may substitute another course.

SOCIAL SERVICE ASSOCIATE DEGREE PROGRAM

This program provides a greater depth to the student in areas related to the field such as Psychology, Sociology, and in addition, enables the student to complete the requirements of the Associate Degree of Arts and Science.

Since most job opportunities will require the taking of a Civil Service examination, the additional background should be helpful to the student.

Course Name	Course No.	Credit Hours
Psychology	SS220	3
Sociology	SS230	3
Social Problems	SS235	3
Political Science	SS240	3
Man's Biological World	NS100	4
Man's Physical World	NS101	4
Man's Creative World	HU200	4
Man's Creative World	HU201	4
Contemporary Problems	SS200&201	2
Total Hours		30

TEACHER ASSISTANT CERTIFICATE PROGRAM

There is a growing recognition in the field of education of the need for people trained to provide assistance to the teacher and other professional staff. Some educators refer to this as diversified staffing.

The student pursuing the teacher assistant program may find employment possibilities as a teacher assistant, school office assistant, school library assistant, and similar positions in education. The program is designed for people who are seeking to enter the field and also as enrichment for people already employed in a school situation.

The courses taken in the certificate program will apply toward the two-year Teacher Aide Associate Degree program.

While the majority of the courses are transferable, the student should consult with a counselor if he is planning to pursue further education at another institution.

Course Name	Course No.	Credit Hours
Man's Communication	LA100	3
Man's Communication	LA101	3
Man's Social World	SS100	4
*Beginning Typing	BE100	3
Speech	LA210	3
Children's Literature	LA295	3
Introduction to Audio-Visual Services	LA120	2
Music in the Elementary Classroom	HU110	3
Introduction to Art	HU120	2
Art in the Elementary Classroom	HU225	2
Math for Elementary Teachers	MA151	3
Total Hours		31

*The student who has attained a proficiency in typing may substitute another course.

TEACHER AIDE ASSOCIATE DEGREE IN APPLIED ARTS

The purpose of the second year Teacher Aide program is to provide additional training and information which will enable the student to be more proficient in his task of working with professional teachers and other staff members within the school system. While the majority of these courses are transferable, it is important that the student planning to transfer to a four-year institution plan with a counselor on the Montcalm Community College staff.

Course Name	Course No.	Credit Hours
Psychology	SS220	3
Child Psychology	SS221	3
Educational Psychology	SS225	3
Sociology	SS230	3
Political Science	SS240	3
Field Work & Observation	SS190	3
Introduction to Reading	LA290	3
Man's Biological World	NS100	4
Man's Physical World	NS101	4
Elective		1
Total Hours		30

ADVISORY COMMITTEES TO THE PARAPROFESSIONAL PROGRAMS

The advisory committees to the three paraprofessional programs have played an important role in the development of the paraprofessional programs. They continue to advise on the operation of these programs. Listed below are the members of the three advisory committees.

TEACHER ASSISTANT AND TEACHER AIDE PROGRAM ADVISORY COMMITTEE

Burl Glendening, Superintendent, Greenville Public Schools
Robert Gravelle, Dean of Academic Studies, Montcalm Community College
Robert Rhinhard, Superintendent, Lakeview Public Schools
Jack Smith, Superintendent, Carson City-Crystal Schools
Harold Springsteen, Superintendent, Central Montcalm Public Schools
Morley Webb, Superintendent, Montabella High School
Kenneth E. Willett, Superintendent, Tri-County Public Schools
Keats Wood, Superintendent, Vestaburg Public Schools

SOCIAL SERVICE ASSISTANT AND ASSOCIATE PROGRAM ADVISORY COMMITTEE

Max Ake, Paraprofessional, Eight Cap
Miss Donna Boyce, Department of Social Services, Ionia County
Beverly Brubacke, Project Rite, Montcalm Community College, Chairman
Neff Cerna, Director, Migrant Education, Montcalm Intermediate School Office
Robert Gravelle, Dean of Academic Studies, Montcalm Community College
Thayer Hart, Director, Montcalm County Department of Social Services
Ray Hughes, Director, Ionia Mental Health Clinic
Tom Schley, Deputy Director, Eight Cap
Howard Simpson, Training Officer, Ionia State Hospital
Barbara Sousa, Paraprofessional, Ionia Mental Health Clinic
Marge Taylor, Public Health, Ionia County
Rich Thayer, Paraprofessional, Eight Cap
Gary Wakenhut, Mental Health Center, Montcalm County

CORRECTIONS SPECIALIST AND ASSOCIATE PROGRAM ADVISORY COMMITTEE

William Abshire, Assistant Superintendent, Michigan Training Unit
Richard Christiansen, Assistant Training Officer, Michigan Reformatory
Robert Gravelle, Dean of Academic Studies, Montcalm Community College
Robert Greenhoe, Principal of High School, Michigan Training Unit
Richard A. Handlon, Superintendent, Michigan Training Unit
Robert Miller, Director of Treatment, Michigan Training Unit
Richard Shea, Training Coordinator, Michigan Reformatory
William Weideman, Director of Treatment, Michigan Reformatory

VOCATIONAL/TECHNICAL PROGRAMS

Montcalm Community College since its inception has strived to keep abreast of the needs and desires of students within its service area. Additionally, M.C.C. has been sensitive to the needs of local and regional business and industry for well-trained employees. This effort has been made through the participation of members of a General Vocational Advisory Committee and Craft Committees made up of professional and lay persons throughout the M.C.C. service area. The recommendations of these committees have enabled M.C.C. to develop and implement programs of study which not only provide meaningful training and experience in the specialty, but provide the education which is in keeping with the philosophical foundations of the College.

Programs offered at M.C.C. are designed to meet the requirements of the Associate Degree in Applied Arts & Sciences, the two-year Certificate of Achievement, and the one-year Certificate of Achievement. The major emphasis of all programs of study is to provide the knowledge and skill for gainful employment; however, in many instances courses can be considered for transfer to four-year institutions in continuing or related Baccalaureate Degree programs. Many four-year institutions readily accept an individual's Associate Degree for advanced standing in selected programs. Students anticipating transfer to any four-year institution must carefully plan their program accordingly with the assistance of the counseling office.

Students planning to complete the one- or two-year programs are expected to schedule a program planning conference with the counseling staff in order to establish a training plan which is in keeping with individual needs and aspirations as well as program requirements. In some instances, previous training and/or experience can be considered for waiver of required credit. Documentation of such training or experience is essential and must be approved by the Divisional Dean.

The programs of study on the following pages are the basis for awarding of the Degree or Certificate and should be carefully reviewed and understood.

Montcalm Community College offers the following vocational/technical programs:

Associate in Applied Arts and Sciences Degree:

- Architectural Drafting
- Architectural Construction
- Automotive and Diesel Maintenance Mechanics
- Executive Secretary
- Industrial Technology
- Mid-Management in Accounting
- Mid-Management in Manufacturing
- Mid-Management in Marketing
- Mid-Management in Retailing

Certificate of Achievement:

- Apprenticeship Training
- Architectural Construction
- Automotive and Diesel Maintenance Mechanic
- Aviation Maintenance Technician
- Clerk-Typist
- Practical Nursing
- Stenographer
- Welding Practices

ASSOCIATE DEGREE PROGRAMS

ARCHITECTURAL TECHNOLOGY AND CONSTRUCTION TRADES

The architectural trades program provides a broad experience into many fields related to planning and construction. Architectural drafting technicians are trained to think and talk about the problems of construction and to express solutions with the language of the drawing board. Students interested in the construction trades are exposed to a variety of trades, skills and actual building experience. The architectural student enters at any level of accomplishment and moves ahead to a place of experience and knowledge in accord with his or her desire and ability.

Architectural Drafting

(60 credit hours required)

First Semester		Credit Hours
AT130	Architectural Drafting I (Detailing)	7
AT110	Construction Methods and Materials I	4
LA100	Man's Communication	3
SS100	Man's Social World	4
		<u>18</u>
Second Semester		
AT131	Architectural Drafting II (Residential Planning)	7
AT150	Architectural Mathematics	3
LA101	Man's Communication	3
SS101	Man's Social World	4
		<u>17</u>
Third Semester		
AT200	Architectural Drafting III (Mechanical Systems)	6
Electives		8-11
		<u>14-17</u>
Fourth Semester		
AT201	Architectural Drafting IV (Steel & Concrete Structures)	6
Electives		8-11
		<u>14-17</u>

Fred Hop, Architectural Drafting instructor, shares a drafting insight with his class.



ARCHITECTURAL CONSTRUCTION

(66 credit hours required)

First Semester		Credit Hours
AT130	Architectural Drafting I (Detailing)	7
AT120	Architectural Construction I	10
		<u>17</u>
Second Semester		
AT131	Architectural Drafting II (Residential Planning)	7
AT121	Architectural Construction II	10
		<u>17</u>
Third Semester		
AT200	Architectural Drafting III (Mechanical Systems)	6
LA100	Man's Communication	3
SS100	Man's Social World	4
Elective		3
		<u>16</u>
Fourth Semester		
AT201	Architectural Drafting IV (Steel & Concrete Structures)	6
LA101	Man's Communication	3
SS101	Man's Social World	4
AT150	Architectural Mathematics	3
		<u>16</u>
ARCHITECTURAL TECHNOLOGY ELECTIVES		
BE200	Business Law	3
BE235	Small Business Management	3
BE237	Management	3
BE240	Business Machines	4
VE120	Technical Physics	3
AT202	Special Problems Seminar	5
VE290	Field Experience (by approval)	3
VE291	Field Experience (by approval)	3
WE110	Related Welding Skills	3
VE102	Technical Writing and Speaking	2
NS100	Man's Physical World	4
NS101	Man's Physical World	4
HU200	Man's Creative World	4
HU201	Man's Creative World	4

AUTOMOTIVE & DIESEL MAINTENANCE MECHANICS

(83 credit hours required)

The Automotive Maintenance Mechanics curriculum provides for the development of the skill and knowledge essential in the performance of the inspection, diagnosis, repair and adjustments of automotive vehicles and Diesel engines. A thorough understanding of the technical principles of operation and maintenance procedures of the modern automobile, its components and accessories is developed through classroom study and intensified live laboratory experience. Included in the program is a study of the Diesel engine and its special properties with the emphasis on maintenance, servicing, diagnosis and repair of Diesel component parts and accessories. Laboratory instruction is performed on modern equipment and live training units. This is a two-year Associate Degree program.

First Semester		Credit Hours
AM130	Automotive and Diesel Engines, Clutches and Manual Transmissions	11
VE110	Shop Mathematics	3
VE250	Basic Electricity	3
LA100	Man's Communication	3
		<hr/>
		20
Second Semester		Credit Hours
AM131	Automotive Fuel, Ignition and Emission Control Systems	11
AM110	Automotive Drawing and Blueprint Reading	3
VE253	Hydraulics & Fluid Power	3
LA101	Man's Communication	3
		<hr/>
		20
Third Semester		Credit Hours
AM230	Automotive Chassis and Automatic Transmissions	11
AM232	Parts Management	2
WE110	Related Welding Skills	3
SS100	Man's Social World	4
*VE290	Field Experience	3
		<hr/>
		20 - 23
Fourth Semester		Credit Hours
AM235	Diesel Engines and Auxiliary Systems	11
AM233	Service Management	2
AM231	Automotive Air Conditioning and Advanced Emission Control Systems	3
SS101	Man's Social World	4
*VE291	Field Experience	3
		<hr/>
		20 - 23

*Students must take either VE290 or VE291 or elect both.



