

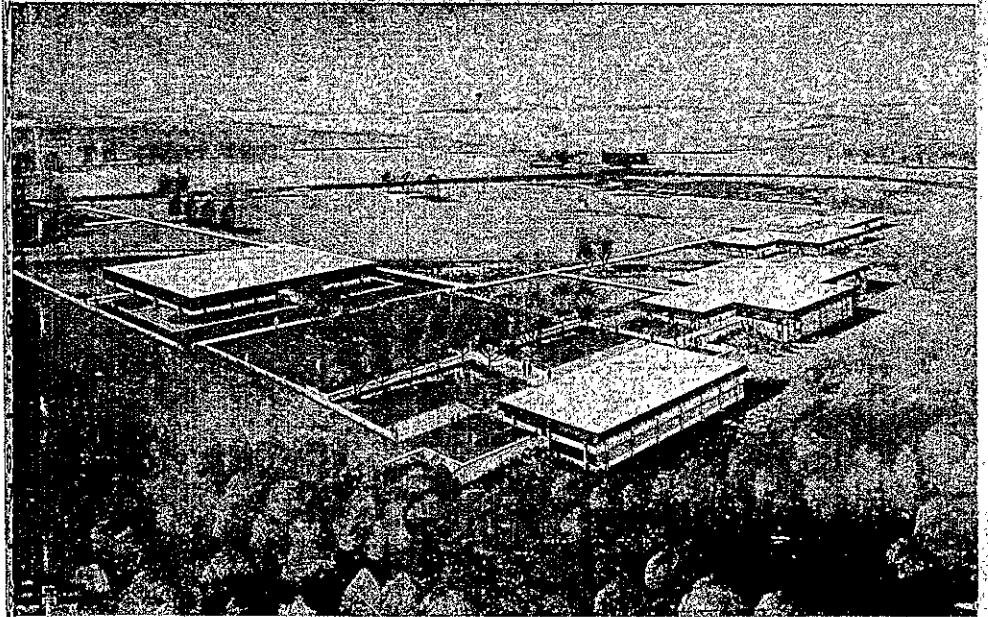


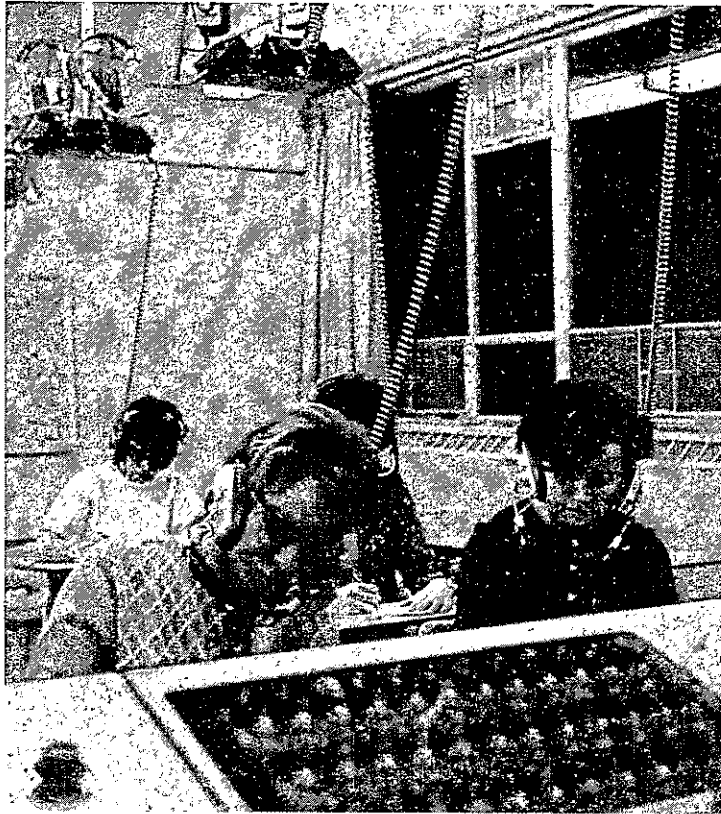
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CATALOG

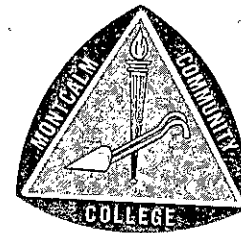
MONTCALM COMMUNITY COLLEGE





1967 - 1968

CATALOG



MONTCALM COMMUNITY COLLEGE

Sidney, Michigan 48885

Telephone
Area 517 - 831-5211 or 5212

MONTCALM COMMUNITY COLLEGE

Academic Calendar - 1967-68

First Semester - August 28 - December 22

July 3 - August 25	Counseling for new students (Sidney Road Office)
August 15 - September 1	Registration (Sidney Road Office)
August 21 - 25	Faculty Conference
August 28	Classes begin
September 1	Last date for registration
September 4	Labor Day Holiday (Classes resume Sept. 5)
November 23 and 24	Thanksgiving Holidays (Classes resume Nov. 27)
December 18 - 22	Final examinations
December 22	Semester ends

Second Semester - January 15 - May 17

January 8 and 9, 1968	Student conferences with faculty advisors
January 10 - 12	Registration for second semester
January 15	Classes begin
March 11 - 15	Spring Vacation (Classes resume March 18)
April 12	Good Friday Holiday (Classes resume April 15)
May 13 - 17	Final Examinations
May 17	Semester ends

Summer Session - 1968

To be announced

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BOARD OF TRUSTEES

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- JOE COOK, *Vice-Chairman*
- BEATRICE DOSER (MRS. FRED), *Treasurer*
- GRACE GREENHOE (MRS. HAROLD), *Secretary*
- JAMES CROSBY, *Trustee*
- DR. HAROLD STEELE, *Trustee*
- DR. DONALD FINK, *Ex-Officio*
- MARILYN STANKEY (MRS. FRANK), *Secretary to the Board*

ABOUT THE COLLEGE

THE 1966-67 STAFF

- Donald D. Fink, Ed.D., *President*
- Maurice D. Swift, M.A., *Dean of Technical/Vocational Studies*
- William H. Falconer, M.S., *Director of College Studies*
- Clifford J. Bedore, Jr., M.A., *Business Manager*
- John B. Carlson, M.L.S., *Director of the Learning Resources Center*
- Jo Ann Regis (Mrs. Arlen), R.N., B.S., *Director of Practical Nursing*
- Helen Brehm (Mrs. Ernest), M.A., *Instructor in Office Occupations*
- John Dargitz, B.S., *Instructor in Drafting and Design Technology*
- Ipha Fishell (Mrs. Frank), R.N., *Instructor in Practical Nursing*
- D. Gary Moore, M.A., *Instructor in Automotive Mechanics*
- Ruth Rose (Mrs. Kelley), R.N., *Instructor in Practical Nursing*

Part-time academic instructors: James J. Christensen, Frank E. Fishell, Jay Loeffers, Les Morford and William J. Seiter

Secretarial Staff: Marilyn Stankey (Mrs. Frank) - *President*; Mary Helms (Mrs. Jack) - *Technical/Vocational Division*; Betty Wood (Mrs. Barry) - *Business Manager*

MONTCALM COMMUNITY COLLEGE

AN HISTORICAL REVIEW

The College came into being in the Fall of 1963 as an idea in the minds of a group of public-spirited citizens. It had become obvious to the people of Montcalm that such factors as distance to existing colleges, rising educational costs, increasing demands upon institutions of higher education, and the growing specialization of the work force were combining to form a mandate for local post-high school education.

Under the sponsorship of the Montcalm Area Intermediate School District Board of Education, a Citizens' Study Committee was formed and began pre-establishment research under the chairmanship of Attorney Charles W. Simon, Jr. of Edmore. William J. Seiter, Intermediate District Superintendent, served as professional consultant to the Committee, and Dr. Max Smith, Director of Community College Cooperation at Michigan State University, was appointed as the Study Director.

That the Citizens' Study Committee had performed its task well and had properly informed area residents of its conclusions was borne out on March 2, 1965 when the College was established by an overwhelmingly favorable vote. Also, the first Board of Trustees, consisting of the six citizens whose names appear in this catalog, was elected, and a perpetual one-mill annual tax levy for all financial needs was established at this election.

The President and Business Manager began their work with the College on August 1, 1965. In September the completion of a joint site survey conducted by Dr. Smith and Dr. Raymond Young, University of Michigan, resulted in the purchase of 158 acres on Sidney Road for the campus site. This was expanded in August, 1966 by the purchase of 80 additional acres contiguous to the original land. As was earlier recommended by the Citizens' Study Committee, the campus is near both the geographical and population centers of the district, available from all directions by surfaced county and state highways.

Architect for the campus Master Plan and Phase I of construction is the firm of Daverman Associates, Inc., of Grand Rapids.

Construction bids for the Learning Resources Center, a Two-Story Academic Center and the Service Building/Heating Plant were opened on September 9, 1966 with actual building activity beginning on October 3. Official ground-breaking ceremonies were held on the Campus on September 26 with Governor Romney as the speaker. Completion of this project is scheduled for the first semester, 1967-68 with Gust Construction Company of Cedar Springs, Michigan as the general contractor.

Moving to verify the commitment of Montcalm Community College to a strong technical/vocational program, the Dean of Technical/Vocational Studies was employed on February 1, 1966 and the first full-time programs of study in this division opened on August 29. Teaching in the academic fields also began on this date with study being offered in five courses. Full-time study in academic and college transfer programs will begin in the Fall of 1967 as described elsewhere in this catalog. All teaching in 1966-67 is being carried out in rented or loaned facilities with most classes meeting in the late afternoon and evening.

So as this catalog is being prepared for distribution, Montcalm Community College is standing on the threshold of its first year as a comprehensive institution of higher education, looking forward to operation in its own facilities on a beautiful 238-acre campus. Thus the idea shared by those forward-looking citizens in 1963 is rapidly developing into a college campus, a faculty, and a student body-- a community of learning dedicated to the service and well-being of Montcalm people.

EDUCATIONAL OBJECTIVES OF THE COLLEGE

Montcalm Community College subscribes fully to the following institutional objectives:

1. To provide technical and vocational study leading to occupational competence at the semi-professional and skilled levels; also to assist in upgrading the skills of employed 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 activities in the Humanities; also, to provide facilities in which community groups may carry on similar projects.

Being aware that the above objectives describe a comprehensive community college, the staff and trustees of Montcalm are utilizing them as guidelines in the orderly 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 technical/vocational fields.
2. At least 10% of the enrolled students will successfully transfer to senior institutions to complete work on a bac-

calaureate degree, and some of these will be in technical programs at Montcalm Community College.

