

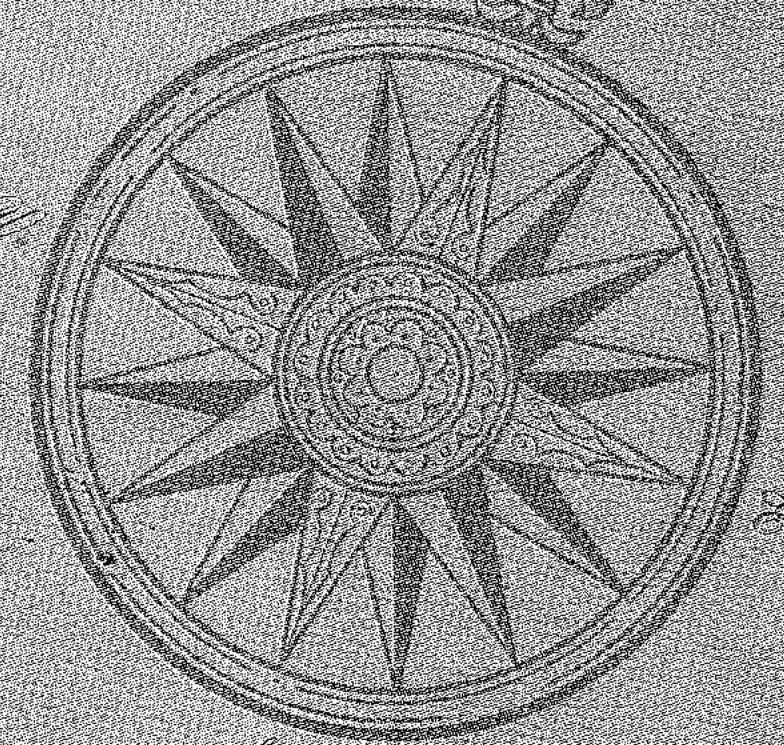
Lansing Community College

1967 - 68

Joan Hartung

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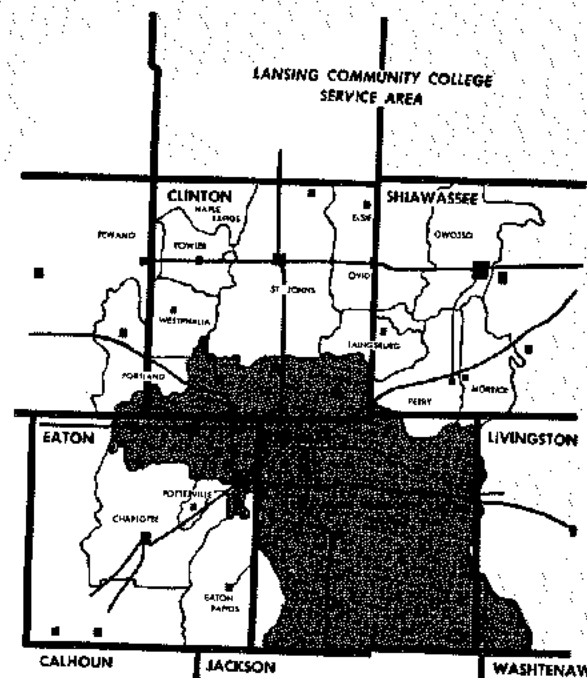
**information for
prospective students**



LANSING COMMUNITY COLLEGE

419 NORTH CAPITOL AVENUE
LANSING, MICHIGAN
TELEPHONE, 489-3751

CATALOG NUMBER SEVEN
PUBLISHED DECEMBER 1966
REVISED SEPTEMBER 1967



*Accredited by North Central Association of Colleges and Schools,
Michigan Commission on College Accreditation*



President Philip J. Gannon

Dear Students:

Lansing Community College has completed its tenth year of operation and is now a vital part of the metropolitan area. We are in the midst of building a new and beautiful campus. When you visit the campus, you will see that "Old Central" has undergone many changes and will note the development of new office facilities for faculty. This development helps fulfill one commitment of our College which is to provide the opportunity for teacher and student to meet in a pleasant informal atmosphere, thus retaining the warmth and personality of a small college.

Our student body, which ranges in age from 16 to 75, is representative of the total matrix of our society, and you may find, in the classroom, students with advanced degrees, housewives, successful journeymen, businessmen or senior citizens as well as the conventional undergraduate. The "returning" student is also a typical student at Lansing Community College. Over the last several years, we have found that many of our graduates are re-enrolling to update their education. To answer the needs of our diverse student body, occupationally-oriented curriculums have been developed in the health, business, and technical fields as well as in the freshman and sophomore years of liberal arts. These curriculums vary greatly in difficulty, but are of equal excellence as each meets the need of the student and the society he serves.

This catalog has been carefully prepared to give an overview of the educational opportunities available at Lansing Community College. I hope you will combine the reading of the catalog with a visit to our campus so we can extend our welcome to you and express our willingness to help in planning your educational program.

Sincerely,

Philip J. Gannon



LANSING COMMUNITY COLLEGE PURPOSES, FUNCTIONS, AND OBJECTIVES

The purposes, functions, and objectives of Lansing Community College are quite clearly influenced by the community it serves, its historical evolution, its student body, and the Community College movement throughout the nation.

To use its facilities efficiently and to meet the demands of business, industry, government, and the increasing number of students requesting an opportunity for higher education, the College offers its programs on a day and evening, six-day week, twelve-month basis. Because the College belongs to and is a part of the Greater Lansing Community, it is prepared, within the framework of its purpose, to design programs to meet new educational needs of the community.

The College provides two-year, occupationally oriented programs in health careers, business, and technology. It provides a variety of adult and community service programs as well as personnel and counseling services for the students of the community and it offers college parallel programs for students planning to transfer to four year institutions.

Lansing Community College offers educational opportunities for all high school graduates in its service area and its presence encourages the enrollment of individuals who might not otherwise attend college. With its strong individual-oriented approach the College attracts students reluctant to cope with the impersonal nature of larger state colleges and universities. In this way it helps to relieve the freshman and sophomore congestion at other state colleges and universities. It reduces significantly the student's expenses for his first two years of higher education and it gives the student an opportunity to find himself and determine his vocational or professional objective while living at home. It fulfills the needs of local business, industry, and government for manpower that is better educated and trained to meet increasing technological changes.

PURPOSES

The College staff, concerning itself with fundamental questions regarding student and college responsibilities, has determined that:

1. The student will be aided in realizing his intellectual potential through an individualized approach to his education. Small classes and personal faculty guidance will aid the student in achieving this objective.
2. The student must be encouraged to bear responsibility for his educational goals and to pursue academic excellence to the limits of his ability.

*There is a divinity that shapes our ends,
rough-hew them as we will.*

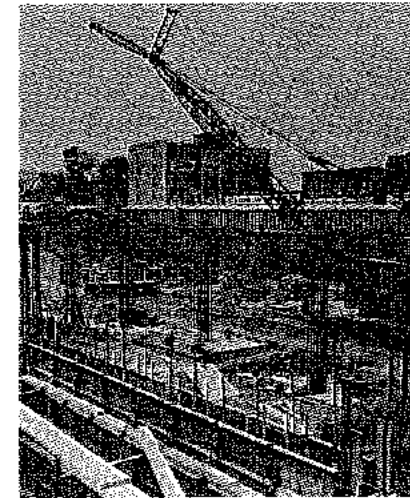
Shakespeare

3. The student and the institution, aware that the world is rapidly changing, culturally and technologically, must search diligently for the truth concerning the heritage of this republic and its roots in western civilization and other cultures as they pertain to the dignity and freedom of man. This search should enhance the student's awareness of his responsibility as a citizen of his community, state, nation, and the world.
4. The student, whatever his selected program of study, must gain further insight into his values as these values relate to him and his fellow man.

FUNCTIONS

The staff of the College further agrees that the purposes can best be met by accepting the following as major functions of the institution:

1. To offer personal, academic, and vocational counseling to our students.
2. To provide general education, both for those students transferring to four-year institutions and for those engaged in two-year programs.
3. To provide technical and semi-professional programs for students now employed or contemplating employment by government, industry, or business.
4. To provide programs parallel to those provided in the freshman and sophomore years in the arts and sciences pre-professional fields at four-year, degree-granting colleges and universities for those students who will transfer to such institutions.
5. To provide cultural programs for adults.
6. To respond to community needs by offering special courses developed in cooperation with business, industry, labor, and government and by making available to community groups the physical facilities of the College.



OBJECTIVES

With these purposes and functions in mind, it is felt that a fulfilling and useful life can best be obtained through sound scholarship and training. Specifically, the faculty strives to:

1. Contribute to good citizenship by helping students to understand democratic processes.
2. Prepare the student to make a contribution to the economic life of his community.
3. Expose the student to our cultural, social, scientific, and spiritual heritage out of which he may construct a satisfying and consistent world view by which to guide his life.
4. Foster self-reliance on the part of the student by encouraging him to think critically in solving problems.
5. Encourage the student to participate in some form of satisfying creative activity and in appreciating the creativity of others.
6. Develop within the student increased understanding of the political and socio-economic problems confronting our nation and the world contributing to a sense of social responsibility.
7. Help the student to understand his relationship to his biological and physical environment so that he may better adjust to and improve that environment.
8. Develop within the student an appreciation and understanding of the contributions afforded by other ideas, races, and religions.
9. Develop within students skills in writing, speaking, reading, and listening which lead to improved self-expression and communication.

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1969	May 1969							June 1969							July 1969							August 1969						
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Lansing Community College Calendar — 1967-1969*

<p>Fall Term 1967</p> <p>September 18-22 Faculty and Committee Meetings</p> <p>September 25-26 Fall Term Registration</p> <p>September 27 Classes Begin</p> <p>November 23-25 Thanksgiving Holiday</p> <p>December 11-15 Examinations</p> <p>December 16 Term Closes</p> <p>Winter Term 1968</p> <p>January 2-5 Faculty and Committee Meetings</p> <p>January 3-4 Winter Term Registration</p> <p>January 8 Classes Begin</p> <p>March 18-22 Examinations</p> <p>March 23 Term Closes</p> <p>Spring Term 1968</p> <p>April 1 Spring Term Registration</p> <p>April 2 Faculty and Committee Meetings</p> <p>April 3 Classes Begin</p> <p>May 30 Memorial Day</p> <p>June 13-17 Examinations</p> <p>June 18 Commencement</p> <p>June 18 Term Closes</p> <p>Summer Term 1968</p> <p>June 19 Summer Term Registration</p> <p>June 20 Classes Begin</p> <p>July 4-5 Independence Day</p> <p>August 17 Term Closes</p>	<p>Fall Term 1968</p> <p>September 16-20 Faculty and Committee Meetings</p> <p>September 23-24 Fall Term Registration</p> <p>September 25 Classes Begin</p> <p>October (to be scheduled) Faculty Day</p> <p>November 28-30 Thanksgiving Holiday</p> <p>December 9-13 Examinations</p> <p>December 14 Term Closes</p> <p>Winter Term 1969</p> <p>January 2-3 Faculty and Committee Meetings</p> <p>January 6 Winter Term Registration</p> <p>January 7 Classes Begin</p> <p>March 18-22 Examinations</p> <p>March 24 Term Closes</p> <p>Spring Term 1969</p> <p>March 31-April 1 Faculty Days</p> <p>April 2 Registration</p> <p>April 3 Classes Begin</p> <p>May 30 Memorial Day</p> <p>June 15 Graduation</p> <p>June 16-20 Examinations</p> <p>June 20 Term Closes</p> <p>Summer Term 1969</p> <p>June 23 Summer Term Registration</p> <p>June 24 Classes Begin</p> <p>July 4 Independence Day</p> <p>August 15 Term Closes</p>
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* 1968-1969 schedule tentative.

Division of Student Personnel Services



*Kenneth Sproull,
Dean of Student
Personnel Services*

The College offers students an extensive program of services through the Division of Student Personnel Services. These services include counseling, pre-enrollment advising, registration, orientation, testing, college and high school articulation, academic advising, educational and vocational information, financial aids, placement and college activities.

Student Personnel Services

Student Personnel Services

Registrar: Raymond Anderson

ADMISSIONS

Application for New Students

Applications may be obtained from the College Admissions Office or from local high schools. Prospective applicants are urged to contact the Admissions Office and submit their applications as early as possible to insure time for testing, counseling and registration. The applicant should:

1. Complete all items and information asked for in the application for admission.
2. Attach a \$10 application fee (check or money order) to the application. This is a non-refundable fee.
3. Mail or personally deliver the application and application fee to his high school to be completed and forward to Lansing Community College.
4. Complete placement tests required by the College when notified.

Application for Transfer Students

Students who have had some college level work and are applying for transfer to Lansing Community College should:

1. Complete the student portion of the application form.
2. Attach a \$10 application fee.
3. Present application to the Admissions Office.
4. Request high school to send a complete record of grades to the College if less than one year of college has been completed.
5. Request that official transcripts from all other colleges or universities in which student has been enrolled since he last attended high school be sent to the Admissions Office.

Special and Guest Applications

Applicants applying for admission as special students must submit the application supplied by the Lansing Community College Registrar's Office. Guest students must submit a guest application form supplied by the registrar's office of the college they are attending. Transcripts need not be submitted for admission. A non-refundable application fee of \$5.00 is required.

Admissions

The Admissions Office will notify new students of the schedule for placement testing.