BUSINESS EDUCATION

EXECUTIVE SECRETARY

(66 credit hours required)

The graduate of the Executive Secretarial Science curriculum will have (1) a knowledge of business technology, and (2) a 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 and transcribing, is responsible for meeting office callers, screening telephone calls, and assisting the executive. An Associate Degree will be awarded upon successful completion of this program.

Required Business Courses

	Credit Hours
*BE101 Intermediate Typing	3
BE202 Advanced Typing	3
*BE104 Intermediate Shorthand	4
BE203 Advanced Shorthand	4
BE120 Business Math	4
BE135 Introduction to Business	3
BE130 Business Correspondence	3
BE230 Typing & Office Practice	3
BE117 Clerical Accounting	3
BE204 Dictation & Transcription	3
BE200 Business Law	3
BE240 Business Machines	4
BE250 Personnel Relations	3
BE280 Introduction to Electronic Data Processing	3
	<u>46 credit hours</u>

Related Courses

VE290 Field Experience Co-op I	3
VE291 Field Experience Co-op II	3
or	
	<u>6 credit hours</u>

Academic & Business electives from LA210, SS215, LA160, BE237 or BE225.

Academic Requirements

LA100 Man's Communication	3
LA101 Man's Communication	3
SS100-101 or NS100-101 or HU200-201	8
	<u>14 credit hours</u>

*Students without high school typing and shorthand must take BE100 and BE103 before placement in these courses.

MID-MANAGEMENT PROGRAMS

Job entry into the environment of Business is continually requiring a higher level of preparation. These curriculums are prepared to provide the necessary qualifications for entrance above the lowest managerial levels and for advancement to the highest managerial levels. The student is provided with the necessary business skills as well as the theoretical and practical applications of business and industrial management. These are Associate Degree programs.

MID-MANAGEMENT IN ACCOUNTING

(64 credit hours required)

First Semester

	Credit Hours
LA100 Man's Communication	3
SS100 Man's Social World	4
BE115 Accounting I	3
BE120 Business Math	4
BE100 Beginning Typing	3
	<u>17 credit hours</u>

Second Semester

LA101 Man's Communication	3
SS101 Man's Social World	4
BE116 Accounting II	3
BE131 Report Writing	3
BE240 Business Machines	4
	<u>17 credit hours</u>

Third Semester

BE200 Business Law	3
BE237 Management	3
BE215 Cost Accounting I	3
LA210 Speech	3
SS220 General Psychology	3
	<u>15 credit hours</u>

Fourth Semester

BE201 Business Law II	3
BE216 Cost Accounting II	3
BE250 Personnel Relations	3
BE246 Tax Accounting	3
SS215 Principles of Economics	3
	<u>15 credit hours</u>

MID-MANAGEMENT IN FINANCE

(60 credit hours required)

Basic Business		Credit Hours
BE115	Accounting I	3
BE116	Accounting II	3
BE120	Business Math	4
BE131	Report Writing	3
BE135	Introduction to Business	3
BE237	Management	3

Electives		Credit Hours
BE100	Beginning Typing	3
BE103	Beginning Shorthand	4
BE240	Business Machines	4
BE280	Introduction to Electronic Data Processing	3
		<u>25 credit hours</u>

Other electives may be chosen in Business Education of a 200 level.

Management Courses		Credit Hours
BE238	Money and Banking	3
BE252	Financial Principles	3
BE253	Principles of Investment	3
BE268	Credits & Collections	3
BE200	Business Law I	3
BE201	Business Law II	3
		<u>18 credit hours</u>

General Education		Credit Hours
LA100	Man's Communication	3
LA101	Man's Communication	3
SS100	Man's Social World	4
SS101	Man's Social World	4

Electives		Credit Hours
LA210	Speech	3
SS215	Economics	3
SS240	Political Science	3
		<u>17 credit hours</u>

MID-MANAGEMENT IN MANUFACTURING

(60 credit hours required)

Basic Business		Credit Hours
BE115	Accounting I	3
BE116	Accounting II	3
BE120	Business Math	4
BE131	Report Writing	3
BE135	Introduction to Business	3
BE237	Management	3

Electives		Credit Hours
BE100	Beginning Typing	3
BE103	Beginning Shorthand	4
BE240	Business Machines	4
BE280	Introduction to Electronic Data Processing	3
		<u>25 credit hours</u>

Other electives may be chosen in Business Education of a 200 level.

Management Courses		Credit Hours
BE236	Production Management	3
BE255	Purchasing	3
BE273	Industrial Relations	3
BE278	Production and Quality Control	3
BE200	Business Law	3
BE250	Personnel Relations	3
		<u>18 credit hours</u>

General Education		Credit Hours
LA100	Man's Communication	3
LA101	Man's Communication	3
SS100	Man's Social World	4
SS101	Man's Social World	4

Electives		Credit Hours
LA210	Speech	3
SS215	Economics	3
SS240	Political Science	3
		<u>17 credit hours</u>

MID-MANAGEMENT IN RETAILING

(63 credit hours required)

Basic Business		Credit Hours
BE115	Accounting I	3
BE116	Accounting II	3
BE120	Business Math	4
BE131	Report Writing	3
BE135	Introduction to Business	3
BE237	Management	3
Electives		
BE100	Beginning Typing	3
BE103	Beginning Shorthand	4
BE240	Business Machines	4
BE280	Introduction to Electronic Data Processing	3
Other electives may be chosen in Business Education of a 200 level.		<u>25 credit hours</u>
Management Courses		
BE233	Merchandising I	3
BE234	Merchandising II	3
BE265	Sales Management	3
BE268	Credits & Collections	3
BE200	Business Law	3
BE248	Advertising	3
BE250	Personnel Relations	3
		<u>21 credit hours</u>
General Education		
LA100	Man's Communication	3
LA101	Man's Communication	3
SS100	Man's Social World	4
SS101	Man's Social World	4
Electives		
LA210	Speech	3
SS215	Economics	3
SS240	Political Science	3
		<u>17 credit hours</u>

INDUSTRIAL TECHNOLOGY

(73 credit hours required)

Offered only upon sufficient demand.

This curriculum provides the basic background of laboratory and related theory courses to acquaint the student with the technical needs of industry. Students are given training in machine tool operations and physical and metallurgical testing equipment. Mechanical courses are accompanied by courses in technical mathematics, drafting, physics, electronics, hydraulics, production problems and materials of industry.

Manufacture, sale and operation of mechanical equipment, machines and machine tools is a large and diversified industry with excellent opportunities for those with the proper aptitude and ability. A thorough technical training course accompanied by a good background of industrial experience is a real stepping stone to advancement. This is a two-year program with an Associate Degree awarded upon successful completion.

Required Technical Courses		Credit Hours
TD100	Technical Drafting I	4
TD110	Descriptive Geometry	4
TD130	Technical Drafting II	4
TD140	Jig and Fixture Detailing	4
IT110	Machine Operations I	9
IT111	Machine Operations II or Approved equivalent training or cooperative industrial experience	<u>9</u>
Related Technical		Credit Hours
**VE112	Technical Math I	3
**VE113	Technical Math II	3
**VE114	Technical Math III	3
**VE115	Technical Math IV	3
VE220	Tool Room Operations	3
VE260	Manufacturing Processes	2
VE253	Hydraulics & Fluid Power	3
VE150	Metallurgy	2
VE120	Technical Physics	3
		<u>25 credit hours</u>

**Students with strong math background should substitute from MA159, MA160, MA200, MA250 or MA251 in lieu of Technical Math requirements.

ACADEMIC ELECTIVES		Credit Hours
LA100	Man's Communication	3
LA101	Man's Communication	3
NS100	Man's Biological World	4
NS101	Man's Physical World	4
SS100	Man's Social World	4
*SS101	Man's Social World	4
		<u>22 credit hours</u>

*Required for Associate Degree.

TOOL & DIE DESIGN

(68 credit hours required)

Offered only upon sufficient demand.

Tool and Die Design prepares the student for gainful employment in a tool design division of engineering and many other engineering related occupations. The training specializes in jig and fixture design, sheet metal die design, and plastic mold design. The design program is preceded by basic drafting techniques, advanced projection (descriptive geometry) and jig and fixture detailing. The program is designed to be terminal at the completion of two years at M.C.C. with the student having vocational skills to obtain gainful employment in engineering and many other related occupations, or transferable to a four-year college or university with the student pursuing a Baccalaureate Degree in trade technical teacher education, industrial technology, industrial supervision, tool engineering, mechanical technology, mechanical design, or engineering graphics. The student may choose to receive either a Certificate or Associate Degree upon successful completion of the program, depending on the general education electives.

Tool and Die Design Courses	Credit Hours
TD100 Technical Drafting I	4
TD110 Descriptive Geometry	4
TD130 Technical Drafting II	4
TD140 Jig & Fixture Detailing	4
TD200 Plastic Mold Design	4
TD210 Sheet Metal Die Design	4
TD230 Jig & Fixture Design	4
TD240 Advanced Die Design	4
	<u>32 credit hours</u>

Related Technical Courses	Credit Hours
VE112 Technical Math I	3
VE113 Technical Math II	3
VE114 Technical Math III	3
VE220 Tool Room Operations	3
VE260 Manufacturing Processes	2
VE253 Hydraulics & Fluid Power	3
VE250 Basic Electricity	3
VE150 Metallurgy	2
	<u>22 credit hours</u>

Academic Electives

*LA100-101 Man's Communication	6
*NS100-101 Man's Physical World or	
*SS100-101 Man's Social World	8
	<u>14</u>

**Required for the Associate Degree--Students electing to work toward the certificate should elect VE100, VE102 in lieu of the Academic electives.*

TWO-YEAR CERTIFICATE PROGRAMS

ARCHITECTURAL CONSTRUCTION

(64 credit hours required)

First Semester		Credit Hours
AT130	Architectural Drafting I (Detailing)	7
AT120	Architectural Construction I	10
		<u>17 credit hours</u>

Second Semester		Credit Hours
AT131	Architectural Drafting II (Residential Planning)	7
AT121	Architectural Construction II	10
		<u>17 credit hours</u>

Third Semester		Credit Hours
AT200	Architectural Drafting III (Mechanical Systems)	6
	Electives	9
		<u>15 credit hours</u>

Fourth Semester		Credit Hours
AT201	Architectural Drafting IV (Steel & Concrete Structures)	6
AT150	Architectural Mathematics	3
	Electives	6
		<u>15 credit hours</u>

ELECTIVES

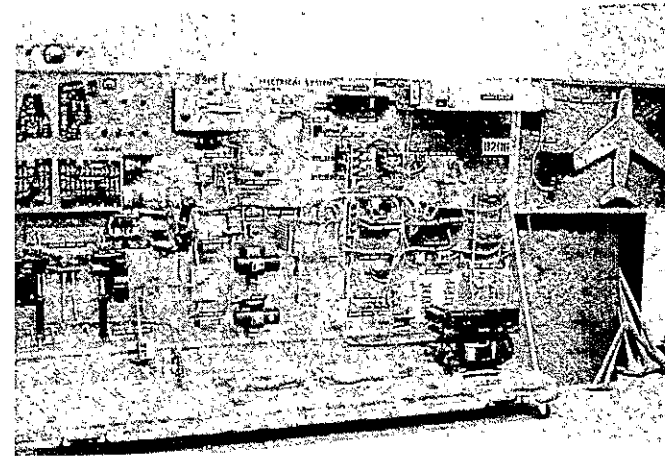
AT202	Special Problems Seminar	5
BE200	Business Law	3
BE235	Small Business Management	3
BE237	Management	3
BE240	Business Machines	4
VE120	Technical Physics	3
VE290	Field Experience	3
VE291	Field Experience	3
VE102	Technical Writing & Speaking	2
WE110	Related Welding Skills	3