3. All students - - youth and adult, academic and technical/vocational, 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 institutional 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

Montcalm Community College has been working for a full year toward accreditation by the North Central Association of Colleges and Secondary Schools. Consultant/ Examiner for the Association is Dr. Daryl Pendergraft, Assistant to the President and Executive Dean at the State College of Iowa. Formal application for accreditation will be made as soon as North Central regulations permit.

Four senior institutions have filed letters with the President stating their intent to accept credits on transfer from Montcalm Community College. They are Alma College, Central Michigan University, University of Michigan, and Western Michigan University. Some of these institutions have modified this statement to the extent that credits will be validated after the first semester of study on the 4-year campus. Central Michigan University has also offered to evaluate technical/vocational credits earned at Montcalm Community College on a per course basis for each individual transferee. On the other hand, all courses in the technical/vocational studies have been designed primarily to provide occupational and semi-professional skill and no particular attention has been given to their transferability to any other institution.

Montcalm Community College holds membership in the Michigan Council of Community College Administrators and is also a full institutional member in the American Association of Junior Colleges.

THE EDUCATIONAL PROGRAM

The educational program at Montcalm Community College is based upon an uncomplicated philosophy having as its chief goals the following outcomes:

1. For the academic student - a 2-year college education of high quality providing a firm grasp of the basic areas of knowledge: Communication Skills, Social Science, Natural Science, the Humanities, and Mathematics. In addition to this basic core of learnings, a series of electives will permit students to explore areas of special interest.

It is believed that a sophomore graduate cannot be considered fully educated until prescribed work has been completed in the entire General Education program described above. Also, it is expected that the student who completes two years of academic study will have an understanding of how knowledge is gained in each academic discipline and will possess the skill and desire to become a lifetime learner.

2. For the vocational/technical student - a high degree of occupational competence at the skilled or semi-professional level. It is expected that the graduate will be able to demonstrate a high degree of job performance as well as the ability to accept new, related responsibility.

For the technical student who will seek the associate degree as well as occupational competence, successful completion of portions of the General Education core will also be required. Because the associate degree technician will frequently assist professional workers - - physicians, engineers, dentists, etc. - - he is expected to have competence in the realm of ideas and theories as a necessary complement to his skill training.

For the vocational student, any academic training will be related specifically to the job skills which he is learning; for example, mathematics will be of a technical nature and directly connected with the skill being taught.

In all cases, the student at Montcalm Community College will be expected to pursue his chosen course of study with enthusiasm and the best effort of which he is capable at all times. Neither students nor their instructors should approach the learning task with an attitude of mediocrity. A high quality of performance is a consistent demand of all in this community of learning.

DEGREES

Only two degrees will be granted at Montcalm Community College:

1. Associate in Arts and Sciences
2. Associate in Applied Arts and Sciences

Every person desiring to earn either degree will be required to earn at least 60 semester credits in the prescribed programs of study listed later in this catalog.

Some programs, particularly those in the technical studies, may require a greater number of credits to complete skill and general education requirements.

At such time as facilities make instruction possible in physical education, requirements for graduation will be raised to include two semesters in that area, or a total of 62 credits.

CERTIFICATE PROGRAMS

A number of educational programs at Montcalm Community College will be of a different emphasis or length than those leading to an Associate Degree. Students successfully completing these courses will receive a certificate of achievement in lieu of the degree. Two examples of this are in the field of Practical Nursing and Automotive Mechanics. The former is of a length and content specified by the Michigan Board of Nursing. The latter, though a two-year course, is so structured with specific job knowledge that no time is available for completion of the General Education requirements for the degree.

It is anticipated that a number of programs, most of them of a vocational nature, will be organized under a similar structure in the future. Students will be awarded appropriate recognition of their achievement in these and may, if they desire, complete the Associate Degree by fulfilling the required General Education core and earning a grand total of 60 credit hours.

GENERAL EDUCATION 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. To the specific needs which the student is attempting to fulfill. However, the College will also expect the student to demonstrate complete self-responsibility in achieving his personal goals.

2. To the equal dignity of all educational pursuits. As Governor Romney remarked at the Montcalm Community College Ground-breaking Ceremonies on September 26, 1966, "All work is good, whether it is done with the head or the hands." Consequently, the College foresees that its student body will be divided about equally between the academic and occupational divisions and anticipates the same high level of accomplishment in both.
3. To General Education (presented later in this catalog) as the most effective means of providing the basic groundwork for upper division collegiate study and also for knowledgeable citizenship through the understanding of our physical, social, and cultural world.
4. To the vital importance of stimulating, exciting, and challenging teaching.
5. To community college instruction as providing the basis for continuous lifelong learning.
6. To high standards of moral and spiritual character as an essential attribute for personal success and well-being.

INSTRUCTIONAL FACILITIES

During the 1966-67 college year, Montcalm Community College classes are being conducted in rented or borrowed facilities and all but Practical Nursing are meeting during the late afternoon and evening hours. Several area high schools and Carson City Hospital are furnishing necessary classroom space.

However, the ground was broken officially on September 26, 1966 for Phase I of Montcalm Community College's Master Plan for campus development. Completion of the Learning Resources Center and the first classroom building is anticipated by the first semester of 1967-68. Also scheduled for bidding in late 1966 is the second classroom building which will be available for the second semester of 1967-68.

The Learning Resources Center will house an initial book collection of 20,000 volumes and will feature periodical and reference service as well. Also included will be a microfilm collection, the Campus Audio-Visual Center, and the Reading and Listening Laboratories.

In addition to regular classrooms, the two-story academic facility features three demonstration/lecture rooms for the sciences,

each accompanied by a well-equipped laboratory; The business/secretarial wing with laboratories for business machines and shorthand transcription; and the Practical Nursing facilities.

Special features of the second academic building include two lecture/demonstration halls seating 92 and 130 persons respectively, with two small-group seminar rooms immediately adjacent.

Planning for Phase Ia of development, the vocational/technical unit, will begin early in 1967 with the opening of the first semester, 1968-69 as the target date for completion. It is expected that this facility will give particular emphasis to laboratories for skills related to light and heavy industry.

STUDENT SERVICES

The program of services and activities for students will grow and evolve with developing needs and demands. This will become particularly true as the College occupies its new facilities on campus.

By and large, the services reviewed below will operate under the direction of the Dean of Students, this office to be activated as of July 1, 1967. Until that time, essential services will be provided by appropriate members of the Administrative Staff.

It is the intent of Montcalm Community College that the Student Services and Activities Program shall exist only for one primary purpose: to enhance and make more effective the instructional program of the College. Such services as counseling and financial aid, for example, are designed to eliminate specific personal problems which, if unresolved, might interfere with a student's ability to function as a learner. Provision of all other services shall be in a like spirit.

ADMISSION

The student body at Montcalm Community College will include persons of varied admissions status: new, transfer, continuing, and part-time. The admission procedure for each group is described below.

1. **New College Students.** For those applicants who have never before attended a post-high school educational institution, the following steps must be completed:
 - a. Submit an application blank (available at your high school office or the Admissions Office). Include a check for the \$10 Application Fee.
 - b. Request that your high school office forward two copies of your transcript of grades and standardized test results to the Director of Admissions, Montcalm Community College.
 - c. Take the American College Tests (ACT) on one of the national testing dates (full information available from high school counselors). Have a copy of the results forwarded to Montcalm Community College (Code #2029).

- d. Secure a Montcalm Community College Physical Examination form and have it completed by your family physician and forwarded to the Director of Admissions. Note: the physical examination must include a TB skin test or chest x-ray.
 - e. Report for your entrance counseling interview as scheduled for interpretation of your ACT scores and placement within the various programs.
 - f. Male students: Montcalm Community College will need to know your Selective Service Board name and number and your own number. Your admission, registration, and continuing enrollment status will be reported to the proper Board by the College.
2. **Transfer Students.** For those applicants who have, at some time, attended other post-high school institutions the following steps must be completed:
- a. Submit an application blank for transfer students (available at the Admissions Office). Include a check for the \$10 Application Fee.
 - b. Request that the college(s) forward a copy of your transcript of grades to the Director of Admissions, Montcalm Community College. The transcript should include a statement of your academic standing at your former institution.
 - c. Secure a Montcalm Community College Physical Examination form and have it completed by your family physician and forwarded to the Director of Admissions. Note: the physical examination must include a TB skin test or chest x-ray.
 - d. Report for your entrance counseling interview as scheduled by the counseling office.
 - e. Transfer students who have been dismissed for academic reasons from their last institution of attendance will be required to wait a full semester before entering the academic program at Montcalm Community College.
 - f. Male students: Montcalm Community College will need to know your Selective Service Board name and number and your own number. Your admission, registration, and continuing enrollment status will be reported to the proper Board by the College.

3. **Continuing Students.** Part and full-time students who were enrolled for the previous semester or summer session need not reapply for admission. However, certain students -- particularly those in part-time programs during 1966-67 -- will be required to follow these procedures:
- a. If the student has completed 12 semester hours of study or more and has not already done so, he must complete the formal application procedures. This includes primarily all steps described in section 1, pages 13 and 14 (New College Students).
 - b. This policy applies to all students completing 12 or more semester hours including those working toward a degree or certificate of completion.

COUNSELING

The counseling service will be an integral part of the Student Services program at Montcalm Community College. Beginning in August, 1967 a full time counselor will be available in the counseling center on the lower level of the Learning Resources Center. After the initial admissions interview, appointments in the counseling center will be upon the initiative of the students themselves. Counseling appointments may be made in advance, but certain hours will be designated for "drop in" conferences. Typical problems which may be discussed with the counseling staff are difficulties with academic classwork, personal and social problems, vocational goals, interpretation of test results, and others.

ACADEMIC ADVISING

The Dean of Students will assign each new enrollee to a faculty advisor appropriate to his area of study. Interviews with faculty advisors will be scheduled prior to the beginning of each semester for programming purposes.

However, each student should assume the responsibility for knowing the office hours of his faculty advisor in order that he may discuss special academic problems as they arise. As is the case in the use of the counseling center, it is assumed that the student will take the initiative in seeking conferences with his academic advisor.

HOUSING

Montcalm Community College has been established primarily as a commuting institution. Therefore, there are no plans for the development of college-operated residence facilities, either on

or off campus. Should a non-resident student desire to take up residence nearer the campus, necessary arrangements should be made by the individual with local residents. The College assumes no responsibility for supervision or administration of living quarters furnished in this manner.