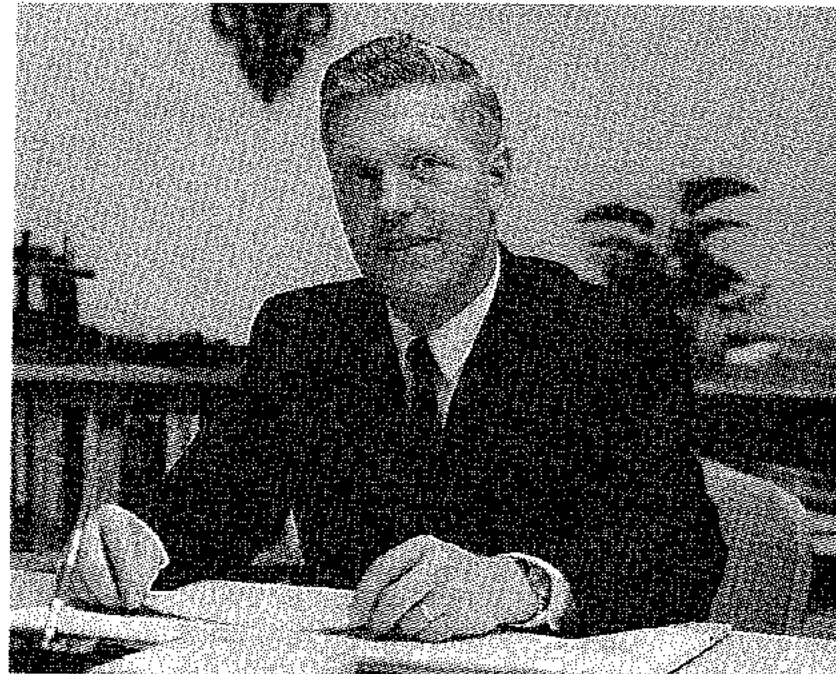
Registration Procedures

Registration periods are indicated on the school calendar, and students will register for classes according to instructions which are published each term. Special, guest and transfer students who have been accepted for admission should enroll for classes when notified by the Admissions Office.

Late Registration

A student registering late will be required to make up the work he has missed. After the first week in any quarter, he is not permitted to enroll for a full-time class schedule. A student registering late will be asked to submit all the required credentials prior to the day he enrolls. Students who register after the official registration period must pay a late registration fee of \$2 if they carry 1-7 hours credit and \$5 if they carry more than 7 hours credit.

Raymond Anderson



Registration



Student Personnel Services

Drops and Adds

Dropping or adding courses involves procedures which must be carried out by the student so that the Registrar's Office may keep accurate account of student records. During the first week of a term, a student may make changes in his schedule by obtaining the proper drop or add form from the Registrar's Office. A student may withdraw from a course before the end of the fourth week without academic penalty.

Auditing

A student who desires to attend classes regularly, but does not wish to take final examinations or receive grades or credit, may register as an auditor. Credit for such courses cannot be established at a later date. An auditor in a class cannot change his status to that of a credit student in that class. Neither can a credit student in a class change his status to that of an auditor.

Withdrawal from College

If a student finds it necessary to withdraw from college, he should contact the Registrar's Office without delay and fill out a form to make his withdrawal official. A statement of "official withdrawal" will be given him if, at the time of withdrawal, all his financial obligations to the college have been met and his conduct and scholarship are such as to entitle him to continue in the college.

Credits

The regular college year is divided into four terms of approximately eleven weeks. In general, a class meets one hour each week for each credit earned; somewhat more time is required for courses with laboratory work. To the student taking laboratory work, the usual load of 16 credit hours of courses will, then, mean about 20 or more hours of class attendance each week. The credit hour value of each course is given in the section of this catalog devoted to course descriptions.

Credit by Examination

A regularly enrolled student may obtain credit for certain courses at the discretion of the department chairman and faculty advisor by passing a comprehensive examination (or series of examinations). The fee is the regular tuition charge. The student must make application for such examination at the Registrar's Office.

Transfer of Credits

Credit will be given for courses transferred from accredited institutions. The credit value of each of these courses will be determined by Lansing Community College. Official transcripts of a Lansing Community College student's record will be mailed to another institution at the request of the student. An "Official Transcript" is one which is signed by the Registrar, has the school seal placed over his signature, and gives the date of graduation or official withdrawal of the student from the College. A student expecting to transfer to a four-year institution is advised to examine carefully the current catalog of the particular college he expects to enter and to follow as closely as possible its particular recommendations for programs of study.

Each student is furnished one free official transcript; for each additional transcript a fee of \$1.00 is charged.

Student Credit Load and Limitations

A full-time student schedule is 12 term hours or more. Permission to carry class schedules exceeding the normal load will depend on the student's academic record.

Student Personnel Services

System of Grades

The following system of symbols is used at Lansing Community College to evaluate the work of the student.

- A — Grade given to indicate distinct superiority in course work.
- B — Grade given to indicate better than average achievement but lacking distinct superiority.
- C — Grade given to indicate average achievement.
- D — Grade given to indicate below average achievement.
- F — Grade given to indicate insufficient achievement.
- I — Incomplete. A grade given only when, for good cause, the student has been unable to complete the work at the end of the term. A student receiving this grade should consult his instructor immediately regarding completion of the work. Grades of "I" must be removed before the closing date of the next term the student is in attendance, or the grade will automatically become an "F."
- N — Grade given to indicate withdrawal from a course. A grade of "N" is given to any student who withdraws officially from a class any time up to and including the last day of the fourth week of the term. A student withdrawing officially from a class after the end of the fourth week will be given a grade of "N" or "F" depending on the quality of his work at the time of withdrawal.
- P — Represents satisfactory performance in courses and certificates will be issued in lieu of a grade.
- X — Audit.

Honor Points

Grade point averages are determined on the following basis:

A—4, B—3, C—2, D—1, F—0, N—0, P—0, X—0.

Thus a student who earned 5 hours of A, 5 hours of B, and 5 hours of C would have a total of 45 honor points. The 45 honor points divided by 15 credit hours results in a grade point average of 3.00.

Probation

A student whose achievement is below a 2.00 average on a term or cumulative basis is subject to scholastic action of probation or withdrawal by the College. A student may be warned, placed on probation, or asked to withdraw from the College if his work is unsatisfactory.

A table for determining a student's academic status at Lansing Community College is published and available from the Admissions Office of the College, and may be found in the Lansing Community College Student Guidebook.

It is recommended that a student whose achievement is below a 2.00 average limit the number of credit hours of work until he has improved his academic record.

Term Grade Reports

An academic report will be issued approximately one week after the close of each term. A mid-term progress report will be mailed to the student during the sixth week of the fall term. The grade report will be withheld if the student does not have all credentials on file in the College office, or if he has not fulfilled all financial obligations to the College.

Student Personnel Services

Examinations

Students are required to take examinations at the appointed time and place in order to receive credit for a course. An examination taken at any other time than that officially scheduled is a "special examination" and the student must make the necessary arrangements with his instructor to have it administered. A student may make application to the Registrar's Office for permission to take a special examination after the close of a term and, if such permission is granted, he will be charged a \$5.00 fee.

Attendance

A student is expected to attend all sessions of each course in which he is enrolled. Failure to do so may result in a lower grade. Absence in no way relieves the student from the responsibility of completing all the work of the course to the satisfaction of the instructor in charge. Absences will be excused when incurred by reason of a student's participation in field trips and other trips arranged by the College, provided such trips have been previously arranged by the instructor through the Dean's office.

When a course requires absences of students from classes the instructor will file a list of the names of the students involved in the Dean's office, at least forty-eight hours in advance of their absence.

Graduation Requirements

To graduate from Lansing Community College a student must:

1. Complete a two-year course of study adapted to his needs, interests, and capacities, and conform to a plan acceptable to the College. The course of study should: (a) be suitable for transfer to admit the student to the level of upper-division work in a four-year college of his choice; or (b) form a program of study to be completed at the end of two years at Lansing Community College.
2. Maintain a minimum grade point average of 2.0.
3. Earn toward graduation at least 30 credits in attendance at Lansing Community College.
4. File with the Registrar's Office a petition for graduation one term preceding the term of graduation.
5. Satisfy all general and specific requirements of Lansing Community College which pertain to him, including the fulfillment of all financial obligations.
6. Be in attendance at the commencement exercise of his class unless a petition of absence is approved by the President.
7. Have the approval of the faculty and the Board of Trustees.

Degrees

Associate degrees are granted to all who meet graduation requirements. A student completing the requirements during the fall or winter term should apply for graduation during the term prior to that in which his work is completed. Those students who maintain a 3.75 grade point average will be graduated Summa Cum Laude; those who maintain a 3.50 grade point average will be graduated Magna Cum Laude; those with a 3.25, Cum Laude. Students must complete 60 credit hours of work at Lansing Community College to qualify for honors.

High School Articulation

Effort is made by Student Personnel Services and participating departments of the College to keep the area high schools informed about various aspects of the College program. Participation in "college nights," presenting information to students through assembly periods, and meetings with area school counselors are considered essential to adequate communication within our service area.

Student Personnel Services Evening Classes

In addition to the regular academic curricula for day students, Lansing Community College also offers a highly diversified program of evening courses for those who choose for personal or occupational reasons to attend class during the evening hours.

Students may elect late afternoon and evening courses as integral parts of a technical or liberal arts and science curriculum, as individual selections in areas of particular interest or as remedial sections in English, reading and mathematics.

The counseling and testing services available to evening students provide an effectual basis for better educational and vocational planning.

Lansing Community College evening program provides educational opportunities to many who are now finding the time to improve their academic or vocational background. For further information, contact the Registrar.

Tuition and Fees*

Tuition, Resident Students	
Per credit hour	\$6.00
Limit on hours charged	15
Maximum per term	\$90.00

Tuition, Non-Resident	
Per credit hour	\$8.50
Limit on hours charged	15
Maximum per term	\$127.50

Tuition for apprenticeship students varies according to the program of study.

Fees, all students

Application fee (new students)	\$10.00
Registration fee (guest, special and readmitted students)	\$5.00
Late registration fee	
1-7 credit hours	\$2.00
8 or more credit hours	\$5.00
College activities fee (each term)	
1-6 credit hours	\$1.00
7-11 credit hours	\$3.00
12 or more credit hours	\$5.00
Summer term (all students)	\$1.00

*Tuition and fees are subject to change through action of the Board of Trustees. Costs listed are those in effect at date of publication.

Laboratory fees vary according to the course of study.

Tuition Refund Policy

FALL, WINTER AND SPRING TERMS

Withdrawal during first week of term	80% of Tuition
Withdrawal during the second and third week of term	50% of Tuition
Withdrawal after third week of term	No Refund

SUMMER TERM

Withdrawal during first week of term	80% of Tuition
Withdrawal during second week of term	50% of Tuition
Withdrawal after second week of term	No Refund

Student Personnel Services

COUNSELING SERVICES

Director of Counseling: Jack Thorsen

Academic Advising

Student Personnel Services coordinates the advisor-advisee system in the College. Faculty advisors are assigned to all full-time students. Advisors help students resolve questions arising in the development of their educational program, assist in the selection of specific courses, and are concerned with the student's academic progress.

Educational-Vocational Information

Student Personnel Services maintains a carefully selected file of educational and occupational source material which is readily available to all students. Directories, career descriptions, job briefs and educational listings are included in a comprehensive service designed to assist the student in making appropriate educational and occupational plans. Books, pamphlets, brochures and outlines are available in both Counseling Services areas and the main library.

Counseling Services

A staff of professionally trained counselors is available to assist students in furthering their educational, vocational and personal development. After a student is admitted to the College a pre-enrollment interview with a counselor enables him to discuss his educational goals and to plan a program of study for enrollment. Adjustment to college often requires additional advising and counseling. Counselors assist students with decisions of curriculum choice, vocational development, social and emotional problems of a personal nature which tend to interfere with academic progress.

Orientation

Effort is made by the College to help the student understand that he is an integral part of the College and to acquaint him with its philosophy, facilities and opportunities. A planned program of orientation to college is a part of the first term class schedule for new freshman students.

Testing Services

A testing program designed to assist students in their educational and vocational development is an integral function of counseling services. Achievement tests are administered as part of the admissions counseling process. Aptitude, vocational and personality interest tests, and intelligence tests are frequently used by counselors as part of the counseling service to students desiring such services.

College Transfer Articulation

Student Personnel Services maintains close contact with colleges and universities to which many of our students anticipate transfer. Curricular guides are prepared for students indicating transfer requirements in their chosen curriculums. Arrangements are made for visits to the College by representatives of universities for the purpose of discussing transfer requirements with our students. Follow-up of transfer students is also part of the college transfer program.

Housing

The Lansing Community College maintains no housing units for students, but it does cooperate in making available a list of suitable living quarters. The College will assist students by maintaining a list of housing.



Jack Thorsen

Student Personnel Services

FINANCIAL AIDS

Scholarships

An increasing number of scholarships are available to students enrolled in the College.

The student who needs financial assistance while attending the College may wish to borrow from one of the Lansing Community College loan funds.

Information and application forms for all loans and scholarships may be obtained from the Chairman of the Financial Aids Committee in the Counseling Services office.

Alvin M. Bentley Foundation Junior College Scholarships

The foundation established by Mr. Alvin M. Bentley makes available a \$500.00 scholarship to one outstanding graduating senior who is admissible to the College and who has financial need.

The State of Michigan Competitive Scholarship

This scholarship provides tuition and fees for graduating seniors who meet the following requirements:

1. Michigan resident for eighteen months preceding application.
2. Graduate of a Michigan public or non-public school with no college training.
3. Participation in the required competitive examination conducted by the Michigan Higher Education Authority.

Student Government Scholarships

The Student Government provides two full tuition renewable scholarships to students of Lansing Community College. The scholarships are awarded on a basis of scholarship and need for funds. The scholarships are renewable so that a student may receive aid for a total of six terms.