AVIATION MAINTENANCE TECHNICIAN

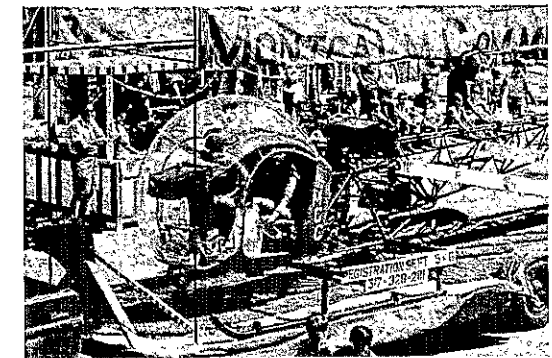
(89 credit hours required)

The Aviation Maintenance Technician Program is designed to provide the skill and knowledge required to meet the requirements of the Federal Aviation Administration Licenses for the Airframe and Powerplant (A & P) Ratings. This 72-week program of studies is structured to provide the required 1900 clock hours of classroom and laboratory training in compliance with the Air Agency Certificate #C08-1. Enrollment in this program is limited and selection of qualified students is based upon academic record, background of experience and/or proficiency examination. The required courses are presented here in a suggested schedule form and beginning students should follow this schedule if possible. A Certificate is awarded upon successful completion of the program. Licensing is the responsibility of the FAA.

First Year - First Semester		Credit Hours	Clock Hours
AV101	Introduction to Aviation	1	30
AV105	Basic Science	3	75
AV201	Aircraft Reciprocating Engines	5	120
AV203	Engine Electrical Systems	5	120
AV204	Engine Lubrication Systems	3	60
AV205	Aircraft Drawings	2	45
		<u>19</u>	<u>450</u>
First Year - Second Semester			
AV211	Aircraft Reciprocating Engine Overhaul	5	120
AV212	Aircraft Engine Ignition Systems	4	90
AV213	Engine Fuel and Induction Systems	5	120
AV214	Turbine Engines	3	60
		<u>17</u>	<u>390</u>
Second Year - First Semester			
AV102	Airframe Nonmetal Structures	3	75
AV103	Airframe Sheet Metal Structures	6	150
AV104	Aircraft Welding	3	60
AV116	Materials and Processes	4	105
AV202	Metal Processing	3	75
		<u>19</u>	<u>465</u>
Second Year - Second Semester			
AV111	Airframe Assembly and Rigging	3	60
AV112	Hydraulic and Pneumatic Systems	6	150
AV113	Aircraft Electrical Systems	4	105
AV114	Aircraft Instruments and Controls	5	120
AV115	Aircraft Fuel Systems	3	75
		<u>21</u>	<u>510</u>
Second Year - Summer Semester (12 week session)			
AV215	Aircraft Propellers	4	90
AV216	Aircraft Servicing	5	105
AV217	Weight and Balance	2	45
AV218	FAA Review	2	30
		<u>13</u>	<u>270</u>



One of several lecture/demonstration panels set up for the aviation student.



An MCC helicopter on display at the Greenville, Michigan, Danish Festival parade.

AUTOMOTIVE & DIESEL MAINTENANCE MECHANICS

(74 credit hours required)

The Automotive Maintenance Mechanics curriculum provides for the development of the skill and knowledge essential in the performance of the inspection, diagnosis, repair and adjustments of automotive vehicles and Diesel engines. A thorough understanding of the technical principles of operation and maintenance procedures of the modern automobile, its components and accessories is developed through classroom study and intensified live laboratory experience. Included in the program is a study of the Diesel engine and its special properties with the emphasis on maintenance, servicing, diagnosis and repair of Diesel component parts and accessories. Laboratory instruction is performed on modern equipment and live training units. This is a two-year Certificate program.

First Semester		Credit Hours
AM130	Automotive and Diesel Engines, Clutches and Manual Transmissions	11
VE110	Shop Mathematics	3
VE250	Basic Electricity	3
		<u>17 credit hours</u>

Second Semester		Credit Hours
AM131	Automotive Fuel, Ignition and Emission Control Systems	11
AM110	Automotive Drawing and Blueprint Reading	3
VE253	Hydraulics and Fluid Power	3
		<u>17 credit hours</u>

Third Semester		Credit Hours
AM230	Automotive Chassis and Automatic Transmissions	11
AM232	Parts Management	2
VE100	Vocational Communications	3
WE110	Related Welding Skills	3
*VE290	Field Experience	3
		<u>19 - 22 credit hours</u>

Fourth Semester		Credit Hours
AM235	Diesel Engines and Auxiliary Systems	11
AM233	Service Management	2
AM231	Automotive Air Conditioning and Advanced Emission Control Systems	3
VE102	Technical Writing and Speaking	2
*VE291	Field Experience	3
		<u>18 - 21 credit hours</u>

*Students must take either VE290 or VE291 or elect both.

ONE-YEAR CERTIFICATE PROGRAMS

CLERK-TYPIST

(33 credit hours required)

The demand for skilled and well-qualified personnel is rapidly expanding. The objective of the Clerical Office Practice-Clerk Typist curriculum is to prepare persons of any age for employment in a variety of office occupations. This one-year certificate program is intended to prepare the student for office occupations which include the development of skills in the use of all office machinery and the knowledge needed to carry on routine office functions. Previous training in typing is desirable. A certificate will be awarded upon successful completion of the program requirements. A student wishing to continue his training may apply credits earned toward the degree program in Secretarial or Management programs.

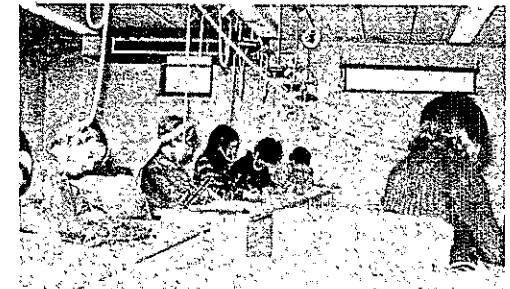
First Semester		Credit Hours
**BE101/BE202	Typing	3
BE120	Business Mathematics	4
BE117	Clerical Accounting	3
BE135	Introduction to Business	3
BE240	Business Machines	4
		<u>17 credit hours</u>

Second Semester		Credit Hours
*BE101/BE202	Typing	3
BE130	Business Correspondence	3
BE220	Voice Transcription	4
BE230	Typing and Office Practice	3
BE250	Personnel Relations	3
		<u>16 credit hours</u>

*BE100 and BE101 may be waived by a competency examination. An elective from the Academic or Business course offerings must be substituted.

**Note: Sales Management, BE265, may be substituted. Permission of the instructor is required.

Yes, I can take dictation!



STENOGRAPHER

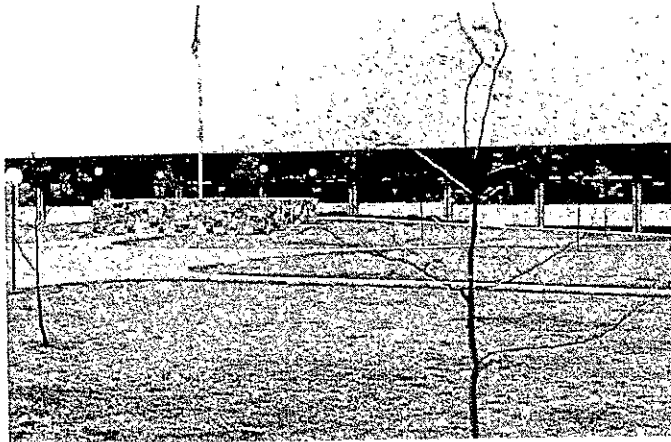
(34 credit hours required)

This curriculum is planned for the high school graduate who has majored in business and desires advanced studies to perfect his skills, but who can spend only one year in college. A student who had little or no previous business training and can spend only one year in college may also wish to follow this curriculum. This is a one-year Certificate program.

First Semester		Credit Hours
BE101	Intermediate Typing	3
BE104	Intermediate Shorthand	4
BE120	Business Mathematics	4
BE117	Clerical Accounting	3
BE200	Business Law	3
		<hr/> 17 credit hours

Second Semester		Credit Hours
BE202	Advanced Typing	3
BE203	Advanced Shorthand	4
BE130	Business Correspondence	3
BE230	Typing and Office Practice	3
BE240	Business Machines	4
		<hr/> 17 credit hours

Upon completion of this one-year intensive business program, a certificate of achievement will be awarded. The student may also elect to continue for the Associate Degree, completing the academic and remaining business education requirements his second year.



View of the Learning Resource Center as seen from the two-story classroom building.

PRACTICAL NURSING

After completion of this forty-four week program, students are qualified to take the Michigan Board of Nursing Examinations to become licensed to practice. This program is conducted with the approval of the Michigan Board of Nursing.

Montcalm Community College is affiliated with three area hospitals. They are United Memorial Hospital in Greenville, Carson City Hospital and Kelsey Memorial Hospital in Lakeview. Each student will spend time at each hospital for specific clinical experience.

The student will also be exposed to public health nursing in cooperation with the Mid-Michigan District Health Department.

Requirements for Admission:

1. Men and women applicants must be 17 years old. The usual maximum age is 55. All applicants will be considered individually.
2. All applicants must be high school graduates, or the equivalent. Applicants without high school diplomas must pass the GED test, equivalent to the 12th grade level.
3. All applicants are required to be in good physical and mental health, within normal weight for height and age. Physical, dental and x-ray examinations are done by own physician and dentist.
4. All applicants are required to take the PSB screen battery which is scheduled through the Dean of Students Office.
5. All applicants must schedule a personal interview with the Director of Nursing or a member of the nursing staff.

First Semester (pre-clinical)	Credit Hours
PN100 Nursing Foundations	10
PN110 Food in Health and Disease	2
PN120 Personal and Environmental Health	2
PN130 The Living Body	7
PN140 Human Growth and Behavior	3

Clinical practice takes place the first semester. However, the main emphasis is on classroom studies.

Second Semester	Credit Hours
PN200 Maternal and Child Health	3
PN210 Rehabilitation Nursing	3
PN220 Nursing the Patient in Health and Disease	9

The student will have more clinical experience and fewer formal classes.

Summer Semester	Credit Hours
PN230 Introduction to Medicines	4
PN240 Nursing of Adults and Children	6

The student will have full-time clinical experience.

Advanced Certification Course for L.P.N.'s	Credit Hours
PN281 Basic Concepts of Pharmacology and the Administration of Medicines (open only to Licensed Practical Nurses)	4 credit hours

WELDING PRACTICES

(37 credit hours required)

Welding is a skill which is essential to many industries. This program stresses the development of technique 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 AWS certification and receive the Certificate of Achievement upon successful completion of program requirements which follow.