FOOD SERVICES

The Informal Study area located on the lower level of the Learning Resources Center will serve initially as the only food service facility for the campus. A small snack bar serving hot foods will be supplemented by a number of vending machines. Snack bar services will be available for approximately 2 hours for the purpose of serving lunches, and vending machines will be available at other hours.

However, until the completion of large lecture facilities in the second academic building, it may be necessary to schedule formal classes in the study area itself between the hours of 8:00 to 11:00 A.M. and from 2:00 until 5:00 P.M. Upon the opening of large lecture facilities, the informal Study area will be available to all students during most of the regular hours of the day.

HEALTH SERVICE

The Health Service Center is located on the lower level of the Learning Resources Center. This facility is equipped with typical first aid materials and two cots for use in case of sickness or accident. This facility is under the supervision of the Dean of Students, who will also make arrangements for care of more serious health emergencies in a nearby medical center.

The College Health Service will appraise the entrance physical examination reports of new students and will note irregularities or problems requiring special attention.

BOOKSTORE

The College Bookstore is located on the lower level of the Learning Resources Center. Its primary purpose is to provide for the purchase -- at the lowest price possible -- of textbooks, special equipment, and other materials required for the successful pursuit of course work. Other supplementary reading materials and sundry articles will be made available as the demand develops. Bookstore hours will be arranged for the greatest convenience of the students and faculty and will be posted in a prominent place.

STUDENT LOUNGE

As mentioned elsewhere in this catalog, a Student Lounge area is provided on the lower level of the Learning Resources Center. It will generally be available for use as an informal study area and for light food services between the hours of 11:00 A.M. and 2:00 P.M. Until the opening of the second academic building during the second semester of 1967-68, this lounge area may be subject to use as a large lecture room from 8:00 to 11:00 A. M. and 2:00 to 5:00 P. M.

STUDY AREA

In addition to informal study in the Student Lounge, a considerable amount of formal study opportunity is available in the College Library. Individual carrels, tables and chairs, and informal seating are all available in this facility.

Study in the Library is expected to be conducted in a manner which will provide little interference with the work of other students using the facility.

PLACEMENT

The Dean of Students will receive and post offers for summer and part-time employment. Students desiring such employment should also register their names with the Dean of Students for quick reference when job offers are discussed with prospective employers.

Placement for technical/vocational graduates will be carried on chiefly between instructors and employers. The Dean of Students will maintain a record of local industrial and business employment personnel to contact for job placement in the Montcalm area.

Educational placement, within the Montcalm Community College programs of instruction as well as other collegiate institutions, is the responsibility of the Counseling Office. A library of college catalogs will be maintained in this office for assistance in educational placement. Assistance will be offered in applying for admission, securing financial aid, etc.

FINANCIAL AID AT MONTCALM COMMUNITY COLLEGE

By its very nature, the community college is one of the least expensive institutions of higher education in existence. A basic reason for this is that most of these institutions are for commuting students thereby eliminating the necessity of board and room charges. Other advantages also contribute to the low cost for individuals.

However, it is recognized that personal and family financial circumstances may cause even the minimal costs of community college attendance to be a barrier to higher education. It is for this reason that Montcalm Community College is developing a system of financial aids to assist the student in eliminating that barrier.

Loans and Work-Study Opportunities. Montcalm Community College has been approved by the Michigan Higher Education Assistance Authority for participation in the financial aids program sponsored by the Michigan State 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 MHEAA should be made directly with them. High school counselors and the Montcalm Community College Admissions Office have information regarding member banks.

In addition, the College is taking steps to come under the loan provisions of the National Defense Education Act (NDEA). A special feature of these loans is the forgiveness of a portion of the debt for those preparing to enter certain professions. Information regarding this program will be available at Montcalm Community College after April 1, 1967.

Under the College Work-Study program of the federal Economic Opportunity Act, a number of on-campus part-time jobs will be available to students carrying a full study program. Information on these jobs will be available from the Admissions Office after April 1, 1967.

In addition, full-time students will be eligible for up to fifteen hours per week of on-campus employment sponsored by Montcalm Community College. Students employed in this program will serve in the science laboratories, library, food service area, as clerical assistants and in other similar functions. In providing these positions, need will be a primary factor, but past employment experiences and basic ability to perform the work will also be considered.

Scholarships. The Michigan Higher Education Assistance Authority also provides for a program of scholarships for which Montcalm Community College has been declared a participating institution. Students taking the qualifying examination may designate this College as the institution at which their scholarships will be used. Decision on the participation of Montcalm Community College in the MHEAA scholarship program was made too late for the college to be listed in the 1966-67 Directory, but students may use the Code #91 to designate this institution.

The awarding of an MHEAA grant depends upon performance on a competitive examination and the amount granted is determined by need.

A number of local scholarships were offered for the 1966-67 college year as follows:

Donar, Inc. of Greenville
Greenville Junior Chamber of Commerce
Greenville Lions Club
Marsh Ford Sales of Greenville
Stan and Marion Kemp Scholarships
Greenville Southside Child Study Club
United Memorial Hospital Guild

The Kemp award was offered at large to any worthy students at the College, all others being designated for graduates of Greenville High School. It is anticipated that a number of these will be repeated for 1967-68.

A new scholarship already announced for the 1967-68 College year will be provided by the Sheridan Lions Club for a graduate of the Central Montcalm High School.

STUDENT ACTIVITIES

The Dean of Students will work with student groups to provide for the organization of appropriate activities as the need for them arises. It is anticipated that the 1967-68 college year will witness the initiation of the following:

Student Government. Montcalm Community College firmly believes that members of the student body can take a constructive, creative part in the establishment and enforcement of regulations affecting students at the College. Also, it is anticipated that the student government will provide an organized means of open communication between the student body and the faculty and administration of the College.

Student Publication. An official student publication provides not only practice in journalism for the students, but an excellent means of communication within the student body as well as with other community colleges. Also, a quality publication helps to interpret student thinking to the community through distribution to citizens who demonstrate sustained interest in the College. It is hoped that student efforts will be made during 1967-68 to establish such a student organization.

Athletics. The lack of facilities on campus will somewhat hamper initial efforts to organize the College athletic competition program.

However, it is expected that a program of intramural competition will be begun in 1967-68, the scope depending primarily upon the availability of rented or borrowed facilities. Competition with other community colleges may also be initiated if student interest in such activities develops.

Montcalm Community College will be eligible for competition within the Michigan Junior and Community College Athletic Conference. Participation in selected activities of the Conference will begin as soon as feasible.

ACADEMIC INFORMATION

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 in the late Summer in order to close by the Christmas holidays. The second semester opens in early January and ends about mid-May. A summer session will be organized as soon as there is sufficient demand.

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.

Full-time – By legal definition, one who carries twelve or more semester hours of study. However, the student must bear in mind the 60-credit requirement for an associate degree and his probable desire to graduate after four semesters of study.

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

GRADUATION REQUIREMENTS

Students working towards a certificate or diploma in a technical/vocational field must complete all established requirements for the award.

Those pursuing an associate degree must complete not only the required 60 semester credits but also the proper sequence of courses as herein presented. When physical education is offered, 62 credits will be required for graduation.

SELECTION OF COURSE OF STUDY

Final selection of a student's program of study prior to registration takes place at the admission counseling interview during the summer preceding the first year of study. Once this selection has been made, the student is required to complete all specified courses in the program.

The most notable exception to the above is the substitution of a specialized academic course in lieu of a General Education course. Such a change will be accepted at registration only if written authorization is presented, signed by the admissions counselor or the Dean of the appropriate division of the College.

Course substitutions will be based upon the student's performance on the American College Tests, study at previous colleges, and/or high school performance.

ATTENDANCE AT CLASSES

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 necessity for regular attendance at all class meetings should be obvious to instructors and students alike. Excessive absenteeism may become a disciplinary matter and could result in dismissal from a class or from the College.

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--is unavoidable, and advance arrangements should be made for completion of work wherever possible.

FINAL EXAMINATIONS

Final examinations are an integral part of the academic requirements at Montcalm Community College. The examinations will be of greater time length than most individual class periods and will be administered on a college-wide schedule during the final week of any semester.

There will be no college-sponsored interference with final examinations. Absence from an examination will be considered unexcused except in cases of personal confining illness. Make-ups of missed final examinations in such extreme cases shall be arranged between the student and instructor.

VETERANS

Men and women who have served in the armed forces of the United States and any part of whose service came after January 31, 1955 are eligible for study under Chapter 34, Title 38, known as the "New G. I. Bill".

Montcalm Community College has been approved for study under this program 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.

GRADING SYSTEM

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

Grade	Definition	Honor Point Value
A	Excellent performance	4
B	Good, often above average performance	3
C	Average performance	2
D	Passing performance, but often poor or below average	1
E	Failure	0
W	Withdrew while passing	0
F	Withdrew while failing	0
I	Incomplete, with permission to complete requirements	-
V	Audit status only	-

All students should take note that the letter grade is a part of the total academic climate of any course and is therefore no more subject to outside influence than the content or day-to-day assigned work. Assigning of grades is the complete and irrevocable responsibility of each instructor.

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 I should be made up as follows:

1. If the course is part of a sequence in which successful completion of the present semester is requisite to pursuing the next, the I grade must be removed prior to the beginning of the ensuing semester.
2. If completion of the course in which an I has been awarded is not requisite for continuation of a sequence, the I must be removed by the middle of the ensuing semester.

THE GRADE POINT AVERAGE

The grade point average is valuable both to the student and the College. It allows the student to assess his total academic performance as of any particular point in his study at Montcalm Community College. On the other hand, the College is able to evaluate an individual's performance against institutional grade requirements, admission standards of transfer colleges, eligibility requirements for interscholastic activities, and for other similar essential purposes.

Computation of the Grade Point Average is as follows:

Course	Grade	Honor Point Value	Semester Credit Hours	=	Grade Point
X	A	4	3	=	12
XX	B	3	4	=	12
Y	B	3	4	=	12
YY	C	2	1	=	2
Z	C	2	4	=	8
Totals			16		46

To find the Grade Point Average:

$$46 \div 16 = 2.875 \text{ (GPA)}$$

The cumulative grade point average for all work completed is the total number of grade points earned divided by the total of all semester credit hours for which a grade has been assigned (except an I or W). This calculation must include semester credit hours for which the grade earned was E, even though no honor points are awarded for that grade.

When a student repeats a course for which an E or F grade was earned on the first attempt, the semester credit hours for both

times will be included in the calculation of the Grade Point Average. When a student repeats a course for which he first received an E or F grade, both the original grade and the repeated course grade are entered upon the student's permanent record.