Trustees Scholarship

The Board of Trustees grants one scholarship yearly to each high school in the Lansing Community College district, for a student having financial need and a high academic record. This scholarship pays tuition and fees, and is renewable for a second year.

Michigan Restaurant Association, Greater Lansing Chapter

The Michigan Restaurant Association provides two scholarships in the amount of \$200 each for sophomore students in the Hotel-Motel, Food Service Curriculum.

Administrative Management Scholarship

The Administrative Management Society offers one \$250 scholarship to a sophomore business student with a 2.5 grade average.

Practical Nursing

State and National Practical Nursing Associations offer \$200-\$250 scholarships to applicants showing academic competence and financial need.

Student Personnel Services

Federal Government Loans for Students

The National Defense Education Act provides for the creation of loan funds at American colleges and universities, from which needy students may borrow on reasonable terms to help complete their higher education.

The law requires that the borrower:

1. Be at least a half-time student (8 or more term hours).
2. Be in need of the amount of his loan to pursue his course of study.
3. Be capable of maintaining good academic standing in his chosen course of study.

Special consideration is given to applicants who express a desire to teach in public elementary or secondary schools and applicants who show promise in science, mathematics, engineering, or modern foreign language. Recent amendments to the law have made the loan terms even more favorable to borrowers.

The Dwight and Eleanor Rich Loan Fund

This fund, established upon the retirement of Dr. Dwight H. Rich from the superintendency of the Lansing Public Schools in June, 1962, provides loans for needy students at reasonable terms to help students complete their higher education.

The student wishing to borrow from this fund must be a full-time student, be in need of the amount of his loan to pursue his course of study, and be capable of maintaining good academic standing in his chosen course of study.

Michigan Guaranteed Loan

The state of Michigan administers a loan fund through local banks which allows freshman students to borrow up to \$1,000 a year. Borrowers must demonstrate the ability to complete college and show financial need. Information and applications may be requested from the Chairman of Financial Aids, Counseling Services at Lansing Community College, or from a participating bank.

Student Government Loan Fund

The Student Government of Lansing Community College provides short term loans in amounts up to \$100 to enable students to meet immediate financial obligations. This loan must be repaid within six months.

Andy Hall Memorial Loan Fund

Funds contributed by students in memory of a former Lansing Community College student are available for short-term loans of a maximum of \$100.

Educational Opportunity Grants

As a part of the Higher Education Bill of 1965, grants ranging from \$200 to \$800 a year are awarded to students with exceptional financial need who would not, except for the grant, be financially able to attend college.

Additional Scholarships and Loans

Many other scholarships and loans are available through local clubs and organizations in the Lansing area. When a student applies for one scholarship or loan he will be considered for all of the financial aid opportunities available at Lansing Community College.

Student Personnel Services

College Work-Study Program

Lansing Community College participates in the Federal Government Program which provides jobs for students from low income families. Information and application for these jobs may be obtained from the Chairman of Financial Aids, Counseling Services, Lansing Community College.

Scholarships for Lansing Community College Graduates

Most Michigan colleges provide scholarship opportunities for Lansing Community College graduates. Information about these scholarships and other financial aids available at Michigan colleges upon transfer from Lansing Community College may be obtained from the Chairman of Financial Aids.

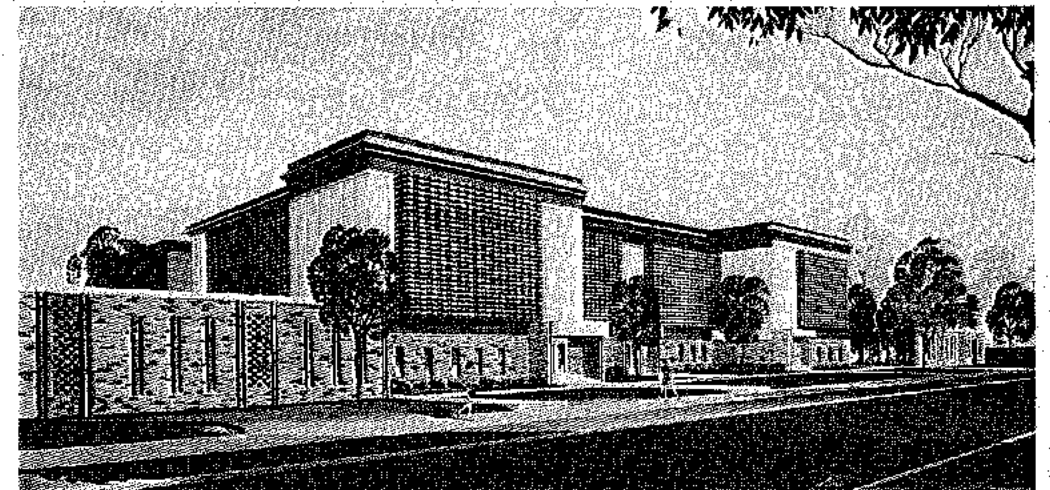
A. S. Corwin Scholarship in Transportation and Traffic Management

A scholarship made possible by friends of Mr. A. S. Corwin, traffic manager of Oldsmobile, who retired after 42 years of service. The award pays \$50 for one academic year (three years). It is awarded with consideration of financial need and the applicant's potential contribution to the field of transportation and traffic.



*Life lies open to me—rich, full, abundant. My thought,
which is my key to life, opens all doors for me.*

Ernest Holmes



Student Personnel Services

STUDENT ACTIVITIES

Director: William Zuhl



William Zuhl

Strong emphasis is placed on student activities as a total college activity involving students, faculty, administration and members of our service community.

Three main functions of College activities are student Government, Student Publications and the Fine Arts Program. Student Government serves the College in two main areas: (1) Serving as a liaison for exchange between faculty, administration and students and (2) promoting and sponsoring a wide range of co-curricular activities. The Lookout is the official publication of the College.

Fine Arts Cultural Program

Lansing Community College offers to its students a Fine Arts Program whereby students are encouraged to attend and participate in the productions of the various fine arts groups in the community. This program, cooperating with two of the community theaters, has encouraged many students and faculty members to perform in community theater production and to assist behind the scene. Considering the Greater Lansing Area as its campus, this Fine Arts Program offers to the students tickets to all of the major productions of the Lansing Civic Players, the Community Circle Players, the Lansing Symphony, and the Town Hall Speaker Series. The cost of these admissions is assumed by the Fine Arts Program, the students paying only a nominal fee. Accordingly, students and faculty members have attended such outstanding performances as "The Music Man," "A View From the Bridge," Gounod's "Faust," and "The Sound of Music." They have also enjoyed internationally known stars, such as Hans Conreid, Bess Myerson, Dave Brubeck, and Henry Mancini. The program offers over twenty-five events in the course of the year.

Cooperating with the student government, the Fine Arts Program coordinates other creative and cultural activities—the student Creative Arts Contest, a College Bowl, a Fine Arts Film Series, and a Miss Lansing Community College Pageant. These programs are constantly being expanded and diversified as students show interest and enthusiasm.

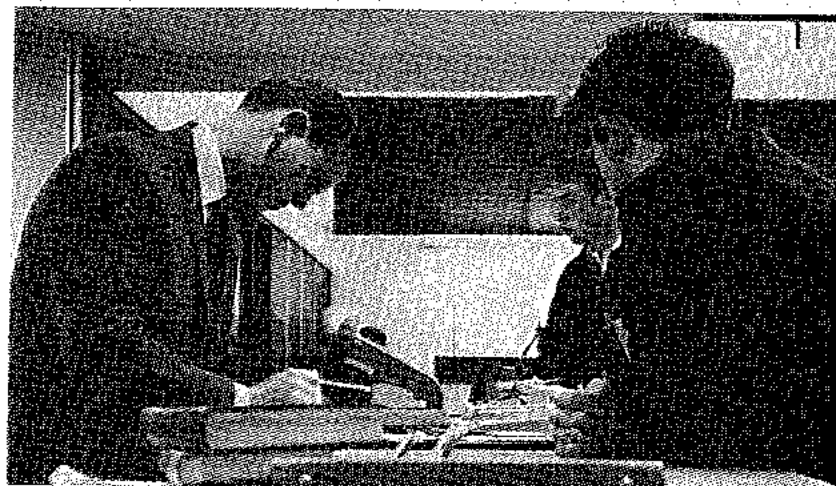
Student Government and Organizations

The Preamble to the Constitution of the Student Government Constitution states: "We, the students of Lansing Community College, in order to form a more perfect student, to provide for full student representation in all matters pertinent to student affairs, and to assist in the integration and coordination of the activities of all student organizations do hereby ordain and establish this constitution."

The Student Government initiates consideration of student recommendations working cooperatively with students and administration on all matters of importance to students and the College. Student Government is responsible for the activities and financial needs of student clubs and organizations recognized by student government and the administration of the College.



Learning Resource Center



Dwight Rich Learning Resource Center

Chairman: James P. Platte

The Dwight Rich Learning Resource Center is composed of the Library and the Instructional Aids Center. This Center provides the printed and recorded resources for the entire program of instruction at Lansing Community College.

The Library

The Library has more than 30,000 books and 300 periodicals selected by the faculty and the library staff, presenting diverse points of view and the latest information supporting the curriculum. In addition to the book collection, the Library provides musical and non-musical recordings and microfilms of the New York Times and fifteen frequently used periodicals back to 1960. The book collection is arranged by Dewey Decimal Classification on open and reserve shelves.

The Library is located at the northwest corner of the main classroom building. Adjacent to the main library are conference rooms and a reading room. Periodical and microfilm reading rooms are also located in the Business Division and Technology Division areas. The Library with its reading room can accommodate 150 students. The carrels in the library are designed for individual study, while the reading room and conference rooms permit group study.

The Library staff assists student research with reference service, and conducts laboratory sessions in the use of the library. Additional reference services are provided by close cooperation with the Michigan State Library.

The Instructional Aids Center

Whereas the Library has the function of assisting the individual student, the Instructional Aids Center primarily helps the classroom instructor. It prepares, upon request of instructors, such materials as charts, graphs, transparencies, audio and video tapes, single-concept films, etc. It assists instructors in developing all audio-visual tutorial programs.

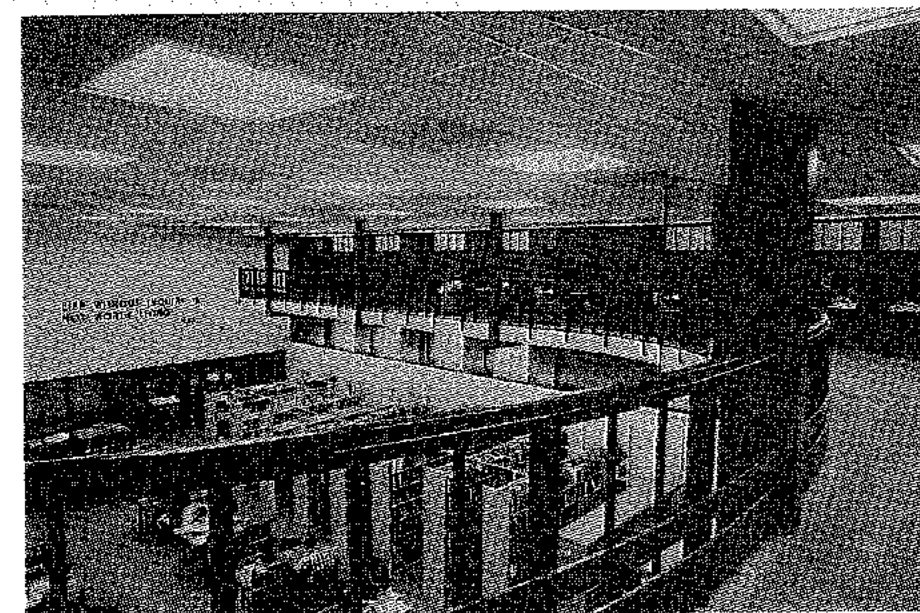
The Instructional Aids Center also serves the immediate interests of the student body by providing entertaining and culturally stimulating stereo programs. It manages a Stereo Listening Distribution Center and provides the background music for study areas and offices. It schedules audio tapes to 40 carrels in the

Library, each equipped with 14 audio channels.



Mrs. Dwight Rich

Dwight Rich Learning Resource Center



Course and Department Codes

ANT Anatomy	HUM Humanities
ART Art	ITR Industrial Trades
AST Astronomy	LE Law Enforcement
BIO Biology	LT Library Technician
BTA Building Trades Apprentice	MT Mechanical Technology
BTJ Building Trades Journeyman	MTH Mathematics
BTR Building Trades	MIC Microbiology
BUS Business	MUS Music
CCR Court & Conference Reporting	NE Nursing Education
CEM Chemistry	NS Natural Science
CT Civil Technology	PE Physical Education
DP Data Processing	PN Practical Nursing
DS Dental Science	PHL Philosophy
DT Drafting Technology	PHY Physics
EC Economics	PLS Political Science
ENG English	PSY Psychology
ET Electronics Technology	REL Comparative Religion
FBS Foundations Biological Science	SPH Speech
FPS Foundations Physical Science	SPN Spanish
FRN French	SS Social Science
FST Food Service Technology	ST Systems Technology
GEO Geography	STR Systems Trades
HST History	TEC Technical Intern
HMF Hotel-Motel-Food	TT Transportation Training

Course Descriptions

Course Numbers

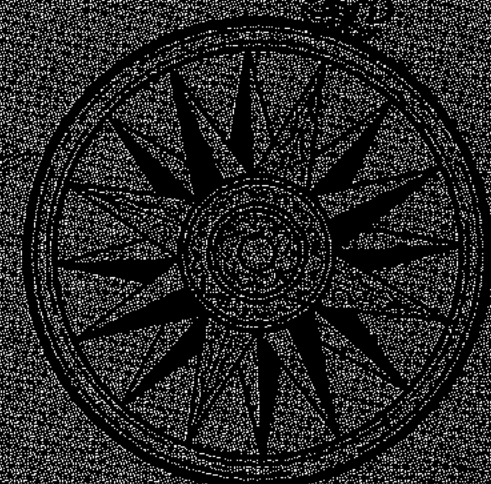
- 001-099 Courses indicate offerings which are not designed to be used in meeting requirements for an associate degree or for transfer to another college.
- 100-299 Courses are those designed to meet the requirements for an associate degree at Lansing Community College or as freshman and sophomore transfer courses to another college or a university.