First Semester		Credit Hours	Clock Hours
WE110	Welding Fundamentals & Practices	11	16
VE110	Shop Mathematics	3	3
VE104	Shop Drawing	2	3
VE253	Hydraulics & Fluid Mechanics	3	3
		<u>19</u>	<u>25</u>

Second Semester		Credit Hours	Clock Hours
WE101	Advanced Welding	11	16
VE100	Vocational Communications	3	3
VE102	Technical Writing & Speaking	2	2
VE106	Blueprint Reading	2	2
		<u>18</u>	<u>23</u>

The student may elect to enroll in one or more advanced special welding courses to accomplish a greater in-depth study of a special technique or skill. He may elect from the following:

WE102	Advanced Welding Laboratory I	3 credit hours
WE103	Advanced Welding Laboratory II	3 credit hours
WE104	Advanced Welding Laboratory III	3 credit hours

The training in the Welding program includes a lot of individualized instruction!



APPRENTICE TRAINING

Admission into the apprenticeship training program is gained by way of employment and/or sponsorship by the employer and contingent upon the development of 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.

The semester in apprentice related instruction is 21 weeks in length with the trainee usually taking two 2-credit hour courses per semester. A competency examination may result in waiver of a required course. Official transcripts of credit may also be used.

Entrance requirements are established by the employer in accordance with existing BAT standards. Continuation of the training program is contingent upon employment status and/or related instruction level of achievement.

Apprenticeship training is presently established for the Tool & Die Maker and Machinery Repairman Trades. Other apprenticeship trades may be pursued providing suitable training plans are established.

RELATED INSTRUCTION COURSE OF STUDY

Courses	Credit Hours	Clock Hours
AP100	Machine Tool Operations Theory	2 42
AP105	Blueprint Reading	4 72
AP110	Shop Mathematics	8 138
AP115	Strength of Materials and Hydraulics	2 42
AP120	Shop Drawing	2 36
AP125	Welding Theory and Practices	2 48
AP130	Metallurgy and Heat Treatment	2 36
AP135	Tool and Die Design (Sheet Metal) or	
AP140	Tool and Die Design (Plastic Mold)	8 168
AP145	Use of Machinists Hand Book	2 42
AP150	Social Economics	1 30
AP155	Safety & First Aid	1 18
	<u>34</u>	<u>672 total hrs.</u>

COURSE DESCRIPTIONS

In this section descriptions of all courses offered at Montcalm Community College are given. These are listed alphabetically.

Numbers in the parenthesis () which follow course titles represent the total credits, hours of lecture/demonstration, and hours of laboratory in that order. For example, in the first course listed below, four semester hours of credit are given for the course, two of the four hours will be lecture/demonstration, and two of the four hours will be laboratory-type classes. In some cases the instructor may designate additional hours of laboratory as being necessary.

APPRENTICE TRAINING

- AP100 Machine Tool Operation Theory (42 hours)
A lecture course consisting of the definition, history, operation and application of the various tool room machines. Tool topics covered include lathe, shaper, horizontal and vertical mills and surface and pedestal grinding. Emphasis is also placed on specific and special operations of these machines.
- AP105 Blueprint Reading (72 hours)
This course covers the following: three view projections, line alphabet, location of dimensions, sketching, shop terminology, drafting terminology, tolerance, decimal and angular tolerances, machine operations, sectional drawing, thread representation, finished surfaces representation, auxiliary views, violations of theory of true projection, arrangements of view, scale drawing, phantom outlines, structural steel shapes, mechanical accessories, A.S.A. symbols, systems of drill sizes and gear formulas.
- AP110 Shop Mathematics (138 hours)
This course covers the study of properties of common fractions, analyzing decimals, square root, using formulas, understanding percentages, equations, measuring instruments, applied geometry, geometric construction and applications and logarithms. Also covered in this course are shop trigonometry, taper and taper turning, screw threads, pulley and gear, applied mechanics and strength of materials, speed and feeds, gears, slide rule and milling machine indexing.
- AP115 Strength of Material and Hydraulics (42 hours)
Areas covered by this course are simple stresses, shear, riveted joints, stresses in thin-walled cylinders-weld torsion, seam-shear and moment diagrams, stresses in beams, beam deflection, combined axial bending stresses, columns and materials.
- AP120 Shop Drawing (36 hours)
A condensed course covering the basic principles and techniques of shop drafting stressing the essentials as: lettering, instrument usage, technical terms, applied geometry, free hand sketching, orthographic auxiliaries and section drawings, dimensioning practices, detail and assembly drawing, conventions and standard drafting practices. Pictorial drawing and presentation of engineering data through the media of charts and graphs is also included.
- AP125 Welding Theory and Practice (48 hours)
This course is a study of techniques and processes used to fabricate metal products by welding. Laboratory experiences include oxyacetylene welding and cutting, soldering and brazing, shielding metal - arc welding, inert-gas-shielded (mig-tig), and other special welding processes.
- AP130 Metallurgy and Heat Treatment (36 hours)
Studied in this course are properties of metals and tests to determine their use, chemical metallurgy, producing iron and steel, physical metallurgy, shaping and forming of metals, properties of nonferrous alloys, study of properties of steel, surface treatments, power metallurgy, and classification of steels.

- AP135 **Tool and Die Design (168 hours)**
This course covers instruction on die design standards, solid and spring stripper drop through blanking die, inverted type blanking die, compound blank and pierce die, composite section blanking, solid forming dies, single and multiple pressure pad forming dies, and progressive type dies such as pierce, blank, notch, countersink, cutoff and form.
- AP140 **Tool and Die Design - Plastic Mold Design (168 hours)**
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.
- AP145 **Use of Machinists Handbook (42 hours)**
This course includes: tables of squares, cubes, circles, and logarithms, solution of triangles and trig tables, geometry, mechanics, wire and sheet metal gages, uses of iron and steel-heat treat and hardness, helical springs, and keys or keyways.
- AP150 **Social Economics (30 hours)**
This course studies labor in our economy including labor's obligations to the employer, the employer's obligation to the labor, services for employees, logic behind collective bargaining, the union contract and how labor unions operate. Covered under our economic system are competitive prices in action, capital equipment, wages, profit, and money and banking. Also included in this course are business cycles, circular flow of money, problem of instability, inflation and deflation, the role of the government in the economy, and the study of international trade.
- AP155 **Safety and First Aid (18 hours)**
This course studies the "why and how of first aid." Subjects covered are wounds, common and special; shock-physical, electrical and heart attack; artificial respiration, injuries to bones, joints, and muscles of the human body and skeletal injuries; burns and ill effects of heat and cold; common emergencies, transportation, causes and industrial types of accident prevention; and first aid kits and supplies.

ARCHITECTURAL TRADES

- AT110 **Construction Methods and Materials I (4,2,2) Fall Semester**
This course relates materials used by the construction industry to the function they perform. The physical properties and applications of masonry, wood, steel and synthetics is related directly to assembly with consideration to local and federal codes.
- AT111 **Construction Methods and Materials II (4,2,2) Spring Semester**
A lecture/laboratory experience in foundation work, carpentry, and framing, and the use of power tools. The student is exposed to actual materials either under simulated or real working conditions.
- AT120 **Architectural Construction I (10,3,12)**
A practical course involving full-scale construction of a residential or commercial building using modern materials and methods. Students will have assembly experience in carpentry, plumbing, heating, wiring, masonry, and finish work. First semester is devoted primarily to framing, exterior covering and closing against the weather.

- AT121 **Architectural Construction II (10,3,12)**
A continuation of AT120 involving all interior utility installation and finish decorating. The latter part of the course involves foundation and basement construction for the coming fall project.
- AT130 **Architectural Drafting I (Detailing) (7,4,8) Fall Semester**
This course begins with a review of standard drawing techniques and proceeds through a logical sequence of structural detailing. Basic principles are presented in the use and rendering of modern materials and methods of construction.
- AT131 **Architectural Drafting II (Residential Planning) (7,4,8) Spring Semester**
A continuing course in architectural and construction principles relating primarily to residential design. This course stresses such elements as modular coordinates, floor planning, utility placement, and exterior design for the draftsman, builder, or homeowner. Prerequisite: AT130 or by arrangement.
- AT150 **Architectural Mathematics (3,3,0) Spring Semester**
This course is specifically designed to relate functionally with the mathematical computations required of the architectural draftsman and the construction technician. Lecture, demonstration, and practice with exemplary problems is given. Computation of material quantities, estimating and construction cost analysis is experienced by the student.
- AT200 **Architectural Drafting III (Mechanical Systems) (6,4,5) Fall Semester**
This course primarily covers service systems of a habitable structure. The student designs and illustrates typical pre-fab and on-site service systems and makes correlated computations.
- AT201 **Architectural Drafting IV (Steel & Concrete Structures) (6,4,5) Spring Semester**
This course deals with the design systems in use for large, fireproof structures made primarily of concrete and steel. Knowledge and drawing technique is gained in floor systems, roof decks, curtain walls, and structural framing. Graphic and perspective illustration are a part of the students' final design project.
- AT202 **Special Problems Seminar (5,2,4)**
A course for the advanced student who wishes to expand his or her architectural experience in a particular area of concentration. Projects and instruction are largely of an individual or small group nature. Opportunity is provided for independent study of methods and for the rendering of innovative and special design. Prerequisite: AT131.
- AT210 **Trades Crew Management (4,2,2) Fall Semester**
A one or two-semester course for the student who desires training and experience in the management of personnel. Experience is gained in planning, procurement, and the allocation of job responsibilities. This course is particularly applicable to the person with leadership and managerial inclination leading toward such job descriptions as contractor or group leader. Leadership trainees also function as liaison personnel between the AT120 construction project and the architectural designing class.
- AT211 **Trades Crew Management II (4,2,2) Spring Semester**
Continuation of AT210.

AUTOMOTIVE MECHANICS

- AM110 Drawing and Blueprint Reading (3,1,2) Fall Semester**
This course reviews the basic fundamentals of all projections, lettering, sketching and dimensioning. A thorough study of blueprint reading as it relates to assembly, service parts replacement and service adjustment is covered.
- AM130 Automotive and Diesel Engines, Clutches and Transmissions (11,4,12) Fall Semester**
This course covers instruction in theory, laboratory procedures, diagnosis and operations for automotive engines and Diesel engines, clutches and manual transmissions. Shop work consists of the overhaul or rebuilding of engines, clutches and manual transmissions. All popular engines are covered, including the study of the gas turbine and the Wankel engine.
- AM131 Automotive Fuel, Ignition and Emission Control Systems (11,4,12) Spring Semester**
This course is designed to develop the student's abilities as a diagnostician or tune-up man. Diagnosis is stressed on actual problems. The student receives an in-depth study of fuel, carburetion, starting, charging, standard ignition, electronic ignition and emission control systems.
- AM230 Automotive Chassis and Automotive Transmissions (11,4,12) Fall Semester**
This course covers front end alignment, brakes, steering, drive line, differentials and automatic transmissions. Laboratory experience involves diagnosis and repair on live late model units using latest methods on modern equipment.
- AM231 Automotive Air Conditioning and Advanced Emission Control (3,1,2) Spring Semester**
The theory, servicing and diagnosis of automotive air conditioning units is covered in depth. Laboratory experiences are on live units using modern equipment in both areas. Advancements in emission controls are studied in depth as new systems are introduced.
- AM232 Automotive Parts Management (2,2,0) Spring Semester**
This course provides an in-depth study of the operation and management of the Automotive replacement parts section of the Automotive Trades. Familiarization with parts coding along with inventory control, pricing, and sales techniques constitutes a major part of the course. Included in the course are the fundamentals of bookkeeping and the handling of currency as it applies to parts management and sales. Parts coding systems and unique features of all major automobile manufacturers in the United States as well as popular foreign car makers will be included.
- AM233 Automotive Service Management (2,2,0) Spring Semester**
A comprehensive course in the management of the Service Department of the Auto Dealership or Service garage. The major emphasis of the course will be on the accurate diagnosis of automobile defects, cost estimating, quality control, personnel management, scheduling, and customer relations. All aspects of service management will be explained and practiced through simulated and actual service procedures.
- AM235 Diesel Engines and Auxiliary Systems (11,4,12) Spring Semester**
This course is designed to furnish the student the necessary technical knowledge and the practical experience to service, repair and diagnose Diesel engines in the truck, farm or heavy equipment fields. Special emphasis will be placed on the fuel injection systems, governors, and turbo-charger. Prerequisites: AM130, AM131, AM230, AM110, VE250, WE110, VE253, VE110, (VE100 or LA100) or qualified work experience.