Only those semester credit hours for which passing grades were received will be counted toward fulfillment of graduation requirements.

COURSE REPETITION

A student must repeat any course for which he has received a final grade of E or F if it is a part of the required sequence for graduation or completion of a certificate.

A student may repeat a course for which a final grade of D has been awarded if he desires to improve his Grade Point Average. However, semester credits for this course will be accepted only once towards graduation or completion, though the credits and honor points for both enrollments in the course will be used in the calculation of the cumulative Grade Point Average.

HONORS

Each semester a Dean's Honor List will be issued including the names of all students whose semester Grade Point Average exceeds 3.50. The President's Honor List will include those whose semester GPA is 4.00.

Distinguished Dean's Scholars will include those who have completed at least two semesters of study with a cumulative GPA exceeding 3.50. The President's Scholars will be those who have completed two or more semesters with a cumulative GPA of 4.00.

ACADEMIC PROBATION AND DISMISSAL

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

1. Failure to achieve at least a 1.70 Grade Point Average at the end of the first semester will result in the student's being placed on academic probation.
2. A student will continue on probation until his cumulative Grade Point Average has been raised to 2.0 or above.

3. While on probation, a student must achieve a 2.0 Grade Point Average each semester. Failure to do so will result in academic dismissal.
4. Students subject to academic dismissal may follow one of two 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 of curriculum. If such a change is decided upon, the counselor will make his recommendation in writing and written approval will be sought from the student's faculty advisor and the Dean of the Division into which the student will enter.
5. Students dismissed for academic reasons, either from Montcalm Community College or any other college, must wait for a full semester before re-entering the College.
6. A student dismissed from Montcalm Community College for academic reasons has the right to an appeal before the Dean of Students to explain his grade deficiencies.

For Students Pursuing a Certificate of Completion. A student in a non-degree program is expected to make steady progress in developing the skills for which the courses are established. If a student's progress is not satisfactory, he will be invited to discuss possible difficulties with his faculty advisor and suggested remedial action will be taken.

However, when it appears that it will be impossible for the student to overcome his difficulty with the course work, he will be dropped from the College for lack of achievement.

As is the case of those receiving academic dismissal, the student dismissed from a certificate program may seek assistance from the Counseling Center and/or make an appeal to the Dean of Students for the purpose of explaining his grade deficiencies.

FINANCIAL INFORMATION

TUITION

Resident of Montcalm Community College District: \$8.50 per credit hour

Out of District Students: \$13.50 per credit hour

The tuition differential for non-residents is based upon the fact that residents of the Montcalm Community College District contribute to the support of the College through taxes as well as the payment of tuition. Therefore, in order to be eligible for resident tuition charges, the student's normal residence should be subject to Montcalm Community College taxes. In general, students whose parents reside in an area not included in the Montcalm Community College District will be subject to the payment of non-resident tuition.

Resident and non-resident 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 21 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 21 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 21 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 21 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 21 years of age whose parents or legal guardians do not reside within the boundaries of Montcalm Community College District.
3. Foreign-born students who are in the United States on a visa, visitor's visa, or any visa that entitles them to attend college full or part-time, regardless of their length of residence within the boundaries of Montcalm Community College District.

FEES

Application Fee \$10.00
Submitted with application for admission. Non-refundable, but will be credited against Matriculation Fee and/or tuition when the applicant actually enrolls at Montcalm Community College.

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

Matriculation Fee for those whose ACT scores have already been received by the Admissions Office \$5.50

Student Activity Fee, per semester \$10.00

Laboratory Fees

(Student will be subject to purchase of normal laboratory materials. Varies according to course.)

SCHEDULE FOR TUITION REFUNDS

- If withdrawal takes place:
- During first week - full refund
 - During second week - 75% refund
 - During third week - 50% refund
 - During fourth week -
 - or thereafter - none

Fees are non-refundable.

PROGRAMS OF STUDY

The programs of study offered at Montcalm Community College will be described under two general headings: Academic and Technical/Vocational. Course descriptions will appear in the section immediately following.

ACADEMIC

The academic program at Montcalm Community College is centered around a core of General Education which will be required of all students electing to study in the Academic Division. Deviations from the General Education core will depend upon the long range educational plans of students and also upon their demonstration of unusually high proficiency in certain areas of study.

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 areas of Communication, Natural Science, Social Science, Humanities, and Mathematics. It is the policy of Montcalm Community College that all graduates from the academic program shall have achieved proficiency in these five areas.

It is the goal of Montcalm Community College to equip the academic 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 even though their formal education ceases with graduation from Montcalm Community College. Also, it is anticipated that the General Education program will provide an equally useful preparation for advanced study at transfer institutions, especially when used in combination with the pre-professional courses described below.

GENERAL EDUCATION PROGRAM

Title	Semesters	Credits
Man's Communication	2	6
Man's Physical World	2	8
Man's Social World	2	8
Man's Creative World *	2	8
Man's Mathematical Methods	1	4

*To be offered beginning in 1968-69

Title	Semesters	Credits
Seminars:		
Orientation (1st semester Freshman year)	1	1
Interdisciplinary	2	4
Laboratories:		
Humanities	1	2
Social Science	1	2
Natural Science (in addition to regular lab for Man's Physical World)	1	2
TOTAL GENERAL EDUCATION CREDITS		45

ELECTIVES FOR 1967-68

Title	Semesters	Credits
Language Arts:		
Speech	1	3
Introduction to Literature	2	6
Foreign Language	2	8
Social Science:		
Anthropology	1	3
Sociology	1	3
Psychology	1	3
Geography	1	3
Mathematics:		
Statistics	1	4

PRE-PROFESSIONAL COURSES

Students presenting evidence of high proficiency in one or more of the academic areas covered under the General Education program may substitute more traditional courses designed to prepare them for professional competence in those fields. Major sequences will be available in

Mathematics	History
Biology	Political Science
Chemistry	College Writing/Literature
Physics	

Study in the pre-professional courses listed above will be on an independent basis under the supervision of appropriate faculty members. Determination of the eligibility of a student for participation in the pre-professional courses will be based upon such evidence as centile rankings on the American College Test and high school grades. It is anticipated that the permission for such study will be granted during the admissions counseling interview held before the student's initial semester at Montcalm Community College, but outstanding achievement in a General Education course may also lead to pre-professional study in the Sophomore year.

GENERAL EDUCATION FOR

TECHNICAL/VOCATIONAL STUDENTS

All technical/vocational students desiring to complete the requirements for an Associate of Applied Arts and Sciences Degree must complete a year of study in Man's Communication and Man's Social World in addition to the Orientation Seminar.

TECHNICAL/VOCATIONAL

Montcalm Community College has come into being during a dynamic era marked by exploration, research, and the rapid discovery of new knowledge. The information itself as well as the techniques for finding it have both been applied to increase the power of our society to produce and do work. These methods have become so refined and complicated that they have developed into a vast system of learnings, much of which must be completed in a classroom rather than on the job.

This College has a major responsibility in occupational education, both in preparing future workers and re-educating those already employed who must meet the challenge of new techniques or completely new jobs. Fully recognizing the need of young men and women to develop these skills, Montcalm Community College began its first full time teaching during 1966-67 in several vocational/technical fields. Each program of study organized was backed by an advisory committee made up of those actually performing the work or serving in a direct supervisory capacity over those workers. Each committee made suggestions as to what should be learned and assisted in discovering the best methods for teaching it, and each will assume

a continuing role in evaluating the success of the program. Every program is designed to meet the skilled employment needs of both Montcalm County and the larger industrial and business society.

Definitions. Occupational education programs at Montcalm Community College are organized under two general headings: Technical and Vocational. These terms are defined as follows:

Technical. Courses which equip the student to work closely with professional workers - - architects, engineers, physicians, etc. These programs of study emphasize the theory of the work as well as the job skill, stress ideas along with performance. Technical programs are usually of at least two years' duration and include a General Education requirement if they lead to an Associate Degree. There is also other academic study which is directly related to job performance.

Vocational. Courses which place their major emphasis upon skilled job performance with only sufficient theory to improve that performance. Designed to prepare the student for work as soon as possible, the vocational courses are often less than two years in length, offer little academic work, and require no General Education courses.

Students should bear in mind that the programs of study listed below are designed to prepare them for employment, and courses have been selected to accomplish that task. No attention has been given to whether any program or course might be transferable to a four-year institution (with the exception of the General Education). Senior colleges and universities will be furnished with complete details, but the matter of transfer will be between the individual student and the receiving institution.

Brochures are available from the Office of the Dean of Technical/Vocational Studies which describe these programs of study in greater detail.

AGRICULTURAL TECHNOLOGY

Rapid technological changes in farming and related agricultural business have given rise to the need for more technically trained people. A variety of agricultural businesses and industries employ persons to assist in marketing, processing, distributing of farm products and in providing services to the farmer. Many responsible positions in agriculture and the related industries require technical training above that available in high school.

First-year courses will be of a general nature and of interest and value to students in many phases of Agriculture. The second year curriculum will give the student an opportunity to specialize in one of the following areas:

AGRICULTURAL - CHEMICALS AGRICULTURAL - EQUIPMENT AGRICULTURAL - SOIL CONSERVATION

Other areas of specialization will be considered upon demand.

First Year General Course Offerings:

First Semester	Semester Credits
Man's Communication 1	3
Introduction to Agricultural Business	3
Agricultural Math	3
Man's Social World 1	4
Agricultural Economics	3
Orientation Seminar	1
Second Semester	
Man's Communication 2	3
Man's Social World 2	4
General Psychology	2
Salesmanship 1	3
Business Law	3

Second Year Course Offerings:

The student can specialize in the second year by pursuing course work in one of the following options:

AGRICULTURAL - CHEMICALS

Third Semester	Fourth Semester
General Chemistry	Agricultural Chemistry
Soil Fertility	Entomology
Plant Pathology	Agricultural Sprays and Application
Fertilizer Technology	Accounting 1
General Bacteriology	Weed Control and Identification

AGRICULTURAL – EQUIPMENT

Third Semester	Fourth Semester
Technical Drafting 1	Agricultural Machinery
Welding Fundamentals	Agricultural Equipment 2
Lawn and Garden Equipment	Electricity and Electronics
Agricultural Equipment 1	Hydraulics and Fluid
Farm Power	Mechanics
	Agricultural Diesels

AGRICULTURAL – SOIL CONVERSATION

Third Semester	Fourth Semester
Technical Drafting 1	Accounting I
Soil Mechanics	Surveying
Landscape Planning	Conservation of Natural
Introduction to Forestry	Resources
Water Conservation and	Park and Nursery Management
Erosion Control	Landscape Engineering

An Associate Degree is awarded on completion of any of the above programs.