Basic Courses

One of the major goals of the college is to provide each student with a common core of general education courses covering fundamental areas of knowledge. These courses, or their equivalents, are required of all baccalaureate degree students. Most are required in curricula leading to the associate degree.

A full year sequence is offered in each of the following:

- English Composition — English 101, 102, 103 — 9 credits
- Humanities (History of Western Civilization) — Humanities 201, 202, 203 — 12 credits
- Natural Science — Natural Science 101, 102, 103 — 12 credits
- Social Science — Social Science 101, 102, 103 — 12 credits

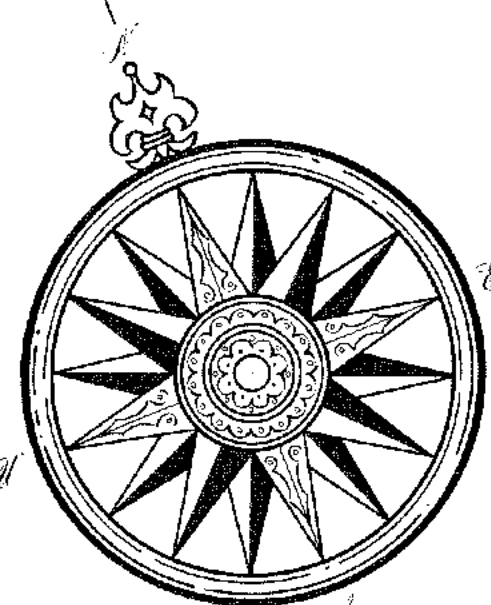


COLLEGE OF ARTS AND SCIENCES

- Department of Health Careers
- Department of Humanities
- Department of Language Arts
- Department of Mathematics
- Department of Science
- Department of Social Sciences

Physical Education WOMEN'S PHYSICAL EDUCATION

- 101 (Fall) One credit**
Lectures on the muscular and nervous system with emphasis on the effect of regular exercise. Review of the different types of training methods. *Individual Conditioning.*
- 102 (Winter) One credit**
Lectures on the circulatory system, heart diseases, and heart research as they relate to health and physical education. Nutrition and metabolism with emphasis on weight control. *Individual Conditioning.*
- 103 (Spring) One credit**
Continuation of P.E. 101. Reading assignments in health related areas. *Individual Conditioning.*
- 104 (Summer) One credit**
This course can be substituted for 101, 102, or 103. Lectures and assignments appropriate to the course for which it is substituted. *Individual Conditioning.*
- 201, 202, 203, and 204 One credit**
Grant for students who have completed three terms of the 100 series of courses; limited reading on selected topics. Physical fitness, instruction and two individual conditioning activities weekly.
- 301, 302, 303, and 304 One credit**
Special projects involving experiments or reading in selected areas. Hours and projects arranged.



DIVISION OF BUSINESS

**Department of Accounting
and Office Programs**

**Department of Management
and Marketing**

Business Division



George Hopkins

Division of Business

Division Chairman: George Hopkins

Foreword

An Associate Degree in Business is granted to students who successfully complete a specified two-year program. This degree may be earned by students who wish to transfer to a four-year institution and by students who intend to enter an occupation at the end of the two years.

The curriculums offered by the Business Division are designed to develop occupational competencies at the skilled or semi-professional levels. The job openings for this level of training represent the fastest growing area of employment in our economy.

Qualified students, interested in gaining new skills and acquiring greater proficiency, may consult with an advisor to select courses that will be equivalent to three terms, or one year, resulting in:

- I. A certificate of training.
- II. Greater potential skill for the initial job.
- III. Increased desire for continued learning.

One-year programs are designed for initial job placement, rather than for transfer to four-year institutions.

Internship and Community Service Programs are offered by this Division to relate to present job requirements and anticipated business changes. Special programs are developed for in-service training for personnel in the various areas of business.

Business Division

Community Services

One of the most important functions of your Community College is that of service to local business, industry, and government.

Where sufficient interest is shown, every effort will be made to offer instruction which will permit an employee to improve, upgrade, or retrain himself through classroom work. This instruction may be pertinent to the employee's present job requirements or to anticipated advancements. The spectrum of courses offered ranges from those of fundamental content to those requiring considerable preparation and background.

Changes have occurred with increasing incidence during the last few years that require better educated personnel, and there is every indication that the rate of change will increase. The College, in cooperation with business, industry, and government in the Lansing area, has scheduled courses for employees who want to improve their understanding of the more important aspects of their occupation and their employer's business. The College stands ready to develop, for specific requirements, programs ranging from single session meetings to those requiring numerous hours for completion.

Cooperative Internship

Lansing Community College

Internship is an on-the-job work experience program carefully coordinated and integrated with a seminar and departmental offerings. The student spends part of his time working in business or industry to gain actual experience in a vocational field of his choice. With business and industry serving as a laboratory staffed with highly competent supervisors cooperating with the College and its coordinator, an individual curriculum may be developed for any type of position that students, business, government, or industry request.

Placement for this training is made through the Internship Coordinator who makes special arrangements for each student based upon that student's special interests and aptitudes. The student will receive course credit (three hours per term) and a wage for his time spent at work. (Student must average fifteen or more work hours per week.)

Advantages of internship include the development of occupational competency of the skilled or semi-professional level leading to jobs which represent the most rapid growth area of employment in our economy. The combination of theory and actual practice has proven to increase motivation of students, and provides excellent training in human relations. Internship contributes to professional and personal development by providing a basis for decisions in choosing a career, by forcing a realization of personal responsibility for a job well done, and by developing maturity. A broader and more meaningful appreciation of the practical application of his total academic endeavors is also gained by the student. The intern student also earns both college credit and wages comparable with other workers in like positions.

To qualify for job placement, students must be able to secure departmental approval through the coordinator and have completed the necessary basic courses for job entry. The areas of employment are wide and varied, offering challenging opportunities to those students with initiative, imagination, and skill.

Business Division Placement

Lansing Community College operates a free placement service for all students and alumni desiring full-time, part-time, or summer employment. Although employment cannot be guaranteed, each is afforded the opportunity to meet or to contact prospective employers. Active communication is maintained between the college and hundreds of employing officials. A file is available from each employer giving job descriptions and other vocational information to aid candidates in selecting interviews. Vocational counseling, aids to preparing proper resumes, correspondence checklists, interview checklists and other assistance to job candidates are available at the placement office located on the third floor of the Administration Building. Students desiring employment are invited to register with the placement office and should maintain an active file of their credentials.

Accounting and Office Programs

Department of Accounting and Office Programs

Department Chairman: Ronald Edwards



Ronald Edwards

Accounting

One-Year Certificate Program

The Accounting Curriculum is designed to serve students preparing for pre-professional levels of employment from Account Clerk to Account Executives, General Sales Clerks to Retail Managers, Record keepers, Cashiers, and Bookkeepers to Chief Clerks, and Data Processing occupations from Coder to Computer Programmer Trainee. The first two terms of course work covers the need for record keeping and other entrance occupations. The first year of course work covers the need for more complex record keeping occupations and achieves the entrance level for general bookkeepers.

1st Term			3rd Term		
Course Number	Course Title	Credit Hours	Course Number	Course Title	Credit Hours
ENG 101	Communications	3	PSY 150	Psychology of Human Relations	4
BUS 117	Business Mathematics	3	BUS 113	Business Law	3
BUS 210	Principles of Accounting I	4	BUS 212	Principles of Accounting III	4
BUS 118	Introduction to Business	4	DPT 120	Survey of Data Processing	3
BUS 101	Intermediate Typewriting	3	EC 101	Applied Economics	3
		17			17
2nd Term					
SS 101	Sociology	4			
BUS 107	Business Machines	3			
BUS 211	Principles of Accounting II	4			
BUS 130	Introduction to Marketing	4			
		15			

Accounting

Two-Year Associate Degree Program

The two-year accounting program is designed to meet the needs of modern business and industry for accounting and financial information. It is based on postulates that accounting is the language of business as well as the measurement and communication of financial data to those who will use that data, not only for its informational value, but also as a basis of decision and action. The curriculum will help the student to develop habits of critical, logical thinking while he is learning to record, report and interpret economic data.

Completion of the two-year program will provide the student with sufficient skill and knowledge to meet entrance requirements of business and to progress rapidly through the many sub-professional levels of accounting.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition I	3	SS 101	Sociology	4
BUS 118	Introduction to Business	4	BUS 250	Intermediate Accounting I	4
BUS 117	Business Math	3	BUS 215	Law in Society I	3
BUS 210	Principles of Accounting I	4	EC 201	Principles of Economics I	3
PSY 101	Orientation	2	BUS 241	Accounting Internship, or Elective	3
PE 101	Physical Education	1			
		16			17
Winter Term			Winter Term		
ENG 102	Composition II	3	SS 102	Economics	4
BUS 107	Business Machines	3	BUS 251	Intermediate Accounting II	4
BUS 130	Introduction to Marketing	3	BUS 216	Law in Society II	3
BUS 211	Principles of Accounting II	4	EC 202	Principles of Economics II	3
BUS 101	Intermediate Typewriting	3	BUS 241	Accounting Internship, or Elective	3
		16			17
Spring Term			Spring Term		
ENG 103	Composition III	3	SS 103	Political Science	4
BUS 212	Principles of Accounting III	4	BUS 252	Intermediate Accounting III	4
BUS 204	Business Correspondence	3	EC 203	Principles of Economics III	3
DPT 130	Survey of Data Proc.	3	BUS	Elective	3
PSY 150	Psychology of Human Relations	4	BUS 242	Accounting Internship, or Elective	3
		17			17

Recommended Electives: DPT 103 Introduction to Data Processing; BUS 220 Office Management; BUS 226 Personnel Management; BUS 108 Business Machines II.

Accounting and Office Programs



Accounting and Office Programs

Legal Secretary

Two-Year Associate Degree Program

The Legal Secretarial Program is designed for students who wish to specialize for this rapidly expanding career. The curriculum provides the student with skill and ability necessary to manage the office of an attorney, and develops understanding of the vocabulary and terms used, in addition to the normal secretarial skills. An Associate Degree is awarded upon satisfactory completion of the program.

Freshman Year		Fall Term	Credit Hours	Sophomore Year		Fall Term	Credit Hours
ENC	101	Composition	3	BUS	201	Transcription	4
SS	101	Sociology	4	BUS	210	Principles of Accounting I	4
BUS	*104	Beginning Shorthand	4	BUS	215	Law & Society I	3
BUS	117	Business Mathematics	3	PSY	150	Psychology of Human Relations	4
			14	OR			
				Office Internship			3
							14.15
Winter Term		Fall Term	Credit Hours	Winter Term		Fall Term	Credit Hours
ENC	102	Composition	3	BUS	202	Shorthand Speed Building	4
SS	102	Economics	4	BUS	216	Law & Society II	3
BUS	101	Intermediate Typewriting	3	BUS	103	Secretarial Machines	2
BUS	*105	Intermediate Shorthand	4	BUS	211	Principles of Accounting II	4
BUS	107	Business Machines I	3	EC	101	Applied Economics	3
			17	OR			
				Office Internship			3
							16
Spring Term		Fall Term	Credit Hours	Spring Term		Fall Term	Credit Hours
ENC	103	Composition	3	BUS	203	Secretarial Training	3
SS	103	Political Science	4	BUS	205	Legal Shorthand	2
BUS	102	Advanced Typewriting	3	BUS	204	Business Correspondence	3
BUS	*106	Advanced Shorthand III	4	SPH	104	Fundamentals of Speech	3
BUS	108	Business Machines II	3	Elective			
			17	OR			
				Office Internship			3
							14

*If the student has completed shorthand in high school, one term of Advanced Shorthand may be sufficient. Departmental approval is needed for a substitution.



Medical Secretary

Two-Year Associate Degree Program

Designed for the student who wishes to become a secretary in a medical office, this program provides basic secretarial skills and the technical understanding necessary for competence and self-confidence in the specialized field. An Associate Degree is awarded upon satisfactory completion of the curriculum.