AVIATION MECHANICS

- AV101 Introduction to Aviation (1,2,0) Fall Semester**
An introductory course including aircraft nomenclature, theory of flight, and principles of aircraft maintenance and repair.
- AV102 Airframe Nonmetal Structures (3,2,3) Fall Semester**
This course studies the repair of wood structures, fabric coverings, and the application of aircraft finishes.
- AV103 Airframe Sheet Metal Structures (6,4,6) Fall Semester**
This course studies the repair of sheet metal structures, including various types of fasteners, plastics, honeycomb, and interior furnishings.
- AV104 Aircraft Welding (3,1,3) Fall Semester**
This course is designed to provide the student with skills for soldering, brazing, gas-welding, and arc-welding. It will also provide the student with an understanding of the procedures for welding magnesium and titanium.
- AV105 Basic Science (3,3,2) Fall Semester**
This course is designed to provide the student with a basic understanding of electricity, physics, and basic mathematical skills.
- AV111 Airframe Assembly and Rigging (3,2,2) Spring Semester**
This course provides the student with an understanding of the method of assembly and rigging of both rotary-wing and fixed-wing aircraft, including alignment of structures and the balancing of movable surfaces. Prerequisites: AV101, AV105.
- AV112 Hydraulic and Pneumatic Systems (6,4,6) Spring Semester**
This course is designed to provide the student with an understanding of hydraulic and pneumatic power systems and the components, including a study of landing gear systems.
- AV113 Aircraft Electrical Systems (4,3,4) Spring Semester**
This course will provide the student with an understanding of aircraft electrical system operation and the repair of electrical system components. Prerequisite: AV105.
- AV114 Aircraft Instruments and Controls (5,4,4) Spring Semester**
This course includes the study of cabin atmosphere control systems, instrument systems, communication and navigation systems, and position and warning systems. Prerequisites: AV101, AV105.
- AV115 Aircraft Fuel Systems (3,2,3) Spring Semester**
This course is a study of aircraft fuel system requirements, fuel systems, fuel system components, and the repair of fuel systems and their components.
- AV116 Materials and Processes (4,2,5) Fall Semester**
This course includes the study of nondestructive testing methods, heat-treating processes, aircraft hardware, and methods of cleaning and controlling corrosion.

- AV201 Aircraft Reciprocating Engines (5,4,4) Fall Semester
This course studies the aircraft piston type engine including the engine parts and their function. The course will also study engine displacement, compression ratio and horsepower.
- AV202 Metal Processing (3,2,3) Fall Semester
This course includes a study of hand and power tools used in shaping and processing of metal.
- AV203 Engine Electrical Systems (5,4,4) Fall Semester
This course studies the engine's electrical system, its components, and the repair of those components. The course also studies engine instrument systems and fire protection systems. Prerequisite: AV105.
- AV204 Engine Lubrication Systems (3,2,2) Fall Semester
This course studies the source of lubricants, their use, and engine lubricating systems.
- AV205 Aircraft Drawings (2,1,2) Fall Semester
This course will include the study of basic drawing procedures, making sketches, and reading blueprints, graphs and charts.
- AV211 Aircraft Reciprocating Engine Overhaul (5,3,5) Spring Semester
This course studies the overhaul procedures for conducting a major overhaul on a reciprocating engine and the procedures for removing and reinstalling an engine on an aircraft. Prerequisites: AV201, AV204.
- AV212 Aircraft Engine Ignition Systems (4,2,4) Spring Semester
This course studies the operating principles of the aircraft magneto, its overhaul and the repair and replacement of ignition harness. Prerequisite: AV105.
- AV213 Engine Fuel Induction Systems (5, 5) Spring Semester
This course studies the operation and overhaul of float carburetors, pressure carburetors and fuel injection systems. The student will also study engine fuel systems, induction systems, including superchargers, engine cooling systems and engine exhaust systems. Prerequisite: AV105.
- AV214 Turbine Engines (3,2,2) Spring Semester
This course is designed to provide the student with a basic understanding of the theory of operation, disassembly and reassembly of jet engines as well as operating procedures and troubleshooting practices.
- AV215 Aircraft Propellers (4,2,4) Summer Semester
This course includes a study of the operation and repair of fixed pitch, constant speed and feathering propellers.
- AV216 Aircraft Servicing (5,2,5) Summer Semester
This course studies the requirements for making an airframe and powerplant conformity and airworthiness inspection. The course also includes instruction in ground operations, servicing, maintenance forms and records, maintenance publications, and mechanics privileges and limitations. Prerequisites: All AV courses except AV215, AV217 and AV218.

- AV217 Weight and Balance (2,1,2) Summer Semester
This course studies the proper procedures for weighing an aircraft, finding the center of gravity and the movement of the center of gravity with changes in loading. Prerequisite: AV105.
- AV218 FAA Review (2,2,0) Summer Semester
This course is a review of all previously taught subjects designed to prepare the student to take the FAA written, oral and practical examinations for both the airframe and powerplant mechanics licenses. Prerequisites: All AV courses except AV215, AV216 and AV217.
- AV250 Pilot Ground School (3,3,0) Summer Semester
This course provides the student with information regarding pre-flight planning, airplane systems, airports, communications, air traffic control, weight and balance, meteorology, Federal Aviation Regulations, the Airman's Information Manual, the use of the flight computer, basic navigation, radio navigation and medical facts of flight. Successful completion of this course should be very helpful in taking the FAA pilot's written exam.

BUSINESS EDUCATION

- BE100 Beginning Typing (3,1,3) Fall and Spring Semester
This is an introduction to and a mastery of the typewriting keyboard. Personal and business letters, elementary tabulation, simple outlines, and manuscript writing are included.
- BE101 Intermediate Typing (3,1,3) Fall and Spring Semester
The writing of business letters with practice in proofreading, tabulation, special communication forms and reports, application and employment procedures. Prerequisite: BE100 or equivalent.
- BE103 Beginning Shorthand (4,3,2) Fall and Spring Semester
A course in the elementary principles of Gregg Shorthand. Prerequisite: BE100 or equivalent.
- BE104 Intermediate Shorthand (4,3,2) Fall and Spring Semester
Intensive training in theory of shorthand, the development of shorthand outlines, and development of the ability to take new matter dictation.
- BE115 Accounting I (3,3,0) Fall and Spring Semester
An introduction to accounting and fundamentals; 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 are examined.
- BE116 Accounting II (3,3,0) Fall and Spring Semester
The valuation of receivables and merchandise inventory, valuation of fixed assets and depreciation, accounting for taxes, payroll, property, and sales tax are covered. An introduction to corporation and cost accounting are included. Prerequisite: BE115 or equivalent.

- BE117 Clerical Accounting (3,3,0) Fall and Spring Semester
This course, designed primarily for students on a secretarial/clerical program, covers the basic terminology and fundamental principles of accounting. Most of the emphasis is on the practical business application of the materials covered, with major consideration given to the preparation of accounting statements, balance sheet and income statement.
- BE120 Business Mathematics (4,4,0) Fall and Spring Semester
This course reviews fundamental arithmetic processes and their business applications and includes cash and trade discounts, mark-ups, depreciation and interest, and payroll deduction.
- BE122 Financial Math (3,3,0)
This course covers simple and compound interest; ordinary and deferred annuities, and perpetuities; amortization and depreciation; bonds and insurance.
- BE130 Business Correspondence (3,3,0) Spring Semester
A study of effective correspondence in business. Prerequisite: BE100.
- BE131 Report Writing (3,3,0) Spring Semester
The student is introduced to the what and why of business reports, problems and planning, research, organizing information, constructing and writing a report in an acceptable manner.
- BE135 Introduction to Business (3,3,0) Fall Semester
The student is introduced to the environment, nature, and opportunities of business. Types of ownership are covered and the operation of business is investigated through marketing, location and layout, personnel, finance, and controls for decision making. The legal environment of business is also investigated.
- BE200 Business Law (3,3,0) Fall Semester
Law and Society, the Uniform Commercial Code are considered with emphasis placed on the law of contracts, sales and real property. Case studies are used extensively.
- BE201 Business Law II (3,3,0) Spring Semester
A continuation of BE200. Security devices, commercial paper and agency and employment are considered. Special emphasis is placed on corporate and partnership law.
- BE202 Advanced Typing (3,1,3) Spring Semester
Continued speed-building techniques; advanced production typewriting techniques; skill in business letters, tabulations, manuscript writing, legal documents, and business forms. Prerequisite: BE101 or equivalent.
- BE203 Advanced Shorthand (4,3,2) Spring Semester
Further development of the ability to write new-matter dictation with increasing emphasis on speed and accuracy in transcription. Prerequisite: BE101 and BE104.
- BE204 Dictation and Transcription (4,3,2) Fall and Spring Semester
This course stresses development of skills in typing, shorthand, and English grammar that are necessary for efficient transcription as well as the development of shorthand vocabulary in medical, legal and technical terms. Prerequisites: BE202 and BE203.

- BE215 Cost Accounting I (3,3,0) Fall Semester
Cost information systems and accumulation procedures are considered. Planning and control of factory overhead, materials, and labor are considered along with other related costs. Prerequisite: BE116.
- BE216 Cost Accounting II (3,3,0) Spring Semester
Planning for profits and sales and controlling of costs and profits are covered. Emphasis will be placed on cost and profit analysis. Prerequisite: BE215.
- BE220 Voice Transcription (4,2,3) Fall and Spring Semester
Development of voice transcription skill is stressed with the operation of belt-type transcribers. Emphasis is placed on typing skills and technical English skills for efficient transcription. Prerequisite: BE202.
- BE230 Typing and Office Practice (3,1,4) Spring Semester
A course in which subject matter and skill development are drawn together in practical application. Prerequisite: BE202.
- BE233 Merchandising I (3,3,0) Fall Semester
The student is introduced to marketing with special emphasis upon retailing. Establishing, financing and organizing the new store and buying and selling with special attention given to promotion are major topics in the course.
- BE234 Merchandising II (3,3,0) Spring Semester
A continuation of BE233 with emphasis placed upon control of the operation. Prerequisite: BE233 or equivalent.
- BE235 Small Business Management (3,3,0)
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.
- BE236 Production Management (3,3,0)
The management functions as applied to the production of products. The inputs of capital, labor, design, and purchasing are covered with emphasis upon the process including all types of control. Prerequisite: MA159 or equivalent.
- BE237 Management (3,3,0) Fall Semester
This course treats all activities in the field of business. Each facet of business, such as ownership, organization, marketing, physical factors, purchasing, production, personnel, finance, quantitative control, and government regulations. The development and installation of a total information system for managerial decisions is investigated.
- BE238 Money and Banking (3,3,0)
The nature and origins of money and credit; the history of banking institutions, with emphasis upon the Federal Reserve System; along with statutory controls of money, credits and banks are studied.