APPRENTICESHIP TRAINING

The purpose of an Apprenticeship Program is to train young men in certain branches of the skilled trades, such as:

Tool and Die Making
Machine Repair
Jig and Fixture Building
Electrical Maintenance
Others

The usual entry age is 18 to 20 years inclusive. Normally the training runs for a 4-year period.

The minimum requirements are a "C" average in:

Two semesters of Algebra
Two semesters of Geometry
Two semesters of Mechanical Drawing
Two semesters of Shop Courses

Typical Related Instruction Schedule
for
Tool and Die Apprentice
Machine Repair Apprentice

Courses	Required Hours
Machine Tool Operation Theory	42
Blueprint Reading	72
Shop Mathematics	138
Strength of Material and Hydraulics	42
Shop Drawing	36
Welding Theory and Practice	48
Metallurgy and Heat Treatment	36
Tool and Die Design	168
Use of Machinists Handbook	42
Social Economics	30
Safety and First Aid	18
	<u>18</u>
TOTAL:	672

These courses are conducted by the Community College, usually on Saturday morning. The trainee usually takes two courses - - two hours each - - running for 21 weeks per semester.

First Semester: September – February
Second Semester: February – June

The apprenticeship agreement is usually instituted by the employer in cooperation with the U. S. Bureau of Apprenticeship and Training. The work schedules and the required related instruction courses are worked out by the employer and a representative of the Bureau to meet the requirements of the trade. The College acts only as the coordinator and provides the related instruction.

AUTOMOTIVE MECHANICS

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, demonstration, field trips, and shop practice.

First Semester	Semester Credits
Vocational Communication Skills 1	3
Drawing and Blueprint Reading	3
Automotive Math and Shop Reports	2
Automotive Mechanics 1 (Theory)	3
Automotive Laboratory 1	6
Automotive Engines	
Automotive Maintenance	

Second Semester	Semester Credits
Vocational Communication Skills 2	3
Welding Fundamentals	3
Automotive Mechanics 2	3
Automotive Laboratory 2	6
Ignition	
Carburetion	
Transmission	
 Summer Schedule – Job Placement	
Third Semester	
Business Law	3
Salesmanship 1	3
Automotive Mechanics 3	3
Automotive Laboratory 3	6
Suspension	
Steering	
Alignment and Balance	
Brake Systems	
 Fourth Semester	
Management and Personnel Relations	2
Technical Writing and Speaking	2
Automotive Mechanics 4	3
Automotive Laboratory 4	8
Automotive Tune-Up	
Diagnosing Equipment	
Emergency Servicing	
Trouble Shooting	

A certificate is awarded upon successful completion of the above program.

CLERICAL OFFICE PRACTICE

The demand for skilled and better qualified office personnel is rapidly expanding. The purpose of the Clerical Office Practice curriculum is to prepare people of all ages for the world of work in the office occupations. It does not include training in shorthand, but does give extensive practice in voice transcription and in the use of office machines.

First Semester	Semester Credits
Man's Communication 1	3
Beginning Typing	3
Professional Filing	3
Business Math	2
Man's Social World 1	4
Orientation Seminar	1
 Second Semester	
Man's Communication 2	3
Intermediate Typing	3
Business Machines	4
General Psychology	2
Man's Social World 2	4
 Third Semester	
Applied Typing and Office Practice	3
Accounting 1	3
Voice Transcription	4
Business Law	2
Work Experience or Elective	3
 Fourth Semester	
Office Machines	4
Accounting 2	3
Personnel Relations	3
Office Management	2
Work Experience or Elective	3

An Associate Degree will be awarded upon successful completion of the above program.

DRAFTING AND DESIGN TECHNOLOGY

Mechanical Drafting and Design Technicians are concerned with the preparation of drawings for design proposals, for experimental models and items for production use.

These technicians perform many aspects of design in a specialized field, such as the developing of the design of a section subassembly or major component. Investigating design factors and availability of material and equipment, production methods and facilities are frequent assignments. They also design units and controls from specifications by utilizing drawings of existing units and reports on functional performance or design components in industrial fields based on engineers' original design concepts or specific ideas.

First Semester	Semester Credits
Man's Communication 1	3
Technical Math 1	3
Mechanical Drafting	4
Man's Social World 1	4
Machine Shop Practices	3
Orientation Seminar	1
Second Semester	
Man's Communication 2	3
Technical Math 2	3
Advanced Mechanical Drafting	4
Man's Social World 2	4
Fabrication Processes	2
Third Semester	
Jig and Fixture Layout and Design	4
Technical Math 3	3
Physics	3
Business Law	2
Mechanics and Strength of Materials	3
Fourth Semester	
Die Design and Layout	4
Production Problems	2
Technical Math 4	3
Hydraulics and Fluid Mechanics	3
Personnel Relations	3

An Associate Degree is awarded upon successful completion of the above program.

EXECUTIVE SECRETARY

The graduate of the Executive Secretarial Science curriculum will have

- a knowledge of business terminology
- 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 given the responsibility for meeting office callers, screening telephone calls, and being an assistant to an executive.

First Semester	Semester Credits
Man's Communication 1	3
Intermediate Typing	3
Intermediate Shorthand	4
Business Math	2
Man's Social World 1	4
Orientation Seminar	1
Second Semester	
Man's Communication 2	3
Advanced Typing	3
Advanced Shorthand	4
General Psychology	2
Man's Social World 2	4
Third Semester	
Applied Typing and Office Practice	3
Accounting 1	3
Dictation and Transcription	4
Business Law	2
Work Experience or Elective	3
Fourth Semester	
Office Machines	4
Accounting 2	3
Personnel Relations	3
Office Management	2
Work Experience or Elective	3

An Associate Degree is awarded upon the successful completion of the above program.

INDUSTRIAL TECHNOLOGY

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.

First Semester	Hours	
	Lecture	Laboratory
Machine Operations 1	2	8
Technical Drafting 1	2	2
Shop Math 1	2	0
Vocational Psychology	2	0
Vocational Communication Skills 1 or Man's Communication 1	3	0
Industrial Safety and First Aid	1	0
Orientation Seminar (Associate Degree only)	1	0
Second Semester		
Machine Operations 2	2	8
Technical Drafting 2	2	2
Shop Math 2	2	0
Metallurgy 1	2	0
Vocational Communication Skills 2 or Man's Communication 2	2	0
Welding Fundamentals	2	0
Third Semester		
Technical Math 3	2	0
Physics	3	3
Metallurgy 2	3	0
Mechanics and Strength of Materials	3	0
Man's Social World 1 or Elective	4	0
Fourth Semester		
Technical Math 4	3	0
Electricity and Electronics	3	2
Production Problems	2	0
Hydraulics and Fluid Mechanics	3	2
Man's Social World 2 or Elective	4	0

A Certificate or an Associate Degree will be awarded upon successful completion of the above program.

MACHINE TOOL PRACTICES

This curriculum was prepared to meet a definite need for training of machine operators and machinists. Many industries lack time and facilities for training enough operators or machinists for present or foreseeable future needs. Expanding industries and new industries under development express the need for skilled craftsmen who have the background of knowledge and skills necessary for entry and advancement with their company.

First Semester	Hours	
	Lecture	Laboratory
Machine Operations 1	2	8
Technical Drafting 1	2	2
Shop Math 1	2	0
Vocational Psychology	2	0
Vocational Communication Skills 1	3	0
Industrial Safety and First Aid	1	0
Second Semester		
Machine Operations 2	2	8
Shop Math 2	2	0
Blueprint Reading	2	0
Welding Fundamentals	2	2
Vocational Communications Skills 2	3	0

A certificate is awarded upon successful completion of the above program.

PRACTICAL NURSING

After completion of this forty-eight 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 in Carson City, and Kelsey Memorial Hospital in Lakeview. Each student will spend time at each hospital for specific clinical experience.

Requirements for Admission

1. Men and women applicants must be 17½ years old. The usual maximum age is 55. All applicants will be considered individually.

2. All applicants must be high school graduates or 21 years of age. Applicants 21 to 25 years of age must have completed 10th grade and pass G. E. D. tests. Applicants over 25 must have 8th grade formal education and G. E. D. tests equivalent to 10th 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 to be done by own physician and dentist.
4. All applicants must have satisfactory scores on pre-admission tests.
5. All applicants must schedule personal interviews after testing with the Director of Nursing or a member of the nursing staff.

First Semester – Pre-Clinical

Nursing Fundamentals
 Nutrition and Diet Therapy
 Community Health
 Body Structure and Function
 Pediatrics
 Personal and Vocational Relationships in Nursing
 Disaster Nursing and First Aid

Clinical practice is begun the 5th week. However, the main emphasis is on classroom studies the first semester.

Second Semester

Obstetrics
 Geriatrics with Diversional Therapy
 Medical-Surgical Nursing

The student will have full time clinical experience and fewer formal classes.

Summer

Introduction to Pharmacology
 Nursing of Adults and Children

The student will have full time clinical experience with a review of the total program the last two weeks.

COURSE DESCRIPTIONS

Course descriptions will appear in this section in the same order as the course titles under the section entitled Programs of Study. Numbers in the parentheses () represent the total credits, hours of lecture/demonstration, and hours of laboratory in that order.

ACADEMIC

GENERAL EDUCATION

LA 100 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.

LA 101 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: LA 100 or by examination.

NS 100 Man's Physical World (4, 3, 2)

The purpose of this course is to develop the student's understanding of scientific methods of analysis, classification, description, and experimentation. Selected topics in the fields of biology, chemistry, and physics will be covered. Three hours lecture or demonstration and two hours laboratory per week are scheduled.

NS 101 Man's Physical World (4, 3, 2)

Continuation of NS 100. Prerequisite: NS 100.

SS 100 Man's Social World (4, 4, 0)

The purpose of this course is to develop the student's understanding of the socio-cultural process upon which our civilization is based. A cross-cultural approach will be extensively utilized. Material will be drawn from the fields of anthropology, economics, geography, history, political science, psychology, and sociology.

SS 101 Man's Social World (4, 4, 0)

Continuation of SS 100. Prerequisite: SS 100.

HU 100 Man's Creative World (4, 4, 0)

The purpose of these courses is to develop the student's understanding of the artistic, literary, and philosophical nature of a man. Selected topics will integrate material from the fields of art, literature, music, philosophy, and religion. Note: this course will first be offered during the 1968-69 college year.