Freshman Year		Fall Term	Credit Hours	Sophomore Year		Fall Term	Credit Hours
ENC	101	Composition	3	BUS	201	Transcription	4
NS	101	Botany Zoology	4	BUS	215	Law & Society I	3
BUS	*104	Beginning Shorthand	4	BUS	210	Principles of Accounting I	4
BUS	117	Business Mathematics	3	PSY	150	Psychology of Human Relations	4
PE	101	Physical Education	1	Elective			
			15	OR			
				Office Internship			3
							18
Winter Term		Fall Term	Credit Hours	Winter Term		Fall Term	Credit Hours
ENC	102	Composition	3	BUS	202	Shorthand Speed Building	4
NS	102	Chemistry-Physics	4	BUS	216	Law & Society II	3
BUS	101	Intermediate Typewriting	3	BUS	103	Secretarial Machines	2
BUS	*105	Intermediate Shorthand	4	EC	101	Applied Economics	3
BUS	107	Business Machines I	3	Elective			
PE	102	Physical Education	1	OR			
			18	Office Internship			3
							15
Spring Term		Fall Term	Credit Hours	Spring Term		Fall Term	Credit Hours
ENC	103	Composition	3	BUS	203	Secretarial Training	3
NS	103	Astronomy-Geology	4	BUS	204	Business Correspondence	3
BUS	102	Advanced Typewriting	3	BUS	207	Medical Shorthand	2
BUS	*106	Advanced Shorthand	4	SPH	104	Fundamentals of Speech	3
BUS	108	Business Machines II	3	HUM	250	American Government	4
PE	103	Physical Education	1	Elective			
			18	OR			
				Office Internship			3
							15

*If the student has completed shorthand in high school, one term of Advanced Shorthand may be sufficient. Departmental approval is needed for a substitution.



Accounting and Office Programs

Secretarial Science
Two-Year Associate Degree Program

The two-year Secretarial Science program is designed to prepare students for one of the many interesting and challenging positions in business, from senior stenographer to executive secretary. The program provides the skills necessary for entrance-level jobs, and sufficient background in related areas to enable the serious graduate to advance rapidly.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition I	3	BUS 201	Transcription	4
BUS 118	Introduction to Business	4	BUS 210	Principles of Accounting I	4
BUS 104	Beginning Shorthand	4	SPH 104	Principles of Speech	3
BUS 117	Business Mathematics	3	EC 201	Principles of Economics I	3
SS 101	Sociology	4	BUS	Elective	3
PSY 101	Orientation	1			17
		15			
	Winter Term			Winter Term	
ENG 102	Composition II	3	BUS 202	Shorthand Speed-Building	4
SS 102	Economics	4	BUS 211	Principles of Accounting II	4
BUS 105	Shorthand II	4	BUS 220	Office Management I	3
BUS 101	Intermediate Typewriting	3	EC 203	Principles of Economics II	3
BUS 107	Business Machines	3	BUS 215	Law & Society I	3
		17			17
	Spring Term			Spring Term	
ENG 103	Composition III	3	BUS 203	Secretarial Training	3
SS 103	Political Science	4	BUS 304	Business Correspondence	3
BUS 106	Shorthand III	4	EC 205	Principles of Economics III	3
BUS 102	Advanced Typewriting	3	BUS 215	Law & Society II	3
BUS 109	Secretarial Machines	2	PSY 150	Psychology of Human Relations	4
		16			16

Stenographic

One-Year Certificate Program

This is an accelerated program for qualified students. It includes instruction and practice in all primary skills and abilities necessary for a wide variety of office occupations. A certificate is awarded for satisfactory completion of the courses. Further study is possible, full or part-time, for earning an associate degree.

First Term	Third Term				
ENG 100	Communications	3	BUS 113	Business Law	3
PSY 101	Orientation	1	BUS 102	Advanced Typewriting	3
BUS 118	Introduction to Business	4	BUS 106	Shorthand III	4
BUS 117	Business Mathematics	3	BUS 109	Secretarial Machines	2
BUS 104	Shorthand I	4	BUS 110	Office Methods	3
		15			15
	Second Term			Recommended Electives:	
BUS 210	Principles of Accounting I	4	PSY 150	Psychology of Human Relations	4
EC 101	Applied Economics	3	BUS 201	Transcription	4
BUS 101	Intermediate Typewriting	3	SS 101	Sociology	4
BUS 105	Shorthand II	4			
BUS 107	Business Machines	3			
		17			

*Students who have completed one or more years of shorthand in high school should see departmental advisor for proper placement. Placement in advanced courses requires departmental approval.



Department of Management and Marketing

Department Chairman: James Person

Management

One-Year Certificate Program

A one-year curriculum in Management is designed primarily for qualified students desiring positions of the first or supervisory level of management. Businesses are encouraged to make use of the management courses in the implementation of their employee upgrading or promotion programs. Counseling with a staff member in the management area is recommended to guide the choice of electives toward the desired goal of the student. A certificate is granted to those students successfully completing the curriculum.

First Term	Third Term				
BUS 118	Introduction to Business	4	BUS 227	Management & Supervisory Development	3
BUS 117	Business Mathematics OR Equivalent	3	BUS 220	Public Relations	3
ENG 101	Composition or Communications	3		Electives	3
BUS 225	Principles of Management	3			15
	Elective	3			
		16			
	Second Term				
BUS 130	Introduction to Marketing	4			
EC 101	Applied Economics	3			
PSY 150	Psychology of Human Relations	4			
	OR				
PSY 201	Introduction to Psychology	4			
BUS 226	Personnel Management	3			
	Elective	3			
		17			

Recommended Elective or Substitutes

BUS 220	Office Management	BUS 135	Managerial Marketing
BUS 110	Applied Accounting I	BUS 132	Sales Management
BUS 111	Applied Accounting II	BUS 131	Advertising
DP 103	Introduction to Data Processing	BUS 120	Sales
BUS 215	Law & Society	BUS 121	Retailing
BUS 270	Real Estate Principles	MKT 246	Management Internship
BUS 275	Life Insurance Principles		

(Industrial Supervision electives may be offered as needed.)

Management and Marketing



James Person

Management and Marketing

Management

Associate Degree Program

The Management program offers training for management in various fields, determined by needs of students or the community. Classic management duties of planning, organization and control are presented to meet the needs in specific situations. Each course stresses the premise that every manager is a professional worker in a field with a history, a heritage and a future.

Lansing Community College facilities and personnel are available for organizing, conducting and coordinating management programs to meet needs of interested businesses, on an individual or group basis.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 104	Composition	3	BUS 210	Principles of Accounting I	4
BUS 118	Introduction to Business	4	BUS 215	Law & Society I	3
SS 101	Sociology	4	BUS 225	Principles of Management	3
SPH 104	Fundamentals of Speech	3	EC 201	Principles of Economics I	3
PSY 101	Orientation	1	MKT 246	Internship or Elective	3
		15			16
Winter Term			Winter Term		
ENG 102	Composition	3	BUS 221	Principles of Accounting II	4
SS 102	Economics	4	BUS 216	Law & Society II	3
BUS 229	Public Relations	3	EC 202	Principles of Economics II	3
BUS 130	Introduction to Marketing	4	BUS 226	Personnel Management	3
BUS 120	Sales	3	MKT 247	Internship or Elective	3
		17			16
Spring Term			Spring Term		
ENG 103	Composition	3	BUS 212	Principles of Accounting III	4
SS 103	Political Science	4	BUS 227	Management and Supervisory Development	3
BUS 235	Managerial Marketing	3	MKT 248	Internship or Elective	3
BUS 232	Sales Management	3	EC 203	Principles of Economics III	3
		16			13

Recommended Elective or Substitutes

BUS 131 Advertising	DP 120 Survey of Data Processing
BUS 225 Office Management	DP 130 Systems and Applications I
BUS 270 Real Estate Principles	DP 330 Systems and Applications II
BUS 275 Life Insurance Principles	PSY 201 Introduction to Psychology
BUS 121 Retailing	PSY 150 Psychology of Human Relations

Marketing

One-Year Certificate Program

A condensed one year curriculum in Marketing is offered for qualified students. The courses are designed to meet the needs of students and business. The curriculum has special value to those already employed who desire upgrading or promotion. A certificate is granted to those students successfully completing this curriculum.

Electives may be chosen from the courses listed in the course description section of the college catalog. Staff advisors in Business will recommend electives to students in accord with their needs and goals.

Management and Marketing

First Term	Credit Hours	Third Term	Credit Hours
BUS 118	Introduction to Business	BUS 131	Advertising
BUS 117	Business Math or equivalent	BUS 211	Principles of Accounting II
BUS 130	Sales	EC 201	Economics
ENG 101	Composition	BUS 246	MKT Internship
BUS 225	Principles of Management	OR	
	16	PSY 201	Introduction to Psychology
		BUS 235	Managerial Marketing
			16-17
Second Term			
BUS 130	Introduction to Marketing		
BUS 229	Public Relations		
BUS 210	Principles of Accounting I		
BUS 121	Retailing		
SPH 104	Fundamentals of Speech		
	17		

Marketing

Associate Degree Program

The Marketing Program offers organized training in retail distribution, wholesaling, management and other activities related to the marketing of goods and services. The courses offered in this area provide education and training to improve the skills, business knowledge, and judgment of those preparing for, or now engaged in, the rapidly growing area of distribution and marketing. The primary objective is to train individuals to participate more efficiently in business activities.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
SS 101	Sociology	4	EC 201	Principles of Economics I	3
BUS 118	Introduction to Business	4	BUS 210	Principles of Accounting I	4
ENG 101	Composition	3	BUS 215	Law & Society I	3
BUS 117	Business Math or equivalent	3	BUS 225	Principles of Management	3
PSY 101	Orientation	1	MKT 246	Internship or Elective	3
		15			16
Winter Term			Winter Term		
ENG 102	Composition	3	BUS 211	Principles of Accounting II	4
BUS 130	Introduction to Marketing	4	BUS 226	Personnel Management	3
SS 102	Economics	4	EC 202	Principles of Economics II	3
BUS 120	Sales	3	BUS 235	Managerial Marketing	3
SPH 104	Fundamentals of Speech	3	MKT 247	Internship or Elective	3
		17			16
Spring Term			Spring Term		
ENG 103	Composition	3	BUS 212	Principles of Accounting III	4
SS 103	Political Science	4	BUS 227	Management and Supervisory Development	3
BUS 131	Advertising	3	BUS 232	Sales Management	3
BUS 121	Retailing	3	MKT 248	Internship	3
BUS 229	Public Relations	3	OR		
		16	EC 203	Principles of Economics III	3
					13

Recommended Electives or Substitutes

DP 120 Survey of Data Processing	BUS 275 Life Insurance Principles
DP 130 Systems and Applications I	PSY 201 Introduction to Psychology
EC 203 Principles of Economics III	OR
BUS 270 Real Estate Principles	PSY 150 Psychology of Human Relations



Management and Marketing **Law Enforcement**

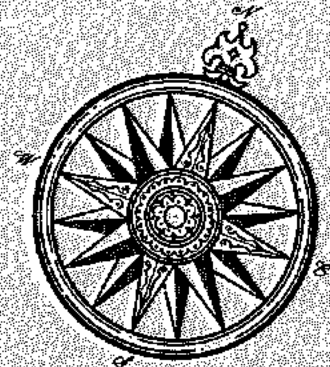
Associate Degree

This program is designed to prepare young men or women for police work, and to assist those now in the field to secure the general and technical information necessary for promotion. Modern law enforcement agencies need people with ability and training for police work at local, state or federal level, and can offer a variety of challenging careers.

Students who plan to enter this field should enroll in the entire curriculum listed below. (Men and women presently engaged in police work can enroll in specialized law enforcement classes listed.)

Basic Program					
Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
PSY 101	Orientation	1	BUS 210	Principles of Accounting I	4
ENC 101	Composition	3		*(or approved elective)	
SS 101	Sociology	4	BUS 215	Law & Society I	3
BUS 101	Intermediate Typewriting	3	LE 201	Tech. of Criminal Investigation	4
PE 101	Physical Education	1	SS 220	Juvenile Delinquency and Youth Behavior	3
LE 101	Introduction to Law Enforcement	4			
		16			14
Winter Term			Winter Term		
ENG 102	Composition	3	BUS 211	Principles of Accounting II	4
SS 102	Economics	4		*(or approved elective)	
SPH 104	Fundamentals of Speech	3	BUS 216	Law & Society II	3
PE 102	Physical Education (Judo)	1		*(or approved elective)	
LE 102	Police Organization & Adm.	4	NS 103	Chemistry-Physics	4
		15	LE 203	Criminal Law & Procedures	4
					15
Spring Term			Spring Term		
ENC 103	Composition	3	BUS 212	Principles of Accounting III	4
SS 103	Political Science	4		*(or approved elective)	
PSY 201	Introduction to Psychology	4	LE 203	Crime Causation & Prevention	3
PE 105	Physical Education	1	LE 204	Traffic Law & Accident Investigation	3
LE 103	Theory of Patrol	3		*(Approved Electives)	6
		15			16
Approved Electives					
LE 205	Legal & Criminal Behavior	3			
LE 206	Police Interviewing and Interrogation	3			
LE 246	Law Enforcement Internship	3			

96 *Electives are approved by the Law Enforcement Coordinator



Law Enforcement Course Certification
Certificate Program

Students who are presently engaged in law enforcement work will receive a certificate upon successful completion of the 28 hours of work in the field of law enforcement.

- L. E. 101 (4) Introduction to Law Enforcement
- L. E. 102 (4) Police Organization and Administration
- L. E. 103 (3) Theory of Patrol
- L. E. 201 (4) Introduction to Criminal Investigation
- L. E. 202 (4) Criminal Law and Procedures
- L. E. 203 (3) Crime Prevention
- S. S. 220 (3) Juvenile Delinquency
- L. E. 204 (3) Traffic Law and Accident Investigation

Management and Marketing

Management and Marketing

Library Technology

The library technician is an assistant to the professional librarian and, in certain instances, is a supervisor of the non-professional staff in a public, special, or school library. He will work with people, books, audio-visual material and general office procedures.

Lansing Community College offers a two-year program of training leading to an Associate Degree in Arts (Library Technology). One library technology course is offered each fall, winter and spring term during the two-year sequence. The introductory course will be offered during the fall term of each school year. Anyone interested may also enroll for a single library technology course.