- BE240 Business Machines (4,1,3) Fall and Spring Semester**
A course designed to train the student in the fundamental processes of key-driven calculators, adding-listing machines, rotary calculators, listing calculators, and ten-key machines. Prerequisite: BE120 or equivalent.
- BE246 Tax Accounting (3,3,0) Spring Semester**
Local, State and Federal taxes of sole proprietorships, partnerships, and corporations are considered. Tax practices and procedures relating to assessment and collection are also covered. Prerequisite: BE116.
- BE248 Advertising (3,3,0) Spring Semester**
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.
- BE250 Personnel Relations (3,3,0) Spring Semester**
This course covers the methods of selecting and training personnel, discipline problems, morale, wages, fringe benefits, promotions, separations, and other related areas.
- BE252 Financial Principles (3,3,0)**
Monetary and credit systems are covered extensively with emphasis placed on meeting the demands for funds, the factors affecting the supply of funds, and monetary and credit policies and problems.
- BE253 Principles of Investment (3,3,0)**
The student is introduced to the securities market with special attention to corporate securities and financial policies. Limited income securities, common stock, and special classes of securities are covered. Security analysis and portfolio development policies are investigated. Prerequisite: BE135 or equivalent.
- BE255 Purchasing (3,3,0)**
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. Prerequisite: BE237.
- BE265 Sales Management (3,3,0) Spring Semester of Odd Years**
To provide the student with necessary background in organization, management, and operation of an effective sales force. The laws of effective selling are covered extensively.
- BE268 Credits and Collections (3,3,0) Fall Semester of Even Years**
This course is designed to provide the student with understanding of basic credit principles. Use of credit as a tool, analysis of dealers 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.
- BE273 Industrial Relations (3,3,0)**
The components of personnel problems, supervision skills, organization, manpower, and employment development are investigated. Incentives and management responsibilities also are covered.

- BE278 Production and Quality Control (3,3,0)**
Organizing for production, intermittent and continuous production are studied. Control for job shops, repetitive production, continuous production, and automatic production along with mathematical methods for solving problems are covered. Prerequisite: BE236.
- BE280 Introduction to Electronic Data Processing (3,2,2) Fall Semester**
This course provides the student with a basic understanding of the procedures, uses and limitations of unit record data processing equipment as applied to various areas of business.

FOREIGN LANGUAGES

- FL120 Elementary French (4,4,0)**
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 (4,4,0)**
A continuation of French 120. Prerequisite: FL120 or equivalent.
- FL220 Intermediate French (4,4,0)**
Prerequisite: French 121 or successful completion of two years of high school French. Advanced conversation and readings emphasize vocabulary building, French syntax, aural comprehension and phonetics.
- FL221 Intermediate French (4,4,0)**
Prerequisite: French 220. A continuation of French 220 with emphasis on gaining greater fluency through advanced French conversation and enrichment reading from French literature and current periodicals.
- FL130 Elementary Spanish (4,4,0)**
An introductory course in the Spanish language with emphasis upon grammar, vocabulary, diction and conversation. There will be considerable use of tape and disc recordings in the Listening Center.
- FL131 Elementary Spanish (4,4,0)**
A continuation of FL130. Prerequisite: Spanish 130 or equivalent.
- FL230 Intermediate Spanish (4,4,0)**
The second year of collegiate Spanish with greater emphasis upon conversation and reading of Spanish literature. Diction and vocabulary study will also continue. Prerequisite: at least two years of high school Spanish or LA195.
- FL231 Intermediate Spanish (4,4,0)**
A continuation of FL230. Prerequisite: FL230.

HUMANITIES

- HU110 Music In The Elementary Classroom (3,2,1)**
This course is designed to give the student a knowledge of a well-rounded music program for the elementary grades. Stress is placed on creative experiences, use of appropriate materials and methods pertinent to the elementary classroom.
- HU120 Introduction To Art (2,1,2)**
The purpose of this course is to introduce the student to the varieties and types of materials for individual and classroom use.
- HU122 Drawing I (3,1,3) 6 Studio Hours**
Introduction to the tools and materials of drawing using the various approaches to the graphic representation of real and intangible form. Exploration of traditional and experimental drawing media.
- HU123 Advanced Drawing II (3,1,3) 6 Studio Hours**
Advanced problems in drawing; with emphasis on the human figure and art expression. Prerequisite: HU122.
- HU125 Painting (3,1,3) 6 Studio Hours**
Introduction to the media and techniques of oil painting. Instruction in principles of drawing, color, design as they apply to painting. There will also be discussion of aesthetic and theory of historical painting styles using prints and slides.
- HU191- Choir (1,1,0)**
192 Offers student, interested in the performing arts, an opportunity to further develop his 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.
- HU193- Special Ensemble (1,0,1)**
194 These groups are appropriate for musicians who enjoy performing in small instrumental and/or vocal ensembles. Participants will be selected, after audition, with the director. Each ensemble will rehearse once per week with the director and to set up rehearsal schedules. There will be vocal ensembles such as mixed ensemble, Girl's ensemble and Men's Quartet. Following are the potential instrumental ensembles: Brass choir, Woodwind, Quintet, and Trumpet trio.
- HU195- Stage Band (1,0,1)**
196 This group is made up of instrumentalists having previous band experience who are interested in performance. Rehearsals are held two times per week at times convenient to the participating students and the schedule will be arranged after the first class meeting.
- HU200 Man's Creative World (4,4,0)**
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, philosophy and religion.

- HU201 Man's Creative World (4,4,0)**
Continuation of HU200. Emphasis on the modern historical development of thought in art, literature, music, philosophy and religion.
- HU215 Music Literature (3,3,0)**
A comprehensive course in which selected works by major composers, past and present, are studied. Recordings of various musical forms, including the symphony, concerto, tone poem, opera and chamber music, will be used in the class to build a basic listening repertory. The fundamentals of music, including meter signature, accidentals, treble and bass clefs, note and rest values, and circles of fifths, will be introduced. Students will be expected to attend various concerts throughout the semester.
- HU220 Introduction to Philosophy (3,3,0)**
Designed to acquaint the student with some fundamental questions concerning the nature of man and the way in which these questions have been dealt with by the most profound thinkers of the past and present.
- HU225 Art In The Elementary Classroom (2,2,0)**
The purpose of this course is to emphasize the role of art in the elementary classroom and its role in contributing to the creative development of the child.

INDUSTRIAL TECHNOLOGY

- IT110 Machine Operations (9,3,12)**
This course is machine shop orientation to familiarize the student with hand tools, operations, and basic machine tool processes, care of tools and equipment, and shop safety.
- IT111 Machine Operations II (9,3,12)**
This course is advanced operation on grinders, shapers, mills, presses, and lathes. The student will be trained to perform all operations required from the beginning to completion of the job. Prerequisite: IT110 or special arrangement.

LANGUAGE ARTS

- LA100 Man's Communication (3,3,0)**
The purpose of this course is to introduce the student to the nature and function of the English language. The student will attain a basic competency in oral and written communication.
- LA101 Man's Communication (3,3,0)**
The purpose of this course is to develop the student's ability to analyze the various processes of formal and informal communication and to improve his ability to recognize and utilize effective argumentative and expository prose. Second Semester. Prerequisite: LA100 or by consent of instructor.

- LA120 Introduction to Audio-Visual and Library Services (2,2,0)
This course has two major purposes (1) To acquaint prospective teachers and teacher aides with the operation and simple repair of audio-visual equipment (2) To familiarize students with the function of the library in the school setting and principles and techniques of managing a school library. (Field trips are planned to local school libraries.)
- LA150 Reading Lab (1,2,0)
This course is designed to increase reading speed and comprehension in addition to rectifying various deficiencies of the students. The laboratory exercises will be adapted to the needs of the individual. The course may be repeated as many times as is deemed necessary, but a maximum of two credits will be allowed.
- LA160 Journalism (3,3,0)
An introduction course which includes the basic techniques of writing, the principles of effective news writing; a survey of newsroom organization and practical experience provided through laboratory sessions.
- LA161 Journalism Lab (1,0,2)
Practical experience on the College Newspaper, *The Post*.
- LA162 Journalism Lab (1,0,2)
Advanced practical experience on the College Newspaper, *The Post*, emphasizing editorial and feature writing techniques. A maximum of two credits for LA161-162 will be allowed.
- LA200 American Thought and Literature (3,3,0)
A survey of American Literature including complete works by several authors selected to represent major movements, both literary and historical, and many shorter pieces from each literary genre, with emphasis on the 20th Century.
- LA201 American Thought and Literature (3,3,0)
A survey of American Literature from each literary genre, with emphasis on the literature and thought prior to the 20th Century.
- LA210 Speech (3,3,0)
Speech 210 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 his peers, the student will become familiar with the basic principles of speech organization, preparation and delivery.
- LA212 Oral Interpretation (3,3,0)
Through analyzing and reading aloud selected prose, poetry and drama, the student will improve his own understanding of these works and increase his ability to communicate to others. The course will relate interpretative reading to the other areas of speech: public address, television, theatre, speech improvement, and the teaching of literature.
- LA220 English Literature from the Beginnings to 1798 (3,3,0)
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)
A systematic study of English Literature which emphasizes the principal authors of the nineteenth century and twentieth century. Reading and discussion will include representative works and will also review current critical attitudes.
- ✓ LA230 Short Story (3,3,0) 1st Semester of Even Years
A study of the strengths and limitations of this genre in which the student learns to read with delight and understanding. Prerequisites: In general, this course should be open to students who are willing to work at a sophomore level.
- ✓ LA240 The Novel (3,3,0) 1st Semester of Odd Years
A study of the novel, with dual intent: Through systematic discussion of each novel to increase the rewards one receives from reading it and, through study of the several schools of literary criticism, to better understand how the "more than casual" reader approaches fiction.
- LA250 Creative Writing (3,3,0)
The purpose of this course is to allow the student to sharpen his 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 he has 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) 2nd Semester of the Odd Years
An introduction to drama as a literary form. The student will read representative writings of the period from classical times to the present.
- ✗ LA270 Poetry (3,3,0) 2nd Semester of the Even Years
Contemporary and classic examples of poetry are compared to historically durable examples on points of structure and content.
- LA280 A Survey of Black American Literature (3,3,0)
A chronological survey of Black American writing from 1760 to the present, with emphasis on twentieth century examples of poetry, fiction, drama and autobiography.
- LA290 Methods of Teaching Reading In The Elementary School (3,3,0)
Methods and materials of instruction of reading at the elementary level. Analysis of learning and teaching problems, and study of concrete materials and classroom attack. Consideration of practical bearings of research and progressive theory on current practice.
- LA295 Children's Literature (3,3,0)
A survey of Literature for children in the elementary grades, aimed at developing techniques for using books with children, story telling, and the criteria for book selection.