HU 101 Man's Creative World (4, 4, 0)

Continuation of HU 100 Prerequisite: HU 100.

MA 100 Man's Mathematical Methods (4, 4, 0)

The purpose of this course is to develop the student's understanding of the basic concepts of modern mathematics. The course will cover sets, functions, relations, and mathematical systems - including groups, real number systems, and quadratic equations. Prerequisite: Mathematical maturity equivalent to traditional high school geometry.

SE 101 Seminar (1, 1, 0)

The purpose of this course is to orient the student to college, to the Montclair general education program and to assist him in the selection of a suitable academic or vocational objective.

SE 201

SE 202 Seminar 2 and 3 (2, 4, 0)

The purpose of these courses is to introduce the student to the interrelated nature of human knowledge. The seminars will be based upon topics of an interdisciplinary nature. The student will utilize his knowledge of the natural sciences, social sciences, and humanities to present oral and written reports of an original nature. Prerequisite: Sophomore standing.

NS 199

SS 199

HU 199 Laboratories 1, 2, 3 (2, 0, 4 each)

The purpose of these courses is to develop the student's ability to conduct original research in the three broad general education areas -- the natural sciences, the social sciences, and the humanities. Prerequisite: Previous or current enrollment in Man's Physical World, Man's Social World, or Man's Creative World. The student may not enroll in more than one laboratory per semester. Note: HU-199 will not be offered until 1968-69. Prerequisite: NS 100, SS 100 and HU 100.

ELECTIVES

Language Arts Division

LA 150 Reading Laboratory (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.

LA 160 Journalism (3, 3, 0)

This course is designed to present a comprehensive survey of the news media. Emphasis will be placed upon the social, economic, and cultural forces which have influenced the development of newspapers, magazines, radio, and television in the United States.

LA 200 Introduction to Literature (3, 3, 0)

This course provides an introduction to the study and appreciation of the short story, poetry, and the formal and informal essay. Attention will be given to each genre and the relation of the form to content. Both accepted classics and newer experimental forms will be studied.

LA 201 Introduction to Literature (3, 3, 0)

An introduction to the study and appreciation of the novel and drama. Attention will be given to the historical background of each genre and to the relation of the form to content. The writing studied will include both accepted classics and newer experimental forms.

LA 210 Speech (3, 3, 0)

A course designed to develop proficiency in speaking through directed practice. The functions of speech in a variety of situations will be stressed. While speech structure and the development of a style will be emphasized, attention will also be given to pronunciation, enunciation, the use of effective language, and adjustment to the audience.

LA 195

LA 197 Foreign Language (4, 4, 0)

One foreign language will be offered during the 1967-68 college year. Because of the early date of publication of this catalogue it is impossible to identify the specific language. However, there will be an announcement on this in a supplemental publication during the Spring, 1967.

Mathematics Division

Various courses - - algebra, elementary analysis, calculus, for example - - will be offered to meet the needs of qualified students.

MA 190 Statistics (3, 3, 0)

This course is designed to introduce the student to basic statistical techniques. Emphasis will be placed upon probability, measures of central tendency and dispersion, and the presentation of data in tabular and graphic forms.

Social Science Division

SS 110 Anthropology (3, 3, 0)

This course is designed to introduce the student to the elements of cultural development through a comprehensive study of selected primitive societies. Emphasis will be placed upon the adaptation of the societies, or cultures, to the natural environment.

SS 111 Physical Geography (4, 4, 0)

A study of the natural environment as it influences man's activity and distribution. Emphasis will be placed upon landforms, climate, vegetation, soils, and natural resources.

SS 120 General Psychology (3, 3, 0)

An introduction to the field of psychology with special emphasis on such major concepts as motivation, learning, personality, intelligence, and others.

SS 121 Child Psychology (3, 3, 0)

A study of the application of psychological principles to the family and its effects upon personality development, child growth and development, and other important aspects of child rearing.

SS 130 Sociology (3, 3, 0)

This course is designed to introduce the student to the major sociological issues of modern society. Emphasis will be placed upon the problems of demography, race, poverty, crime, health, and the family.

Humanities Division

At the time of this publication, Montcalm Community College is not planning to offer courses in art, music, or philosophy during the first year of operation.

Natural Science Division

Various independent study courses will be offered in the fields of biological science, chemistry, and physics in response to student demand.

PRE-PROFESSIONAL

Courses offered under the Pre-Professional independent study program will carry the titles and content more nearly typical of specialized work in the individual subject matter fields. For example, a student enrolled in the Pre-Professional biology program will probably cover Botany, Zoology, and Human Anatomy and Physiology (two semesters).

Because this program applies to a relatively small number of students, no course descriptions are offered in this catalog. Instructors and the Counseling Office will have these on hand for information of the students and transfer institutions by August, 1967.

TECHNICAL/VOCATIONAL

Course descriptions for required General Education may be found under the academic section.

AGRICULTURAL TECHNOLOGY

AT 100 Introduction to Agricultural Business (3, 3, 0)

This course is a study of the typical business enterprise, the location, the buildings, the divisions of operation and management. Sales promotion, merchandising, effective advertising, proper public relations and community responsibility and image receive due consideration.

AT 110 Agricultural Math (3, 3, 0)

This course reviews basic arithmetical concepts as well as covering methods of handling money, sales instruments, financing statements, mark-up, discounts, commissions and others.

AT 120 Agricultural Economics (3, 3, 0)

Emphasis is put on supply, demand and price relationships. The role of government in agriculture and agriculture in the national economy is stressed.

AT 130 General Psychology (2, 2, 0)

The student is introduced to the field of psychology with special emphasis on such major concepts as motivation, learning, personality structure, intelligence and others.

AT 140 Salesmanship I (3, 3, 0)

Time is devoted to the various techniques used in selling with consideration given to the methods of training sales and service personnel and the development of merchandising and service policies.

AT 150 Business Law (3, 3, 0)

Legal principles, the law of contracts, corporations, real and personal property, sales, mortgages, insurance trade regulations, the legal difficulties encountered by the average customer and the small businessman are studied.

Agricultural Technology - Chemicals**AT 200 General Chemistry**

This course includes laws of chemical combinations, states of matter, atomic and molecular structure, bonding, physical and chemical properties of matter.

AT 203 Soil Fertility

Soil fertility and plant nutrition in crop production, soil-plant relations, diagnostic techniques, and methods of evaluating soil fertility are surveyed.

AT 209 Plant Pathology

This course studies plant diseases and their origin.

AT 212 Fertilizer Technology

This course emphasizes composition, methods of manufacture and use of fertilizer materials, including a study of their reactions with soils and plants. Recommended methods of application are covered.

AT 215 General Bacteriology

This is a general bacteriology course dealing with the structures, development and function of bacteria and other micro-organisms with emphasis on those organisms associated with water and soil and the role of micro-organisms in nature.

AT 218 Agricultural Chemistry

This is an integrated course stressing principles of organic chemistry, such as nomenclature, chemical bonding, correlation of physical properties with structures, mechanisms or organic relations of both aliphatic and the aromatic series. Laboratory deals largely with synthesis of organic compounds and study of their properties as related to agriculture.

AT 220 Entomology

This course is a basic study of the biology, morphology, and ecology of insects and related arthropods. A collection is required.

AT 223 Agricultural Sprays and Applications

This is a study of the preparation, properties, and uses of agricultural chemicals in the control of disease, insects, and weeds. Use of chemicals for fruit thinning, growth regulations, and plant nutrition is covered. Recommended methods of application are studied.

AT 210 Accounting I

This course encompasses an introduction to accounting and fundamentals; the meaning and purpose of accounting; accounting statements; balance sheets, profit and loss statements. The theory of debits and credits; accounts payable and receivable; the trial balance; adjusting and closing entries; accounts for sales, purchases and cash; accounting for notes, interest, prepared accounts, un-earned and accrued items are examined.

AT 226 Weed Control and Identification

A study of the identification and control of annual and perennial weeds of economic importance in Michigan is made.

Agricultural Technology - Equipment**AT 230 Technical Drafting I**

The principles of dimensioning receive further study, and topics such as finish marks, surface symbols, fits and tolerances are covered. Both detail and assembly drawings are made involving the basic machine elements.

AT 233 Welding Fundamentals

This course incorporates theory and practical demonstration of types and processes, joint design, welding symbols,

inspection and testing in a manner to provide the technical student with an understanding of welding as related to his field of study.

AT 239 Lawn and Garden Equipment

The principles of operation, servicing, adjustment and maintenance of equipment for lawn, garden and landscaping are taught. Consideration is given to chain saws and small engines.

AT 240 Agricultural Equipment I

Orientation to the many types of equipment employed in the handling of materials on the modern farm is given with emphasis on care, operation, and installation procedures for crop dryers, barn cleaners, silo unloaders, milking machines, milking parlors, or similar installations having like learning experiences.

AT 243 Farm Power

This is a study of the principles of internal combustion engines with emphasis on the power units, farm tractors, power train and chassis and including cleaning, disassembling and rebuilding, and painting of tractors. Instruction and practice is given on Dynamometer and other test equipment. Commercial shop management procedures are followed. Cooperative work experience in participating farm equipment dealerships can be arranged.

AT 246 Agricultural Machinery

Instruction in set-up, adjustment, servicing, and maintenance of tillage, seeding, and harvesting machinery is given including some field operation.

AT 241 Agricultural Equipment 2

This is advanced study of equipment used in modern farming including the planning and installation techniques for bulk tank milk cooling systems, water supply equipment, farm heating, cooling, and ventilation - - designing, planning, installation and servicing.

AT 250 Electricity and Electronics

This course has been designed for students majoring in mechanical and industrial technology and for students needing electrical theory for its direct relation to their work. This course includes both theory and laboratory experiments.

AT 253 Hydraulics and Fluid Mechanics

This course includes applied physics, hydraulic principles and formulas, fluid characteristics and basic cir-

cuits theory. In practice the units of the hydraulic systems are disassembled, inspected and tested. The piping tubing, hose and common trouble sources in a hydraulic system are also covered.

AT 256 Agricultural Diesels

Principles of diesel engines with reference to design and construction are examined. Teardown, inspection and service of diesel equipment, and the use of special testing equipment are a part of this course.

Agricultural Technology - Conservation

AT 230 Technical Drafting I

See description under Agricultural Technology - Equipment - AT 230

AT 260 Soil Mechanics

This is a basic course dealing with the formation, physical, chemical, and biological properties of soils, with attention to structural quality of earth materials.