Certificate Program — 1 year

Fall Term		Credit Hours	Spring Term		Credit Hours
LT 101	Introduction to Use of Library	3	LT 103	Reference	3
LT 201	Technical Services	3	LT 205	Library Problems	3
ENG 101	Composition I	3	ENG 103	Composition III	3
BUS 011	Typewriting I OR BUS 101	3	BUS 210	Principles of Accounting OR BUS 107 Business Machines	3-4
SS 101	Sociology	4	Elective OR LT 245		3
		16			15-16
Winter Term		Credit Hours	Recommended Electives		Credit Hours
LT 102	Ordering, Circulation, Maintenance, and Preparation of Materials	3	ENG 201	ENG 250	DP 120
ENG 102	Composition II	3	ENG 202	ENG 203	DP 130
SPH 104	Principles of Speech	3			
PSY 201	Introduction to Psychology OR BUS 220 Office Management	3			
Elective		3			
		15			

Associate Degree — 2 years

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
LT 101	Introduction to Use of Library	3	LT 201	Technical Services	3
ENG 101	Composition	3	HUM 201	Western Civilization	4
NS	Natural Science OR Foreign Language	4	BUS 210	Principles of Accounting I OR Elective	4
ESY 101	Orientation	1	ENG	English Elective	3
SS 101	Sociology	4			14
		15	Winter Term		Credit Hours
LT 102	Ordering, Circulation, Maintenance, and Preparation of Materials	3	LT 245	Coordinated Work Experiences OR Elective	3
ENG 102	Composition	3	HUM 202	Western Civilization	4
NS	Natural Science OR Foreign Language	4	BUS 220	Office Management OR Equivalent	3
SS 102	Economics	4	BUS 107	Business Mathematics	3
BUS 101	Intermediate Typewriting II	3	ENG	English Elective	3
		17			16
Spring Term		Credit Hours	Spring Term		Credit Hours
LT 103	Reference	3	LT 205	Library Problems	3
ENG 103	Composition	3	SPH 104	Speech	3
NS	Natural Science OR Foreign Language	4	BUS 104	Business Correspondence	3
SS 103	Political Science	4	HUM 203	Western Civilization	4
		14	ENG	English Elective	3
					16
		Credit Hours	Recommended Electives		Credit Hours
			ENG 201	ENG 203	DP 120
			ENG 202	ENG 250	DP 130

Pre-Business Administration

Associate Degree Program

The Pre-Business Administration curriculum is designed for students preparing for transfer to a four-year institution to complete work in professional areas of accounting, economics, finance, law, management, marketing, business education, professional secretary, engineering, statistics or related business professions.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
PSY 101	Orientation	1	HST 201	Western Civilization I	4
ENG 101	Composition	3	NS 101	Botany-Zoology	4
SS 101	Sociology	4	BUS 210	Principles of Accounting I	4
MTH 102	Intermediate Algebra	5	EC 201	Principles of Economics I	3
BUS 118	Introduction to Business	4			15
PE 101	Physical Education/Elective	1	Winter Term		Credit Hours
		18	HST 202	Western Civilization II	4
			NS 102	Chemistry-Physics	4
Winter Term		Credit Hours	BUS 211	Principles of Accounting II	4
MTH 103	Statistics	5	EC 202	Principles of Economics II	3
ENG 102	Composition	3			15
BUS 102	Economics	4	Spring Term		Credit Hours
PE 102	Physical Education/Elective	1	HST 203	Western Civilization III	4
Elective		3	NS 103	Astronomy-Geology	4
		18	BUS 212	Principles of Accounting III	4
			EC 203	Principles of Economics III	3
Spring Term		Credit Hours			15
SPH 104	Fundamentals of Speech	3			
ENG 103	Composition	3			
SS 103	Political Science	4			
PE 103	Physical Education/Elective	1			
PSY 201	Introduction to Psychology	4			
		15	Recommended Electives		Credit Hours
			BUS 120	Sales	3
			BUS 121	Retailing	3
			BUS 130	Introduction to Marketing	4
			BUS 131	Advertising	3
			DP 110	Portran	3
			DP 120	Survey of Data Processing	3
			GEO 203	Economic Geography	3
			BUS 215	Law & Society I	3
			BUS 216	Law & Society II	3
			BUS 225	Principles of Management	3
			BUS 230	Personnel Management	3
			BUS 237	Management & Supervisory Dev.	3
			MTH 184	College Algebra & Trig. I	5
			MTH 185	College Algebra & Trig. II	5

Evening Courses in Transportation and Traffic Management

Under the sponsorship of Lansing Community College, in cooperation with the Traffic Club of Lansing, a two-year, six-term course in Traffic and Transportation Management will be conducted at the College. Certificates of satisfactory completion will be issued by the College.

This course deals adequately with the theoretical, historical, and academic aspects of Traffic Management; analyzes practical problems and specific cases, and provides excellent technical training. This course, in two years, imparts information which might take years to obtain in the normal course of work in an individual traffic department or a carrier's general office.

Business COURSE DESCRIPTIONS

- 020 Small Business Management** **Three credits**
Survey of the functions of planning, organizing, and controlling oriented to the problems of smaller business organizations; a review of the major problems in marketing, finance, taxation, law, personnel relations, and economics applied to the smaller business.
- 011 Beginning Typewriting** **No credit**
Introduction to and mastery of the keyboard to build accuracy and speed. Fees on basis of three hours laboratory.
- 101 Intermediate Typewriting** **Three credits**
Continuation of Typewriting I. Improves speed, accuracy, and manipulation. Covers typing of business letters, reports, and tabulations.
- 102 Advanced Typewriting** **Three credits**
Continuation of Typewriting II. Improves judgment, skill and efficiency. Prerequisite: Business 101 or departmental approval.
- 104 Beginning Shorthand I** **Four credits**
Designed to teach the basic principles of shorthand and build an elementary vocabulary.
- 105 Intermediate Shorthand II** **Four credits**
Completes theory begun in Business 104. Develops speed and accuracy in reading from plates, and in limited dictation. Prerequisite: Business 104 or departmental approval.
- 108 Advanced Shorthand III** **Four credits**
Continuation of Business 105. Develops high speed in dictation. Prerequisite: Business 105.
- 107 Business Machines I** **Three credits**
Teaches the basic operations and manipulation of calculating machines. Includes the study of the operation of the ten-key, key-driven, and rotary calculators. One hour lecture, two hours laboratory. Prerequisite: Business 117 or College mathematics substitute.
- 108 Business Machines II** **Three credits**
Continuation of Business 107. Develops higher speed and problem-solving ability. One hour lecture, two hours laboratory. Prerequisite: Business 107.
- 109 Secretarial Machines** **Two credits**
Operation and manipulation of the stencil and fluid duplicating processes. Includes study of machine transcription and filing procedure. One hour lecture, one hour laboratory.
- 110 Accounting I** **Four credits**
foundational basis. winter
Explains and puts into practice rational processes of the accounting field. Balance sheet and income statement used to introduce the system. Followed by topics concerning records for merchandise, adjusting and closing accounts, business documents and procedures, cash controls, payroll procedures. Practice set is included. No prerequisite. Students who have completed one to two years of high school bookkeeping with A or B standing should consult with an accounting instructor for placement.

- 111 Accounting II** **Four credits** **Business**
~~Continuation of Business 110. Course contents include owners equity accounts, negotiable instruments, accounting practices for purchases and sales, inventory, plant assets, adjusting entry and report procedures. Practice set is included, and an accounts receivable exercise for hotel-motel offices. Accounts payable and payroll exercise for small businesses are performed by using accounting boards and several pieces of related accounting equipment. Prerequisite: Business 110 or Business Division approval.~~
- 112 Accounting III** **Four credits**
~~Continuation of Business 111. Subject matter relates to corporate organization, capital stock, retained earnings, bonds, intangible and wasting assets, voucher system, branch records and statement analysis. A practice set is included. Exercises on bookkeeping machines for accounts receivable, accounts payable, and payroll; also covers recording equipment for data processing service organizations.~~
- 113 Business Law** **Three credits**
For students who are interested in completing certain one or two-year business programs and others who may be interested for consumer education purposes. Designed to help students develop vocabulary, a fund of information and understanding of meaning and operation for student training and growth in intelligent reading, understanding of, respect for, and obedience to the law. Course relates specifically to contracts, sales, negotiable instruments and other subject areas related to business.
- 117 Business Mathematics** **Three credits**
Designed to develop skill and accuracy in mathematics. Includes study of decimals, fractions, aliquot parts, percentages, discounts, inventory, payroll, interest.
- 118 Introduction to Business** **Four credits**
Survey of business activities, covering principles, problems and practices related to our economic framework. Includes topics such as organization, production, marketing, personnel administration, finance, and economics.
- 119 Office Methods** **Three credits**
Offered primarily for the one-year office program. Emphasizes clerical office procedures and responsibilities. Includes the study and evaluation of effective personality traits. Prerequisite: Business 103. ?
- 120 Sales** **Three credits**
Designed to familiarize the student with fundamentals of sales. Deals with such topics as consumer buying habits, the salesman's job, the sales transaction, retail store and other sales methods, inventory, use of sales media, product demonstration techniques, and customer service problems.
- 121 Retailing** **Three credits**
A comprehensive consideration of the activities involved by retailers in selling goods to ultimate consumers. Emphasis placed on areas relating to the needs and interests of the class.
- 130 Introduction to Marketing** **Four credits**
Study of problems and policies of manufacturers, wholesalers, and retailers in the marketing of goods and services. Channels of marketing, customer relations, functions of sales departments, price policies and communications are included.

BUS 118 recommended as a prerequisite

- Business 131 Advertising** *Spring* **Three credits**
 Presents methods and techniques in modern advertising, giving information to do the entire advertising job. Copy writing, selection of media and how the advertiser can approach his problems most effectively are included.
- 201 Transcription** **Four credits**
 Designed to teach how to type mailable transcripts from shorthand notes. Prerequisite: Business 106 and Business 102.
- 202 Shorthand Speed Building** **Four credits**
 Continuation of Business 201. Attention given to specialized vocabulary and high speed writing. Prerequisite: Business 201.
- 203 Secretarial Training** **Three credits**
 For the instruction of office procedures and responsibilities. Emphasizes the importance of pleasant, sincere personality and effective secretarial traits. Prerequisites: Business 103 and Business 106.
- 204 Business Correspondence** **Three credits**
 Most effective techniques for formulating the various types of letters are emphasized.
- 205 Legal Shorthand** **Two credits**
 Designed to develop skill in writing and transcribing words and phrases commonly recurring in the spoken and written language of the law. Prerequisite: Business 106.
- 207 Medical Shorthand** **Two credits**
 Develops skill in writing and transcribing words and phrases occurring in the spoken and written language of medicine. Prerequisite: Business 106 or departmental approval.
- 210 Principles of Accounting I** **Four credits**
 A course designed to explain and apply basic principles of accounting by means of balance sheet and income statement approach. Topics include basic analysis, perpetual and periodic merchandise accounting, alternative adjustments to accounts, business documents and data flow and negotiable documents. Includes the concept for the use of data processing equipment in performing accounting functions. Prerequisite: Sophomore standing or department approval.
- 211 Principles of Accounting II** **Four credits**
 Continuation of Business 210. Includes payroll and tax accounting, controlling accounts and subsidiary ledgers, cash records and forecasting, the voucher system, partnerships, corporations and bonds. Shows how accounting services contribute to the recognition and solution of management problems. Prerequisite: Business 210.
- 212 Principles of Accounting III** **Four credits**
 Continuation of Business 211 involving the study of income and valuation determination, and analysis and comparison of financial statements. Accounting principles related to mercantile businesses, branch accounts, manufacturing companies, cost accounting, budgeting and sources and application of funds. Prerequisite: Business 211.

- 215 Law and Society I** **Three credits Business**
 Introduction to the fundamental principles of our law for business and non-business students, to develop understanding of our legal system, federal, state and local, its purposes and importance to society. Course contents include study of the nature and sources of law, study of courts, and court procedure, legal reasoning, crime and torts, and the law of contracts, personal and real property, leases and mortgages, and bailments. Prerequisite: Sophomore standing or departmental approval.
- 216 Law and Society II** **Three credits**
 The nature and law of sales, commercial paper, security devices, agency, employment, partnerships, corporations—profit and non-profit types—insurance, trusts and estates, and the 1962 Michigan Uniform Commercial Code. Prerequisite: Business 215.
- 220 Office Management I** **Three credits**
 First of two courses dealing with the principles of office management. Includes study of office organization and layout; work flow, procedures, standards, personnel and supervision procedures, equipment, centralized services, and automation trends. *Sophomore standing w/ other secretarial course prerequisites*
- 221 Office Management II** **Three credits**
 Deals with automation and trends in the problem areas of social, economic organization, management, feasibility, and automated service centers.
- 225 Principles of Management** *Spring* **Three credits**
 Study of (a) the field of management in terms of the concept of scientific management, and the qualifications of executives; (b) principles of the planning, organizing, and controlling functions, including the relationship of decision making to the work of the organization; (c) relationship of the management of people, communications, morale, and motivation to the leadership concept of management. *Prerequisite: BUS 118, Econ. preferred*
- 226 Personnel Management** **Three credits**
 Survey of the principles, problems, and practices of modern business, government, and other organizations involved in the handling of employees from the recruiting stages through the post-retirement stage. Emphasis on the use of the appropriate practices in keeping with the type and size of organization. Prerequisite: Business 118, or equivalent.
- 227 Management and Supervisory Development** **Three credits**
 Management principles oriented to the supervisory levels of responsibilities in business, government, and other activities. Emphasis is placed on management functions of planning, organizing, directing, coordinating, and controlling, the relationship of policies and procedures, and the responsibilities of supervisory persons for work performance, employee development and evaluation, leadership of workers, and ethics to be considered in decisions.
- 229 Public Relations** *Winter* **Three credits**
 Techniques of public relations for those holding supervisory or higher positions in management and marketing. Principles of creating and maintaining good public relations, including employee-employer relations. Customer-employee relations receive emphasis, while focus on the programming of the total public relations effort and selecting of appropriate strategy, media, and persuasive devices to accomplish objectives.