MATHEMATICS

- MA100 Elementary Algebra (3,3,0)**
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. Prerequisite: none.
- MA102 Trigonometry (3,3,0) 2nd Semester of Even Years**
The right triangle is studied to introduce the students to the trigonometric functions. Further topics include trigonometric identities, additional formulas, law of sines, law of cosines, complex numbers and DeMoivre's Theorem. Prerequisites: one and one half years of high school algebra and one year of high school geometry.
- MA104 Intermediate Algebra (3,3,0)**
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. Prerequisite: MA100 or equivalent.
- MA151 Math for Elementary Teachers (3,3,0) Fall Semester**
To 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 ten, systems of integers, rational and real numbers will be discussed.
- MA152 Geometry for Elementary Teachers (3,3,0) Spring Semester**
This material presents a survey of geometry; formal and informal, metric and non-metric, Euclidean and non-Euclidean. Topics include points, planes, parallels, congruence, measures and an introduction to vectors. Prerequisite: MA151 or equivalent.
- MA159 College Algebra (3,3,0) Fall Semester**
Topics covered include the quadratic equation, sequences and series, complex numbers, DeMoivre's theorem, synthetic division, mathematical induction, combinations and permutations. Prerequisite: Trigonometry.
- MA160 Analytic Geometry (3,3,0) Spring Semester**
The straight line, the circle conics, algebraic curves, transcendental curves, parametric equations, planes and lines, and quadratic surfaces. Prerequisite: MA159 or equivalent.
- MA190 Elementary Statistics (3,3,0) 2nd Semester of Odd Years**
This course is designed to introduce students to basic statistical techniques. Topics studied include mean, standard deviation, frequency, probability, binomial distribution, the normal curve, sample means, confidence limits, hypotheses testing, chi-square, linear correlation and regression. Each topic is introduced with examples and problems. Practice in the use of appropriate tables will be sufficient to insure confidence in their use.
- MA250 Calculus I (4,4,0) Fall Semester**
Functions and continuity, limits differentiation, applications, integration and the definite integral with applications. Prerequisite: MA160.

- MA251 Calculus II (4,4,0)**
Logarithms and exponentials, arc length, polynomials, partial fractions, Taylor's series. Special methods of integration, partial differentiation. Prerequisite: MA250 or equivalent.
- MA290 Differential Equations (3,3,0) 1st Semester of Odd Years**
Linear equations, the Bernoulli Equation, existence and uniqueness theorems, applications equations of first order and high degree. Clairaut's equation, solution by power series, an introduction to Laplace transform, Strum's theorem. Prerequisite: One year of Calculus.

NATURAL SCIENCES

- NS100 Man's Biological World (4,3,2) Freshman Year**
This course provides a basic general education in the major Biological sciences (Biochemistry, 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 or her own interest and potential in a biological science.
- NS101 Man's Physical World (4,3,2) Freshman Year**
The purpose of this course is to provide a basic general education in the major science areas (Astronomy, Geology, Physics and Chemistry) so that the student will better be 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 or her own interest and potential in physical science.
- NS102 Physical Geography (3,3,0) (Earth Science)**
A study of the earth-sun relationships, climatic factors on the earth, the geographic grid, land forms, rocks and minerals. 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 the part played by man in the depletion of these vital materials.
- NS200 Botany (4,3,2) First Semester**
A survey of the plant kingdom from the simplest to the more complex. Studies of structure, classification, physiology and ecological relationships as well as economic values of the plant kingdom, shall be considered. 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.
- NS205 Zoology (4,3,3) Second Semester**
A general survey of the animal kingdom including comparative studies of the structure, function, and behavior of representatives of animal groups. The anatomy and physiology of the human will be emphasized in the study of mammals.
- NS206 Invertebrate Zoology (4,3,2) First Semester**
A study of the invertebrates representative of various habitats of the local area. Field and laboratory work involves the interrelationships, identification, and biological adaptations of local invertebrates while the lecture sessions provide background in basic invertebrate zoology.

- NS207 Human Anatomy and Physiology (4,3,2) Second Semester
An elementary course in human anatomy and physiology with emphasis on normal function and common disorders.
- NS220 General Chemistry (4,3,4) First Semester
Fundamental theories, principles, and problems of chemistry will be emphasized. Prerequisite: One year of high school algebra; NS101 or permission from the instructor.
- NS221 General Chemistry (4,3,4)
A continuation of NS220. Organic and biochemistry will be introduced and the last four weeks will cover qualitative analysis.
- NS222 Organic Chemistry (5,4,3)
The chemistry of carbon compounds and their derivatives with emphasis on nomenclature, fundamental principles, reactions, and reaction mechanisms. Prerequisites: NS220 and 221.
- NS223 Organic Chemistry (5,4,3)
A continuation of Chemistry NS222 and including stereochemistry and organic compounds of biological interest. Prerequisite: NS222.
- NS225 College Physics I (4,4,2)
An introductory course in mechanics, heat and sound. This is a technical course designed for those majoring in engineering or science. Calculus should be taken concurrently.
- NS226 College Physics II (4,4,2)
A continuation of NS225. Light, electricity and magnetism, and modern physics will be considered. Calculus should be taken concurrently.

PHYSICAL EDUCATION

- PE101 Golf (1,0,2)
A coeducational course designed to teach the fundamentals of golf.
- PE102 Bowling (1,0,2)
A coeducational course designed to teach the fundamentals of bowling.
- PE103 Weight Lifting (1,0,2)
A course involving the supervised lifting of weights and body conditioning.
- PE104 Archery (1,0,2)
A coeducational course designed to teach the fundamentals of archery for target or field shooting.
- PE105 Diversified Activities (1,0,2)
A coeducational course designed to teach recreational activities involving lawn jarts, table tennis, chess, checkers, volleyball, badminton, horseshoe, and other quiet recreational activities.

- PE106 Swimming (1,0,2)
A coeducational course designed to teach the basic elements of swimming and lifesaving. The student will also learn the proper administration of first aid to an accident victim.
- PE109 Folk Dancing (1,0,2)
A general course designed to develop skills and techniques in various country and folk dances.
- PE121 Sports Officiating (1,0,2)
This course presents the rules of major sports, officiating techniques, relationship with players and school officials, and game administration. Major emphasis is to stimulate young men into becoming registered officials with the state association.
- PE125 Principles of Physical Education (1,3,0)
This course includes the nature of health, physical education and recreation. Physical education is discussed from ancient to modern times. The course includes the biological, psychological and sociological foundations of physical education, professional organization, literature and career opportunities.

PRACTICAL NURSING

- PN100 Nursing Foundations (10,4,11)
This course provides the nursing student with the information and skills necessary to build a foundation for efficient bedside nursing. Students not only gain skill in procedures they are to perform, but also increase their ability to deal with patients and members of the health team.
- PN110 Food in Health and Disease (2,2,0)
Basic nutrition facts are presented with their relationship to health. The student becomes familiar with food nutrients, good nutrition, malnutrition, and variations of diet therapy.
- PN120 Personal and Environmental Health (2,2,0)
The person as a nurse is studied in this course. Who she is, and what in nursing history and education has evolved present her role as a member of the nursing profession. The student will be introduced to preventive medicine, laws of sanitation, the community health team and each member's role in meeting the total needs of its citizens.
- PN130 The Living Body (7,6,2)
This course introduces the student to the study of the human body structure, dynamics and functions and disease. The concept of the dependence of one system on another and the contributions of each system to the well-being of the body is stressed.
- PN140 Human Growth and Behavior (3,3,0)
The developmental processes of the human being are studied with emphasis on early childhood development and the child-parent relationships. Nursing skills essential to the care of children and the study of the more common disease conditions are also presented. Training will include the care of the pediatric patient.

- PN200 Maternal and Child Health (3,2,5)
This course teaches the student facts about pregnancy, prenatal care, and the care of the new-born infant and gives an understanding of the complications and related care and treatment. Prerequisites: PN100 and PN130.
- PN210 Rehabilitation Nursing (3,2,5)
The principles and practices of rehabilitation nursing aspects including crutch walking, transfer techniques, and bed positioning are taught. Special emphasis is placed on changes which occur during the process of aging, both physiological and mental. Also explored are recreational and diversional activities in relation to the patient's recovery and peace of mind. Prerequisite: PN100.
- PN220 Nursing the Patient in Health and Disease (9,3,15)
Medical-Surgical nursing presents the more common medical and surgical conditions and the nursing techniques and skills involved in providing nursing care. The course is intended to present the concept of meeting the total needs of the patient and a return to normal functioning life.
- PN230 Introduction to Medicines (4,3,1)
This course offers beginning instructions in pharmacology and safety factors essential to dosages and drug administration. The practical nurse must take further post-graduate study to be a medications nurse. Prerequisites: PN100, PN110, PN120, PN130 and PN140.
- PN240 Nursing of Adults and Children (6,0,18)
Each student will be working in the clinical area. Each student will be assigned clinical areas to gain in nursing skills essential to the care of each individual patient. Prerequisites: PN100, PN110, PN120, PN130 and PN140.
- PN281 Basic Concepts of Pharmacology and the Administration of Medicines (4,4,2)
(Open only to Licensed Practical Nurses)
This course is sponsored by Montcalm Community College with the approval of the National Association for Practical Nurse, Education and Service, Inc. (NAPNES). This continuing education program will prepare L.P.N.'s with the knowledge, techniques and attitudes pertaining to drugs and their administration that are essential for carrying out their nursing responsibilities.
Only applicants who have passed the pre-entrance math test (arranged by MCC) and the National Pharmacology Final Test will be issued a certificate from NAPNES. (60 clock hours of instruction, 30 clock hours of clinical experience)

SOCIAL SCIENCES

- SS100 Man's Social World (4,4,0)
This course is designed to introduce the student to the interdisciplinary approach to the study of the development of human behavior. Emphasis will be placed upon those concepts and theories which have influenced man's thinking about his individual nature and social relationships. (Materials from the following disciplines will be utilized: History Anthropology, Sociology, Political Science, Psychology and Economics.)

- SS101 Man's Social World (4,4,0)
This course is a continuation of SS100. It is designed to study those patterns of behavior which have led to the creation of forces that have shaped modern society. Special emphasis will be given to the rights and responsibilities of citizenship and the form and function of government. Emphasis will also be given to specific problem areas which confront the contemporary world. (This course also satisfies the state requirements for political science.)
- SS105 Contemporary Society (2,2,0)
This course will explore the volatile nature of the "now" society. It will deal with such areas as youth culture, rebellion in the home, on the street and on the campus, divergent group antagonism and the social "I" concept. The students will be given a larger decision making role concerning the context and direction of the course. However, techniques of instruction will involve social encounter and/or sensitivity methodology.
- SS130 Introduction to Social Services (3,2,1)
A survey course designed to acquaint the student with the role and function of social services, the various agencies involved and related information. In addition, there will be some emphasis on the role of the para-professional with activities planned for self-improvement such as interviewing, role playing, listening, and other related activities.
- SS140 Introduction to Corrections (3,3,0)
An examination of the total correctional process from law enforcement through the administration of justice, probation, prisons and correctional institutions.
- SS145 Corrections Practicum (4,4,0)
This course incorporates several aspects of the corrections process including role of the practitioner, social and psychological aspects of the client, and other important information related to correctional work.
- SS190 Observational Laboratory or Supervised Field Work (3,1,2)
The purpose of this course is to provide an opportunity for the student or para-professional to gain first hand experience in a community service agency. The student will have the opportunity for two types of experiences (1) A study in depth of designated community service agencies, and/or (2) Participation in a community service agency with defined objectives.
- SS200 Contemporary Problems (1,1,0)
201 This course provides for study and examination of problems and concerns, for which, hopefully, solutions can be found. Such areas of concern may include, but are not limited to, Environment, Ethics, Personal Identity, Politics and Drugs.
- SS215 Principles of Economics (3,3,0)
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. Units include the American Economy, The Macroeconomic System, Theory of the Firm and World Economic Problems.