- amount and rate of consolidation under load
- construction of earth-fill dams
- drainage for structures
- side slope embankments
- cutoff trenching

AT 263 Landscape Planning

This is a practical course in planning residential, public parks, or roadway landscaping with proper emphasis on selection, soil conservation and beautification.

AT 266 Introduction to Forestry

Areas of study are fire protection, cruising and scaling, selective harvesting, tree planting, and nursery practices, forest engineering and planning for forest recreational use.

AT 270 Water Conservation and Erosion Control

This course includes a study of planning and established phases for approved conservation programs: farm ponds, waterways, terrace systems, diversion waterway systems, and grade-stabilization structures.

AT 210 Accounting I

See description under Agricultural Technology - Chemicals AT 210

AT 273 Surveying

This course covers the selection, care and checking of tapes and levels; field observations, note taking and office computations, use of surveying instruments and equipment for land measurement, mapping and contour leveling, building foundation layout, study of legal descriptions and county records.

AT 276 Conservation of Natural Resources

This is a study of natural resources, including minerals, soils, forests, water and wildlife.

AT 280 Park and Nursery Management

This course is designed to cover skills and knowledge of various areas of park design, development and layout and includes the selection of nursery stock suitable to local conditions with emphasis on the relationship of the two enterprises.

AT 285 Landscape Engineering

This course is designed to bring about a thorough understanding and appreciation of the major tools, equipment, supplies and machinery used in the landscape engineering field.

AUTOMOTIVE MECHANICS**AM 100 Vocational Communication Skills 1 (3, 3, 0)**

This course develops reading, writing, and speaking skills. Other instruction and practice includes panel discussions, reports, introductions, and acknowledgements.

AM 110 Drawing and Blueprint Reading (3, 3, 0)

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 adjustments is covered.

AM 120 Automotive Math and Shop Reports (2, 2, 0)

The instruction in Automotive Math is arranged to meet the ordinary mathematical needs of the automobile mechanic. A study is made of fundamental processes involved in practical calculations. Class time is devoted to the study of the practical problems associated with the students in their automotive lab.

**AM 130 Automotive Mechanics 1 and
Automotive Laboratory 1 (9, 3, 15)**

This course covers instruction in theory and laboratory procedures and operations necessary for automotive engine rebuilding. Shop work consists of the overhaul or rebuilding of representative models of all popular automotive engines.

AM 101 Vocational Communication Skills 2 (3, 3, 0)

The writing of industrial reports and letters, the spelling of words common to business and industry, fact finding and summarization are stressed. Practice in developing and improving of reading skills with view to improving comprehension is provided.

AM 140 Welding Fundamentals (3, 2, 4)

See description under Agricultural Technology - Equipment AT 233

**AM 131 Automotive Mechanics 2 and
Automotive Laboratory 2 (9, 3, 15)**

This course is designed to develop the student's abilities so he can serve as a diagnostician or tune-up man. Diagnosis is stressed on actual problems and analysis sheets are filled out for cost estimation and amount of work required for good engine performance. Students receive training on up-to-date test and analyzing equipment.

AM 200 Business Law (3, 3, 0)

See description under Agricultural Technology - AT 150

AM 210 Salesmanship 1 (3, 3, 0)

See description under Agricultural Technology - AT 140

**AM 230 Automotive Mechanics 3 and
Automotive Laboratory 3 (9, 3, 15)**

Students cover terminology, nomenclature, evolution and theory of front end alignment, wheel balancing and brakes. The laboratory experience involves diagnosis and repair on live late model units using latest methods on modern equipment.

AM 240 Management and Personnel Relations (2, 2, 0)

A study of the operation of a business, involving records, business forms, items of income and expense, simplified bookkeeping, forms of taxation is made. Personnel re-

lations involving selection, training, discipline problems, morale, wages, fringe benefits, promotions and other related problems are examined.

AM 250 Technical Writing and Speaking (2, 2, 0)

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 technology. Topics covered include: effective organization, style, mechanics, tables and figures, contents and techniques of report writing, formal reports, informal reports, principles of business correspondence, 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 is a part of the course.

**AM 231 Automotive Mechanics 4 and
Automotive Laboratory 4 (11, 3, 19)**

This section of training is designed to give experience on across-the-board dealership operating including types of service, departmental operations, and automotive record keeping. There is the possibility that some of the laboratory procedures may be conducted on a cooperative basis with the industry.

CLERICAL OFFICE PRACTICE

SE 100 Beginning Typing (3, 2, 4)

This is an introduction to and mastery of the typewriting keyboard. Short personal and business letters, elementary tabulation, simple outlines and manuscript writing are included.

SE 110 Professional Filing (3, 2, 4)

This course is designed to give beginning office workers a knowledge of the various filing procedures commonly used in business and industry. Emphasis is placed on filing rules with practice in alphabetic, numerical, subject, and geographic filing.

SE 120 Business Math (2, 2, 0)

This course reviews fundamental arithmetical processes and their business applications and includes cash and trade discounts, mark-ups, depreciation and interest, and payroll deductions.

SE 101 Intermediate Typing (3, 2, 4)

This course reviews techniques of elementary typewriting with continuation of speedbuilding, introduction to production typewriting, skill in typewriting business letters, skill in typewriting tabulations, letters of application and employment tests.

SE 140 Business Machines (2, 1, 3)

This course provides instruction in the basic operations of machines most frequently found in the business office - full keyboard adding machine, ten-key adding machines, cash registers, bookkeeping machines, calculators, duplicating and reproduction machines.

SE 130 General Psychology (2, 2, 0)

See description under Agricultural Technology - AT 130

SE 230 Applied Typing and Office Practice (3, 2, 4)

This course is designed to give office workers the elements of a successful business personality. Secretarial use of written and oral communication, techniques of handling mail, duties of a receptionist, the handling of itineraries, and use of electric typewriters and duplicators are explored.

SE 210 Accounting I (3, 3, 0)

See description under Agricultural Technology - Chemicals AT 210.

SE 220 Voice Transcription (4, 2, 6)

Development of voice transcription skill is stressed with the operation of belt-type transcribers. Emphasis is placed on typewriting skills and technical English skills for efficient transcription.

SE 200 Business Law (2, 2, 0)

See description under Agricultural Technology - AT 150

**SE 290 Work Experience or
Elective (3, 3, or 200 hrs. wk. exp. per semester)**

This is to be arranged by mutual agreement with the instructor, the student, and a cooperating office or business.

SE 240 Office Machines (4, 2, 6)

This course trains the student in the fundamental processes on key-driven calculators, adding-listing machines, rotary calculators, listing calculators, and ten-key adding machines.

- SE 211 Accounting 2 (3, 3, 0)**
The valuation of receivable and merchandise inventory, valuation of fixed assets and depreciation accounting for taxes - payroll, property, and sales tax are covered. The introduction to corporation accounting is included.
- SE 250 Personnel Relations (3, 3, 0)**
Personnel relations includes methods of selecting and training personnel, discipline problems, morale, wages, fringe benefits, promotions, and other related areas.
- SE 260 Office Management (2, 2, 0)**
This course covers organization of office furniture, equipment, office machines, working conditions, and office layout and includes records management, personnel training, and office manuals.
- SE 291 Work Experience or
Elective (3, 3, or 200 hrs. wk. exp. per semester)**
This is to be arranged by mutual agreement with the instructor, the student, and a cooperating office or business.

DRAFTING AND DESIGN TECHNOLOGY

- DD 100 Technical Math 1 (3, 3, 0)**
This course is presented in terms of application normally encountered in industry and the laboratory by the technician and consists of simple arithmetic with algebraic notations, the language of algebra, positive and negative numbers, factoring, fraction, exponents, powers, root, radicals, equations, formulas, and their application to industry.
- DD 110 Mechanical Drafting (4, 2, 10)**
This is a laboratory/lecture course and includes 10 hours of drafting practice and 2 hours of drafting theory directly related to the laboratory work. The course includes the development and manipulative skills needed for the use of drafting instruments, linework, lettering, geometric construction, orthographic projection, sectioning, dimensioning, notes on drawings, title blocks and drawing of different types of fasteners. Models are used to help the student better visualize objects being drawn.
- DD 120 Machine Shop Practices (3, 2, 4)**
Practical instruction is given in the operation of lathes, shapers, milling and grinding machines as well as bench

- tools and special machine shop equipment. The course is designed to familiarize the student with a practical knowledge of machine processes rather than developing machine shop skills.
- DD 101 Technical Math 2 (3, 3, 0)**
An informal approach to topics in elementary geometry that have trade related applications. Topics include construction, properties of triangles, circles, along with other topics will be considered. Elementary operations on the slide rule will be covered including problems in multiplication, division, combined multiplication and division, square root, cubing and cube root. Prerequisite: Technical Math 1 or equivalent.
- DD 111 Advanced Mechanical Drafting (4, 2, 10)**
This is a laboratory/lecture course and includes 10 hours of drafting practice and 2 hours of drafting theory directly related to the laboratory work. This course is primarily designed to further strengthen and enlarge upon the basic concepts thus far developed in basic drafting with emphasis on advanced projection, true views of surfaces, true length of lines, revolution of an object, intersection of planes and solids, and the detailing of a previously designed die or fixture. Prerequisite: Basic Mechanical Drafting.
- DD 130 Fabrication Processes (2, 2, 2)**
This course incorporates theory and practical demonstration on types and processes of fabricating the different units of a machine, jig, fixture, and die. Proper symbols, techniques and methods of indicating how an assembly is to be fabricated are stressed.
- DD 210 Jig and Fixture Layout and Design (4, 2, 10)**
This is a laboratory/lecture course and includes 10 hours of drafting practice and 2 hours of drafting theory directly related to the laboratory work. This course is designed to bring out the fundamentals of tools, jigs, and fixtures and the layout of drill jigs and milling fixtures are accomplished. Standard parts such as clamps, washers, keys, locating pins, etc. are given their proper perspective in relation to tools, jigs, fixtures and their detailing. Practice is given in incorporating engineering changes in existing tool drawings. Prerequisite: Basic and Advanced Mechanical Drafting.
- DD 203 Technical Math 3 (3, 3, 0)**
This course consists of the functions of trigonometry, logarithms, solution of triangles and special trigonometric algebraic problems directly related to industrial use. Prerequisite: Technical Math 2 or equivalent.