BUS 224
BUS 223

- Business 232 Sales Management** **Three credits**
Study from the viewpoint of management, dealing with the organization and operation of the sales division within the business enterprise. Planning, organizing and controlling of the total sales effort is emphasized. The case method of learning is employed extensively.
- 235 Managerial Marketing** **Four credits**
Study of the total enterprise regarding problems, analytical tools, and approaches to decisions. Concerns allocation of funds to various means of market cultivation, development of promotional strategy, price policy, and management of field selling effort. *Prerequisite: BUS 130*
- 240, 241, 242, and 243 (Arranged) Office Internship—Seminar** **Three credits**
After successful completion of basic courses, usually following the freshman year, students may elect internship. This course allows the students to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages for hours of work. To participate in this program students must be qualified to receive approval from their department and enroll with the coordinator. Their occupational interests are considered with their background or related classes to determine employment arrangements. The flexibility of developing individual programs for interested students in any related occupational opening is accomplished on the basis of developing a practical training program in agreement with the training station supervisors and the college coordinator. Full course load and departmental approval are prerequisites.
- 246, 247, 248, and 249 (Arranged) Management and Marketing Seminar** **Three credits**
After successful completion of basic courses, students may elect internship. This course allows the student to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages for hours of work. To participate in this program students must be qualified to receive approval from their department and enroll with the coordinator. Their occupational interests are considered with their background or related classes to determine employment arrangements. The flexibility of developing individual programs for interested students in any related occupational opening is accomplished on the basis of developing a practical training program in agreement with the training station supervisors and the college coordinator.
- 250 Intermediate Accounting I** **Four credits**
Balance sheet, income and retained earnings statements; the accounting process (bookkeeping systems, voucher system, adjustments, deferrals and accruals, inventories, depreciation, closing entries, cash versus accrual methods); the accounting process illustrated: cash and temporary investments; receivables; inventories (cost procedures and special valuation procedures); estimating procedures in inventory valuation; current liabilities (nature and various types of current liabilities). Prerequisite: Business 212.
- 251 Intermediate Accounting II** **Four credits**
Investments in stocks (types of dividends, rights of various stockholders, exchange of stocks, and investments and tax accounting); investments in bonds (kinds of bonds, amortization, redemption, conversion, U. S. bonds, and long-term notes and mortgages); investments in funds and miscellaneous items; plant equipment (acquisition, use, retirement, depreciation and depletion, and revaluation); intangible assets (kinds and goodwill); long-term liabilities. Prerequisite: Business 250.

- 252 Intermediate Accounting III** **Four credits** **Business**
Stockholders' equity from paid-in capital (capital upon corporate formation and subsequent changes in paid-in capital); stockholders' equity from retained earnings (source of retained earnings and types of dividends); statements from incomplete records (single-entry systems); errors and correcting entries; financial statement analysis (use of comparative data and special ratios and measurement); funds-flow and cash-flow reporting; price-level adjustments in financial reporting. Prerequisite: Business 251.
- 253 Cost Accounting I** **Four credits**
The basic principles of cost accounting are discussed including its contribution to management. Cost concepts, classifications and systems are presented to build vocabulary and understanding. Skill is developed in costing techniques and using cost records. The elements of cost-materials, labor, and overhead are treated in depth. Prerequisite: Business 212.
- 254 Cost Accounting II** **Four credits**
This course is a continuation of Cost Accounting I with emphasis on cost systems. Considerable practice is provided in process cost accounting, estimated cost procedures, standard costs, budgetary control, and management reports. Prerequisite: Business 253.
- 257 Federal Income Tax** **Four credits**
Course includes all aspects of Federal Income Tax as it concerns individuals. Fundamentals are emphasized, pertaining to income inclusions and exclusions, deductions allowable and not allowable, types of returns to be filed based on individual circumstances, dependents, exemptions, medical expenses, etc. With respect to a person operating a business as sole proprietor, the course includes reporting methods of business income, net operating loss carryforward and carryback, self-employment tax, investment credit and other pertinent topics. Treatment of capital gains and losses, disposition of business assets, installment sales, and other specialized subjects are covered. Prerequisite: Business 212 or departmental approval. *Begin every second year*
- 260-265 Traffic and Transportation Management** **Three credits**
Two-year, six-term course resulting in a certificate issued by the College. Theoretical, historical, and academic aspects of traffic management are presented with analysis of practical problems and specific cases.
- 266 Accounting Systems and Procedures** **Four credits**
Provides broad understanding of accounting systems. Includes information and actual application of single entry systems, batch systems, double entry manual systems, accounting board systems, machine bookkeeping systems, punched tape and punched card systems. Skill and development is provided for flow charting, forms design, methods of coding and condensing information, punched card design and application of techniques to the designed system. Prerequisite: Survey of Cost Accounting, or Business Division approval.
- 267 Governmental and Institutional Accounting I** **Four credits**
Provides instructions in the characteristics of governmental and municipal accounting and how it differs from commercial accounting. The essentials of fund accounting, appropriations, allotments, encumbrances and liquidation are covered. Prerequisite: Business 212 (Business 252 preferred).

- Business 268 - Governmental and Institutional Accounting II** **Four credits**
 Continuation of Governmental Accounting I offering detailed accounting procedures and accepted practices in governmental accounting including institutional accounting for units such as hospitals and schools. Instruction is also provided in summarizations and reports of activities and performance. Prerequisite: Business 267.
- 269 - Governmental and Institutional Accounting III** **Four credits**
 Continuation of Governmental Accounting II with emphasis on recent changes and current practices in different government units. Considerable instruction and work is devoted to program budgeting and performance measurement. Prerequisite: Business 268.
- 270 - Real Estate Essentials** **Two credits**
 Designed for new or inexperienced salespeople and those interested in entering the real estate profession. Covers prospecting, listings, showing property, salesmanship, business practices, offers to purchase, Michigan License Law, ethics, etc.
- 271 - Real Estate Business I** **Three credits**
 Designed as first course in G. R. E. program and for preparation toward the State Real Estate License examination.
- 275 - Life Insurance Essentials** **Three credits**
 An introductory course in insurance covering various phases of insurance, including the history, growth, and development; the economics of insurance; careers and sales programs; types of life, business, and health insurance; programming and estate planning; and Michigan License Law. The course is designed to give a student the opportunity to explore career positions in the insurance profession; to acquaint the student with various types of insurance and insurance terminology; to allow the student to better understand the purposes of insurance and its benefits; and to allow the student to realize the economic importance of insurance, professional insurance organizations and insurance salesmen in our present day economy.
- Court and Conference Reporting**
- 101 - Machine Shorthand I** **Four credits**
 Theory and techniques of machine shorthand. Designed to develop vocabulary and build skill up to 60 words a minute.
- 102 - Machine Shorthand II** **Four credits**
 Continuation of CCR 101 with speed development to 100 words a minute.
- 103 - Machine Shorthand III** **Four credits**
 Continuation of CCR 102 with speed development to 120 words a minute.
- 104 - Machine Shorthand IV** **Four credits**
 Continuation of CCR 103 with speed development to 140 words a minute.
- 201 - Machine Speed Building** **Four credits**
 Continuation of CCR 104. Introduction of new speed building shortcuts. Speed development to 150 words a minute.
- 202 - Machine Speed Building** **Four credits**
 Continuation of CCR 201. Introduction of new speed building shortcuts. Speed development to 200 words a minute.

- 203 - Machine Speed Building** **Four credits** **Business**
 Continuation of CCR 202. Introduction of new speed building shortcuts. Speed development to above 200 words a minute.
- 204 - Machine Speed Building** **Four credits**
 Continuation of CCR 203. Introduction of new speed building shortcuts. Speed development to 250 words a minute.
- 221 - Court Reporting Procedures** **Two credits**
 Court procedures and requirements of the court reporter are presented with insights on what new reporters can expect on the job.
- 222 - Court Reporting Procedures** **Two credits**
 Continuation of CCR 221.
- 210 - Legal Typing - Transcription** **Three credits**
 Legal forms, transcript form for various purposes are presented with considerable practice in transcribing machine shorthand notes. Taught in conjunction with CCR 202 in which student must also be enrolled.
- 211 - Legal Typing - Transcription** **Three credits**
 Continuation of CCR 210. Must be enrolled in CCR 203.
- 240 - Court Practice** **Three credits**
 Actual courtroom practice under the direction of an official court reporter.
- 241 - Court Practice** **Three credits**
 Continuation of CCR 240.
- Economics**
- 101 - Applied Economics** **Three credits**
 Introductory survey of business economics. Course work focuses attention on the major economic problems and issues within our American economy. Provides an overview and some tools of economic analysis to aid in logical interpretation. Major subject areas relate to overall look at our economic system, prices and their application, money, income and economic growth.
- 201 - Principles of Economics I** **Three credits**
 First of three courses about the American economy. Provides training for development of objective consideration of economic issues. Concentrates on vital economic problems, business organization, including cooperative, individual and family income, personal finance, national income and product, economic role of government, labor and industrial relations, saving, consumption and investment, and theory of income determination. Prerequisite: Sophomore standing or departmental approval.
- 202 - Principles of Economics II** **Three credits**
 Continuation of Economics 201. Includes: business cycles, prices and money, banking system, monetary and fiscal policy, supply and demand, demand and utility, cost and supply, equilibrium of the firm, and imperfect competition. Prerequisite: Economics 201.
- 203 - Principles of Economics III** **Three credits**
 Continuation of Economics 202. Theory of production and marginal products, rent, wages and collective bargaining, interest and capital, profits and incentives, international trade, technology, problems of economic growth and development, and alternative economic systems. Prerequisite: Economics 202.

General Clerical students

EC 201, 202

Business Data Processing

103 Introduction to Data Processing *Fall* Five credits
Introduction to the fundamental concepts and operating principles common to all data processing operations. Provides the basis for future detailed study of specific systems. Four hours lecture, two hours laboratory.

104 Computer Programming I *Winter* Six credits
Begins a detailed study of computer programming, utilizing a specific data processing system and providing hand-on training in addition to regular classroom work. Primary emphasis is given to programming business data processing applications using symbolic and machine language. Prerequisite: *Data Processing 103 Introduction to Data Processing*. Four hours lecture, four hours laboratory.

*104
non Bus
with Prog.*

105 Computer Programming II *Spring* Six credits
Continuation of DP 104 including more advanced concepts of looping, indexing, and the use of subroutines, and involving more detailed program sessions using the computer system. Four hours lecture, four hours laboratory. Prerequisite: Data Processing 104 Computer Programming I.

109 Fortran (On demand) *Spring* Scientific
Introduction to general purpose digital computers. Programming concepts are taught using Fortran language and the IBM 1620 computer. Prerequisite: Mathematics 102 Intermediate Algebra and Mathematics 108 Trigonometry or consent of instructor.

120 Survey of Data Processing *Fall, Winter* Three credits
General survey course designed to acquaint the layman with Electronic Data Processing, its uses, terminology, and management.

130 Systems & Applications I *Winter* Three credits
A basic understanding of computer system-oriented solutions to the problems and processes of the business environment is given as well as a command of the terminology, principles, and procedures of data processing. Emphasis is placed upon general systems techniques and upon general principles of data processing common to all semiautomatic and automatic business systems.

203 Computer Programming III *Fall* *5* credits
Continuation of Data Processing 105 involving repeated use of principles presented in the previous programming courses and including a study of magnetic tape and random access data processing. Four lecture hours, four hours laboratory. Prerequisite: Data Processing 105 Computer Programming II, *MTA 155*

204 *Computer Prog. IV* *Winter* *5* credits
Designed to familiarize the student with the purpose and function of various types of programming systems and to make him aware that programming systems are as important as the machines themselves. Includes basic concepts of such programming systems as assemblers, compilers, report generators, monitors, sort-merges, and others, including high level languages. Should provide the student with sufficient knowledge of programming systems concepts to enable him to learn specific system with minimum of instruction. Four hours lecture, four hours laboratory. Prerequisite: DP 203 Computer Programming III.

Symbolic

108 *Indicates courses in one-year certificate program. Applicants must take entire program during day. All other Data Processing courses offered evenings almost exclusively.

~~206 Systems Development and Design Three credits Business
A course designed to guide the student through the stages of the evolution of business data processing systems, including analyses of present information flow, system specifications and equipment selection, and implementation of the system, with the objective of giving him an understanding of the skill and knowledge needed for the effective use of data processing equipment in meeting the information needs of business. Prerequisite: DP 204 Programming Systems and DP 203 Computer Programming III.~~

230 Systems and Applications II (formerly DP 132) *Spring* Three credits
Continuation of DP 130 and open also to those who have a familiarity with data processing through actual work experience. An understanding of systems is provided to enable one to approach the problems of business with computer oriented solutions. (Note: Data Processing 130 and Data Processing 132 may be combined to substitute for Data Processing 204 with the approval of an advisor.)

246 Data Processing Internship and Field Project Three credits
A comprehensive individual assignment, involving the application of principles, skills, and techniques learned in earlier data processing courses. Prerequisite: Final term, sophomore status.

Hotel-Motel and Food Service Mid-Management Technology *no prerequisites*

101 Introduction to the Hospitality Industry Four credits
Introduction to the Hotel-Motel industry, and its management departments, the industry's responsibilities, and opportunities for creative employment.