- SS220 General Psychology (3,3,0)**
An introductory survey of the subject matter of psychology with emphasis on both scientific and humanistic approaches to the study of man. The course is designed to familiarize the student with what the field of psychology addresses itself to and how. Among the subjects covered are experimental methodology, human growth and development, intelligence, perception, learning, motivation and emotion, personality, disorder and therapy, and group behavior.
- SS221 Child Psychology (3,3,0)**
A study of psychological theory and experimental findings in the context of their application to understanding, predicting and modifying childhood behavior. Emphasis is on such basic concepts as heredity and environment, maturation, intelligence and achievement, learning and childhood anxiety.
- SS225 Educational Psychology (3,3,0)**
This course is designed to introduce the student to the basic principles of psychology as applied to education. Emphasis will be placed upon the mystery of learning and the phenomena of teaching.
- SS230 Sociology (3,3,0)**
An introduction to the field of sociology surveying such topics as culture and society, social structure, social class, institutions, demography, deviancy, and social change. Emphasis is placed upon acquainting the student with the sociological perspective of human behavior and man's modes of social organization.
- SS235 Social Problems (3,3,0)**
An examination of the sociological approach to social problems with particular emphasis on deviant behavior and social disorganization including such problems as mental disorders, drug abuse, crime, sexual deviancy, prejudice and discrimination, poverty, family and community disintegration, violence and the environmental crisis.
- SS240 Political Science (3,3,0)**
An introduction to the institutions and functions of the national government. Special emphasis will be placed upon the evolution of the present national governmental system, and also upon the need to probe and define the problems of American government and politics in terms of changing times and conditions. This course is designed to satisfy the political science requirements of all curricula as well as the state requirements for political science.
- SS241 State and Local Government (3,3,0)**
A study of the state constitution, legislative, executive and judicial organization and powers of the state and principal activities of the state. Attention will be given to the state-local relations and to county and municipal government.
- SS250 U.S. History to 1865 (3,3,0)**
A study of the history of the United States from the period of exploration to the close of the Civil War. Special emphasis will be placed upon the rise of our political and social institutions; the influence of the frontier, the conflicts between individualism, sectionalism, and nationalism; and the implications and consequences of disunion in the Civil War.

- SS251 U.S. History from 1865 to the present (3,3,0)**
This course is a continuation of SS250. A survey of America's political, economic and diplomatic history from the close of the Civil War to the "Great Society" will be made. Special emphasis will be placed upon the Reconstruction of the South, the industrial transition, the Progressive movements, the world wars, the domestic wars, the emergence of the U.S. into a position of world leadership and the responsibility of this maturity.

TOOL & DIE DESIGN

- TD100 Technical Drafting I (4,2,6)**
This is a laboratory/lecture course and includes the development and manipulative skills needed for the use of drafting instruments, linework, lettering, geometric construction, multiview projection, sectioning and dimensioning.
- TD110 Descriptive Geometry (4,2,6)**
A laboratory/lecture course consisting of projection of lines, surfaces, planes, revolution of objects, intersection of planes and solids and sheet metal layouts.
- TD130 Technical Drafting II (4,2,6)**
A laboratory/lecture course including isometric oblique and perspective projection, welding drawings, roughness symbols and fastening devices.
- TD140 Jig and Fixture Detailing (4,2,6)**
A laboratory/lecture course which includes detailing of jigs, fixtures and dies from assembly layouts. The study of various fits and tolerances are covered along with the new concept of positioning tolerancing.
- TD200 Die Design - Plastic Mold (4,2,6)**
A laboratory/lecture course whereby the student designs transfer and injection mold dies for the production of various plastic products.
- TD210 Die Design - Sheet Metal (4,2,6)**
A laboratory/lecture course consisting of the layout and design of blanking, forming, piercing and progressive draw dies.
- TD230 Jig and Fixture Design (4,2,6)**
The following topics are covered in the laboratory/lecture course: Drill jigs with various types of locating devices, drill bushings, clamping devices, locating pins, milling and tapping fixtures.
- TD240 Advanced Die Design (4,2,6)**
A laboratory/lecture course which allows the advanced student to further strengthen these skills and knowledge with more complex design problems in plastic mold and sheet metal dies. The student also has an option of choosing either plastic mold or sheet metal die design as a specialty.

TRADE-TECHNICAL EDUCATION

- VE100 Vocational Communication Skills (3,3,0) Fall and Spring Semesters**
A course to develop reading, writing and speaking skills. Emphasis is placed on precision, clarity and organization of written and oral communications.
- VE102 Technical Writing and Speaking (2,2,0) Spring Semester**
A study of the nature of concise writing of technical papers, reports, and correspondence demanded of the technician is made providing ample practice assignments in the student's area of study. Topics covered include: Effective organization, style, mechanics, tables and figures, contents and techniques of report writing, formal reports, figures, contents and special letters, memos, the letter of application, the bibliography, abbreviations, spelling and others. This course also emphasizes the value and necessity for effective verbal communication. Persuasive oral presentations are a part of the course.
- VE104 Shop Drawing (2,1,2)**
This course is designed to enable students to develop skill in the production of a working drawing. Programmed instruction involving line work, projection, dimensioning and identification is the major emphasis in the course.
- VE106 Blueprint Reading (2,2,0)**
This course is designed to provide basic instruction in the understanding, interpretation, and utilization of blueprints. Instruction is provided in a manner such that the student may concentrate on blueprints unique to a specific trade or specialty.
- VE110 Shop Mathematics (3,3,0) Fall and Spring Semesters**
This course includes a review of fractions, decimals, simple computations, measurements (including the Metric System), and applied shop problems.
- VE112 Technical Math (3,3,0) Fall Semester**
This course is presented in terms of application normally encountered in industry and the laboratory by the technician and consists of simple arithmetic and algebraic notations, the language of algebra, positive and negative numbers, factoring, fractions, exponents, powers, roots, radicals, equations, formulas and their application to industry.
- VE113 Technical Math II (3,3,0) Spring Semester**
An informal approach to topics in elementary geometry that have trade related applications. Topics include construction, properties of triangles, circles. Elementary operations on the slide rule will be covered including problems in multiplication, division, combined multiplication and division, square root, cubing and cube root.
- VE114 Technical Math III (3,3,0) Fall Semester**
This course begins with a review of linear equations and proceeds with quadratic equations, trig functions through fundamental identities, logarithms and the slide rule through trig functions.

- VE115 Technical Math IV (3,3,0) On Demand**
This course consists of work with the binomial theorem, arithmetic and geometric progressions, complex numbers, solution of cubic and quartic equations, mathematical induction and law of sines and cosines with applications for industry.
- VE120 Technical Physics (3,2,2) Fall and Spring Semesters**
This course gives an introduction to applied science, its history and use, and an insight into understanding the properties and control of matter and energy; technical aspects analysis and use of mechanics; technical aspects of heat effects and energy.
- VE150 Metallurgy (2,2,0) Spring Semester**
This course is a study of the properties, classifications, production, and application of steel as it relates to the designer and die-maker. The course includes the study of heat treatment of metals and various tests to determine physical properties of metals.
- VE220 Tool Room Operations (3,2,2) Fall Semester**
This course covers the theory and practice in the operation of the 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 skill.
- VE230 Mechanics and Strength of Materials (3,3,0) Spring Semester**
This course explores the fundamental principles and applications of materials testing, mechanics, strength of materials. Included in the course are topics such as selection and appropriate use of non-destructive testing methods which includes penetrant, chemical etching, and magnetic particle inspection. Basic heat treating along with an in-depth study of material selection and use will be a part of the course. Included will be topics dealing with axial and central loads, stress and fatigue factors and study of design data from experiments.
- VE250 Basic Electricity (3,2,2) Fall and Spring Semesters**
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, electromagnetism, transformers and motors. This course emphasizes a "hands on" approach with the use of modern components and equipment.
- VE253 Hydraulics and Fluid Mechanics (3,3,0) Fall and Spring Semesters**
This course includes applied physics, hydraulic principles and formulas, fluid characteristics and basic circuits and theory. In practice the units of the hydraulic system are disassembled, inspected, and tested. The piping, tubing, hose and common trouble sources in hydraulic systems are covered through laboratory demonstrations and experiments on specialized fluid power equipment.
- VE260 Manufacturing Processes (2,2,0) Fall Semester**
A study of the methods of processes used in manufacturing a product is studied. Individual and group tours of industry along with a survey of technical literature is the basis for the term paper required.

- VE290 Field Experience (3-9 credit hours) Fall Semester
A course consisting of a carefully-planned cooperative work experience in business industry and a weekly seminar. To receive credit for the course the student must meet the following requirements: (1) acquire approved work experience (2) show evidence of satisfactory progress through bi-weekly employer reports, (3) complete a minimum of 75 clock hours work for each semester hour of credit granted. (Permission of coordinator required.)
- VE291 Field Experience (3 credit hours) Spring Semester
A continuation of VE290.

WELDING

- WE100 Welding Fundamentals and Practice (11,4,12)
This course is designed specifically to provide basic skills, fundamental knowledge, and practical capability in the welding field. A major share of the course is devoted to actual welding practice designed to master the techniques for making welds in all positions with a wide variety of manual processes. Instruction is given in oxy-acetylene welding, brazing, cast iron welding, pipe welding, silver soldering and flame cutting. Lecture, discussion, and text and study guide assignments provide the essential background material needed by the welder.
- WE101 Advanced Welding (11,4,12)
This course incorporates theory and practice in improved mastery in welding techniques, use of processes, joint design, weld symbols, and inspection and testing of welds.
- WE102 Advanced Welding Laboratory I (3,0,4)
Major emphasis in this advanced laboratory course is directed toward modifying manipulative techniques to produce welds in all positions which meet American Welding Society Standards for certification. The use of the largest practical diameter electrodes will be stressed and comparative analysis of electrode selection of optimum welding economy will be expected from each student. Early completion of certification requirements will enable the student to develop ability to make process comparisons and economic feasibility studies.
- WE103 Advanced Welding Laboratory II (3,0,4)
A continuation of WE102.
- WE104 Advanced Welding Laboratory III (3,0,4)
A continuation of WE103.
- WE110 Related Welding Skills (3,1,3)
This course covers welding theory and practice in oxy-actylene cutting, welding and brazing. Electric arc welding theory and practice with mild steel electrodes in flat and vertical position to meet visual inspection requirements as they would apply in automotive areas.

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Automotive Mechanics
Counselor
Social Sciences
Business Education
Language Arts
Social Science
Language Arts
Welding
Practical Nursing
Practical Nursing
Natural Science
Natural Science
Natural Science
Librarian
Business Education
Humanities
Aviation