- DD 220 Physics (3, 3, 0)**
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.
- DD 200 Business Law (2, 2, 0)**
See description under Agricultural Technology - AT 150
- DD 230 Mechanics and Strength of Materials (3, 3, 0)**
This course explores fundamental principles and applications of strength of materials and includes such topics as: axial and central loads, design data from experiments, stress in thin wall cylinder and sphere, riveted and welded joints, torsion, shear, bending moment, design of beams, stress from load, columns, fatigue strength, and stress concentration. Prerequisite: Technical Math 1 and 2 or equivalent.
- DD 240 Die Design and Layout (4, 2, 10)**
This is a laboratory/lecture course and includes 10 hours of drafting practice and 2 hours of drafting theory directly related to the laboratory work. This course covers the layout and design of simple blanking, forming, and piercing dies with a progressive die and cam action die. Prerequisite: Basic and Advanced Mechanical Drafting.
- DD 250 Production Problems (3, 3, 0)**
This is a course in fundamental production operations employing multiple tooling, jigs, and fixtures, in conjunction with basic production machines.
- DD 204 Technical Math 4 (3, 3, 0)**
Algebra and slide rule as required in modern industrial technology, logarithms, triangle trigonometry, and compound angles are covered.
- DD 260 Hydraulics and Fluid Mechanics (3, 2, 4)**
See description under Agricultural Technology - Equipment AT 253
- DD 270 Personnel Relations (3, 3, 0)**
See description under Clerical Office Practice - SE 250

EXECUTIVE SECRETARY

- SE 101 Intermediate Typing (3, 2, 4)**
See description under Clerical Office Practice - SE 101

- SE 110 Intermediate Shorthand (4, 2, 6)**
This course emphasizes reading and writing Gregg shorthand, developing skill in formulating new outlines, and using transcription techniques.
- SE 120 Business Math (2, 2, 0)**
See description under Clerical Office Practice - SE 120
- SE 102 Advanced Typing (3, 2, 4)**
Continued speed building techniques, advanced production typewriting techniques, skill in accounting typewriting, skill in governmental typewriting, skill in medical and technical typewriting are covered. Instruction in operation of duplicators is given.
- SE 111 Advanced Shorthand (4, 2, 6)**
Development of ability to take new-matter dictation, improvement of transcription techniques with emphasis on speed and accuracy in transcription are covered.
- SE 130 General Psychology (2, 2, 0)**
See description under Agricultural Technology - AT 130
- SE 230 Applied Typing and Office Practice (3, 2, 4)**
See description under Clerical Office Practice - SE 230
- SE 210 Accounting 1 (3, 3, 0)**
See description under Agricultural Technology - Chemicals AT 210
- SE 270 Dictation and Transcription (4, 2, 6)**
This course stresses development of skills in typewriting, shorthand, and English that are necessary for efficient transcription as well as the development of shorthand vocabulary in medical, accounting, and technical terms.
- SE 200 Business Law (2, 2, 0)**
See description under Agricultural Technology - AT 150
- SE 290 Work Experience or Elective (3, 3, or 200 hrs. wk. exp. per semester)**
See description under Clerical Office Practice - SE 290
- SE 240 Office Machines (4, 2, 6)**
See description under Clerical Office Practice - SE 240
- SE 211 Accounting 2 (3, 3, 0)**
See description under Clerical Office Practice - SE 211

- SE 250 Personnel Relations (3, 3, 0)
See description under Clerical Office Practice - SE 250
- SE 260 Office Management (2, 2, 0)
See description under Clerical Office Practice - SE 260
- SE 291 Work Experience or
Elective (3, 3, or 200 hrs. wk. exp. per semester)
See description under Clerical Office Practice - SE 291

INDUSTRIAL TECHNOLOGY

- IT 110 Machine Operations 1 (6, 2, 10)
This course is machine shop orientation to familiarize the student with hand tool operations and basic machine tool processes, care of tools and equipment, and shop safety.
- IT 120 Technical Drafting 1 (4, 2, 10)
See description under Agricultural Technology - Equipment AT 230
- IT 130 Shop Math 1 (3, 3, 0)
This course is applied shop mathematics which includes a review of decimals, fractions, simple computations, measurements, and applied shop problems.
- IT 160 Vocational Psychology (3, 3, 0)
The basic theme will be understanding of people, including ourselves, other individuals and groups. Motivations, instincts, habits, attitudes, propaganda, and prejudices will be studied.
- IT 100 Vocational Communication Skills 1 (3, 3, 0)
See description under Automotive Mechanics - AM 100
- IT 140 Industrial Safety and First Aid (1, 1, 0)
This course will include lecture and demonstration of first aid techniques. Information on anatomy and physiology of the body, dressings and bandages, wounds and shock, artificial respiration, injuries to bones, joints, and muscles, injuries due to heat and cold, poisons, unconsciousness and common emergencies will be studied.
- IT 111 Machine Operations 2 (6, 2, 10)
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.

- IT 121 Technical Drafting 2 (4, 2, 10)
This course is the continuation of Technical Drafting 1. The advance principles of orthographic projection are studied as well as the areas of auxiliary views, rotation, sectioning and development.
- IT 131 Shop Math 2 (3, 3, 0)
This course covers practical algebra, geometrical constructions, work and power, speed ratio of gears and pulleys, and practical problems.
- IT 150 Metallurgy 1 (3, 3, 0)
This course is a study of metals and tests to determine their use, production of iron and steel, classification of steels, and physical metallurgy.
- IT 101 Vocational Communication Skills 2 (3, 3, 0)
See description under Automotive Mechanics - AM 101
- IT 170 Welding Fundamentals (3, 2, 4)
See description under Agricultural Technology - Equipment AT 233
- IT 203 Technical Math 3 (3, 3, 0)
See description under Drafting and Design Technology - DD 203
- IT 220 Physics (3, 2, 4)
This course is a study of mechanics, fluids, energy relationships, heat and sound, magnetism, electricity, and light as they pertain to industrial physics.
- IT 240 Metallurgy 2 (3, 3, 0)
This course is a study of heat treatments of steel, chemical metallurgy, surfacement treatments, shaping and forming of metals, and power metallurgy.
- IT 230 Mechanics and Strength of Materials (3, 3, 0)
See description under Drafting and Design Technology - DD 230
- IT 204 Technical Math 4 (3, 3, 0)
See description under Drafting and Design Technology - Equipment - DD 204
- IT 250 Electricity and Electronics (3, 2, 4)
See description under Agricultural Technology - Equipment AT 250

- IT 260 Production Problems (3, 3, 0)**
A detailed study is made of various production activities and the problems associated with them. Problems and cases are solved through the use of available data in texts and engineering handbooks. Constant use of blueprints throughout the course strengthens the ability of the student to visualize and interpret them.

- IT 253 Hydraulics and Fluid Mechanics (3, 2, 4)**
See description under Agricultural Technology - Equipment AT 253

MACHINE TOOL PRACTICES

- MT 110 Machine Operations 1 (6, 2, 10)**
See description under Industrial Technology - IT 110
- MT 120 Technical Drafting 1 (4, 2, 6)**
See description under Agricultural Technology - Equipment AT 230
- MT 130 Shop Math 1 (3, 3, 0)**
See description under Industrial Technology - IT 130
- MT 160 Vocational Psychology (3, 3, 0)**
See description under Industrial Technology - IT 160
- MT 100 Vocational Communication Skills 1 (3, 3, 0)**
See description under Automotive Mechanics - AM 100
- MT 140 Industrial Safety and First Aid (1, 1, 0)**
See description under Industrial Technology - IT 140
- MT 111 Machine Operations 2 (6, 2, 10)**
See description under Industrial Technology - IT 111
- MT 131 Shop Math 2 (3, 3, 0)**
See description under Industrial Technology - IT 131
- MT 150 Blueprint Reading (3, 3, 0)**
This is a fundamental course in sketching and blueprint reading designed to help the trades express themselves and interpret plans on the job. It includes sketching ob-

jects, using straight and curved lines. Isometric, oblique, and orthographic views and methods of dimensioning are covered. The student is trained to visualize and interpret elevations and sections from blueprints and to translate them into practical solutions. It shows the purpose of and the relationship between specifications and blueprints as applied to the trades involved.

- MT 170 Welding Fundamentals (3, 2, 4)**
See description under Agricultural Technology - Equipment AT 233

- MT 101 Vocational Communication Skills 2 (3, 3, 0)**
See description under Automotive Mechanics - AM 101

PRACTICAL NURSING

- PN 100 Nursing Fundamentals**
This course provides the beginning nursing student with the information and skills necessary to build a foundation for efficient and capable bedside nursing. Students not only gain skill in the procedures they are to perform, but also increase their ability to deal with people with confidence and poise.
- PN 110 Nutrition and Diet Therapy**
This course teaches a dependable and sound knowledge of basic nutrition facts and reviews the relationship of health habits to nutrition thereby making the student familiar with food nutrients and the resulting signs of good nutrition and malnutrition due to faulty health habits.
- PN 120 Community Health**
This course deals with preventive medicine and information, laws of sanitation and the community responsibility of citizens in matters of health.
- PN 130 Body Structure and Function**
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.
- PN 140 Pediatrics**
This course enables the student to gain an understanding of the growth and development for each age group; To gain

knowledge of the common disease conditions which afflict the different age groups; to apply principles of growth and development to the individual child's situation in the hospital; and to be aware of the dietary, emotional, and diversionary needs of the child.

PN 150 Personnel and Vocational Relationships in Nursing

This course's objective is to develop: a knowledge of the health team and each member's role in meeting the total needs of the patient; an appreciation of the need to plan for personal growth; and an awareness of the Practical Nurse's relationship to other areas of nursing.

PN 160 Disaster Nursing and First Aid

This course is included as part of the basic nursing instruction. Persons in health occupations need to be advised of their role in national or local disasters. All students will develop an awareness of what C. D. facilities are available and essentials of first aid procedures.

PN 200 Obstetrics

This course teaches the student facts about pregnancy, prenatal care, and the care of the new-born baby and gives the student an understanding of the common complications and the related care and treatment, and the emotional effects on the "new parents".

PN 210 Geriatrics with Diversional Therapy

Geriatric nursing is planned to introduce the student to the changes which occur during the process of aging, both physiological and mental, and to teach the special nursing care needed, due to the aging process. The importance of recreational activities in relation to the patient's recovery and peace of mind is also taught.

PN 220 Medical-Surgical Nursing

Medical-surgical nursing presents the more common medical and surgical conditions and how they are treated. The course is intended to present the concept of meeting the total needs of the patient to return him to a normal functioning life.

PN 230 Introduction to Pharmacology

This course offers beginning instructions on pharmacology and safety factors essential to dosages and drug administration. The practical nurse must take further post graduate study to be a medications nurse.

PN 240 Nursing of Adults and Children

Each student will be working full time in the clinical area. He will seek to gain experiences of a certain nature to which he as yet has not been exposed.