112 Basic Food Management & Production Five credits
Basic concepts in menu planning, food purchasing, nutrition, sanitation and food storage. Demonstration and laboratory.

123 Food Production Techniques & Practice Five credits
Food production as applied to quantity operation and application. To include laboratory exercises.

134 Internship and Seminar Three credits
Offered summer term to students who have successfully completed basic courses. Allows for the student to be placed in an approved training facility, to earn credits for satisfactory work performance, and earn wages for hours worked.

201 Food Service Operation Three credits
The five functions of management with emphasis on supervision and service.

202 Hotel, Motel Housekeeping Four credits
Deals with the broad scope of the housekeeper's position and stresses employee training, record keeping, executive responsibilities and use of equipment and materials.

203 Food Science Four credits
Physical, chemical and biological characteristics of food. A laboratory course.

212 Maintenance and Equipment Four credits
Provides essential technical information in electronics, air conditioning, plumbing, heating, electricity, acoustics, and other equipment to establish preventative maintenance routine and to make necessary operating decisions.

- Business*
- 213 Merchandising for the Hospitality Industry **Three credits**
Sales promotion and methods used to obtain public recognition and good will.
- 214 Law As Related to Innkeeping **Three credits**
A course for innkeepers and their personnel as well as students. Presentation of safe, sound rules to assist in avoiding lawsuits and legal pitfalls.
- 215 Advanced Food Production **Three credits**
Advanced commercial food production. A laboratory course.
- 221 Hospitality Management **Three credits**
General concepts and management including personnel, guests, and operations present and future.
- 222 Food & Labor Cost Control **Three credits**
Supervisory procedures in the control of two major items of expense.
- 223 Front Office Procedures **Four credits**
Organization, control and operation of the front office as applied in the reservation and sale of rooms, service, keeping of accurate accounts, presenting bills of receipts of payment.
- 224 Catering & Beverage Operation **Three credits**
Food and beverage sales and service.
- Law Enforcement** *No prerequisites*
- 101 Introduction to Law Enforcement **Four credits**
Orientation course designed to acquaint the student with the fields of law enforcement. Municipal, county, state and federal police organizations studied. Includes the history, philosophy and administration of justice.
- 102 Police Organization and Administration **Four credits**
Course covers analysis and study of functional divisions of the modern police department. Functions to be studied will include management operations, coordination of activities, communications, recruiting, training, public relations and a look at the future of law enforcement. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval.
- 103 Theory of Patrol **Three credits**
Study of patrol as a basic operation of the police function, the responsibilities of the uniform and patrol officers, purposes, methods, types and means of police patrol. Covers determination of patrol strength layout, beats, areas and deployment. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval.
- 201 Introduction to Criminal Investigation **Four credits**
Fundamentals of criminal investigation, including techniques of surveillance, search at the scene of the crime, collection, recording and preservation of evidence, methods used in the police science laboratory and cooperation with other agencies. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval.
- 202 Criminal Law and Procedures **Four credits**
Study of elements of criminal law including its purposes and functions. Covers law of arrest, search and seizure, rights and duties of officers and citizens, elements necessary to establish crime and criminal intent. Other topics include sources of criminal law, criminal responsibility and general court procedure. Prerequisite: 110 Law Enforcement 101 or Law Enforcement Coordinator approval.

- 203 Crime Prevention **Three credits** **Business**
Analysis of causes and control of crime. Causes of crime and methods of dealing with criminal and potential criminal emphasized. Statistics of crime, problems of the juvenile offender, theories of punishment, problems of probation and parole and the police officer as an agent for the prevention of crime are examined. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval.
- 204 Traffic Law and Accident Investigation **Three credits**
A course covering the Uniform Traffic Code, effective traffic control procedures, elements of "selective" enforcement, parking and intersection control, procedures and policies for vehicle accident investigation, investigation of fatalities, causes, prevention and scope of accident investigation. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval.
- Juvenile Delinquency and Youth Behavior **Three credits**
Early emphasis on the problems of defining juvenile delinquency and a survey of its present status in major industrial nations. Main concentration on theories attempting to account for juvenile delinquency and evidence supporting such theories. Brief coverage of control and correction as a concluding topic.
- 205 Legal and Criminal Behavior **Three credits**
Application of psychological principles, methods, and techniques to legal and criminal problems and procedures including the formation, detection, prevention and rehabilitation of criminal behavior, testimony, legal arguments, trial tactics, and other courtroom procedures.
- 206 Police Interviewing and Interrogation **Three credits**
A study of the techniques and tactics that can be successfully used in police interviewing and interrogation. Major emphasis on the interview process as a method of gathering information. Includes constitutional law and court decisions regulating interviewing of suspects and criminal offenders.
- 246 Law Enforcement Internship **Three credits**
After successful completion of basic Law Enforcement courses students may elect Law Enforcement Internship. This course allows the students to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages. To participate in this program students must secure approval from the Law Enforcement Coordinator. Their occupational interests are considered with their background and related classes to determine employment arrangements. Flexibility of developing individual programs for interested students in any of the Law Enforcement related occupations is accomplished on the basis of developing a practical training program in agreement with the training station supervisors and the college coordinator. The coordinator further conducts an arranged seminar once each week with the internship students to accomplish course objectives which are in accord with purposes of vocational education and to maintain constant evaluation in conjunction with the coordination visits to training stations.
- Library Technology**
- 101 Introduction to Library and Use of the Library *Fall, Winter* **Three credits**
General course in use of the library, including general background and philosophy of library service, especially public libraries. Students receive instruction and practice in the use of the card catalog, Readers' Guide, encyclopedias, dictionaries, and general reference works. Practice in the shelving of books so that arrangement of books on the shelves is understood.

Non-Handing

Business 102 Ordering, Circulation, Maintenance, Preparation of Materials Three credits

Ordering, preparation, physical arrangement, circulation, maintenance, and ordering of books, periodicals, pamphlets and other library materials. Study of various systems of circulating library materials. Study of the acquisition of periodicals and pamphlets, records, picture collections, etc. Study of inventory methods, reasons for inventory, and records to be kept.*

103 Reference Three credits

Study of general encyclopedias, special reference works, year books, dictionaries, and other basic sources used in reference work. An expanded course going beyond course I and including practice in the preparation of simple bibliographies, emphasizing correct form.*

201 Technical Services Three credits

Study of the Dewey Decimal Classification system with problems and practice in simple classification. The purpose is to give an understanding of the classification numbers, not to make classifiers of the students. Study of the principles of dictionary cataloging, using, perhaps, SIMPLE LIBRARY CATALOGING, by Susan Grey Akers. Practice in dictionary cataloging plus practice in assigning subject headings. Emphasis to be placed on working under direction and on typing catalog cards from prepared copy with work on modifying printed cards. Practice in filing in the various library catalogs—dictionary catalog, authority file, and shelf list.*

205 Library Problems Three credits

Seminar type course designed to integrate the technical course work of the preceding quarters. Special problems are assigned for investigation and reporting. Group discussion of common problems. A unit on Audio-Visual familiarization is included.*

246 Coordinated Work Experience (or approved elective) Three credits

Prerequisite: LF 101, 102, and 103.

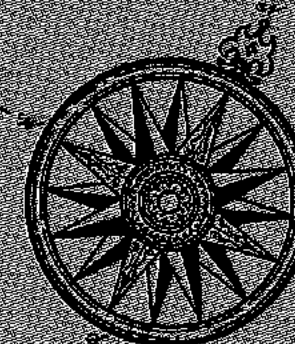
*Prerequisite: LF 101.

DIVISION OF TECHNOLOGY

Department of Engineering Technology

Transportation Training Program

Department of Applied Technology



Technology Division *Division of Technology**Division Chairman: William R. Monroe*

Students enrolled in the Technical Division can participate in the following programs:

- I. If a student desires to obtain a four-year Engineering degree, he can enroll in the Pre-Engineering curriculum and conduct his first two years of study at Lansing Community College. Lansing Community College is accredited by North Central Association of Colleges and Secondary Schools, Michigan Commission on College Accreditation, thus insuring that work in specified programs such as this is transferable to other institutions.
- II. Students can enroll at Lansing Community College and obtain training leading to other careers than those requiring a four-year degree. These programs are divided into the following categories:
 - A. Programs leading to the 2-year Associate of Science degree. This group includes training for the careers of technician in many fields.
 - B. One year Certificate programs leading to a career of engineering technician or craftsman in industrial, building or service occupations.
 - C. Special courses providing intensified training leading to a career, such as the Lansing Community College Truck Driver Training program.
 - D. Manpower Development courses sponsored by the U. S. and State of Michigan Departments of Education are available in various fields from time to time. Participation in one of these programs will qualify a student for a career in a great variety of technical fields. Some of these are discussed in the Manpower Development section.
- III. Individual specific courses which may be taken to provide additional training enabling the student to become more proficient in his field of interest.

*William R. Monroe*

These opportunities are described more fully in the following sections outlining the activities of the Engineering Technology Department and the Applied Technology Department; and the Transportation Training Program.

The increased mechanization of American industry, especially in the last ten years, has created a dire need for skilled technicians, young people who have additional practical and technical training above the high school level, young people who fill the gap between unskilled worker and graduate engineer. To meet this need Lansing Community College has developed seven separate but equally intensive two-year technology programs: Chemical Technology, Civil Technology (with Highway, Sanitary and Structural options), Computer Technology, Community Development, Drafting Technology, Fire Science, Electronics Technology, Mechanical Technology, Quality Control and Systems Technology.

The technicians from each of these programs are concerned with "how to do it" and use their special knowledge to perform operations, make calculations, conduct laboratory developmental work, and plan and conduct tests. They are employed as laboratory technicians, draftsmen, testers, research technicians, engineering technicians, and in a host of other capacities.

Another by-product in the increased mechanization of American industry is the continued demand for higher trained skilled craftsmen. The Applied Technology Department has as its objective the training of these craftsmen. Training programs are offered in the fields of building trades, industrial trades, and service trades.

To further supplement the need of the community and of industry, Lansing Community College has established, and is operating, a Transportation Training program. The objective of this program is to train students to become qualified employees in the trucking industry. To aid students in this program, and in others, a special program has been established to assist students and industrial groups to establish and complete special courses sponsored by the U. S. Government and

the State of Michigan. These Manpower Development and Training Act programs are offered from time to time and on different subjects.

And once again in its technical programs, as in its Business program, Lansing Community College gives ample opportunity for cooperative training by allowing time for part-time employment that corresponds to and puts classroom theory into practice. For the convenience of the student, most of the courses are offered evenings as well as during the day.

*Department of Engineering Technology**Department Chairman: Edwin C. Bergmann*

The rapidly changing technological developments facing our industrialized society have resulted in the demand for technically prepared personnel in all fields of industrial employment. Lansing Community College Engineering Technology Department has as its primary objective, the responsibility for preparing these qualified technicians to assume positions in this society.

A technician is an employee whose job requires basic scientific and mathematical knowledge, specialized education or training in some aspect of technology, science or industry, and who, as a rule, works directly with scientists, engineers, or other professional personnel.

In general, technicians are more intensively trained in fundamentals than craftsmen and in manipulative skills than full professionals. Technicians usually become qualified through formal technical training, on-the-job training, or a combination of both.

In addition to receiving technical training in a specific field, the prospective technician will be required to take selected courses of a general education nature that will give him a better understanding, appreciation, and knowledge of his home, civic and community responsibilities. Upon completion of a two-year program in a selected area of technology the student is awarded an Associate Degree with qualifications that should assure him of a position in a number of industrial and technological occupations.

The Engineering Technology Department has also assumed the responsibility for providing opportunities for individuals to upgrade themselves in their present positions or to guide them in the selection of a new occupation. Individual courses are offered in all technology areas for these specific purposes.

The Engineering Technology Department features a Certificate Program through which students may obtain training to qualify them for a specific career. The certificate is awarded upon completion of the course prescribed for that curriculum. Certificate programs vary in length from one to two years.

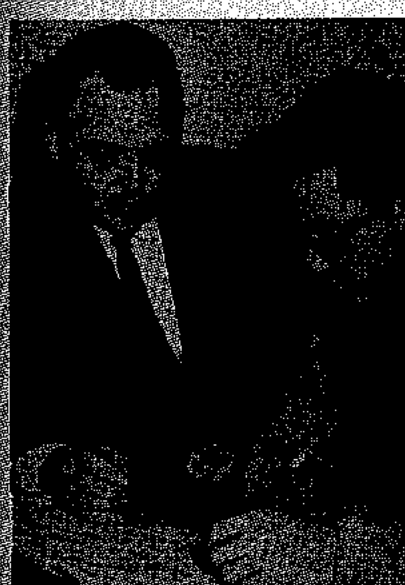
Engineering Technology Curricula

The various curricula in which a student can enroll are given in the following pages. In each case the curriculum and the career pertaining to that curriculum are discussed briefly, and the specific courses that are required to obtain a Certificate or Degree are listed. For each curriculum an advisor will be appointed from the department concerned. In the subsequent section each of these courses is described more fully.

**Technology Division****Engineering Technology***Edwin C. Bergmann*

LANSING COMMUNITY COLLEGE
Department of Engineering Technology

Curriculum	Drafting Technology (DT Courses)	Civil Technology (CT Courses)	Electronics Technology (ET Courses)	Mechanical Technology (MT Courses)	Systems Technology (ST Courses)	Required General Studies
Architectural Technology	103 131 135 136 230 231 232 233 234	201 204 207 241 242 243 245 246 247				MTH 151 152 153 GEO 200 ENG 101 102 103 ART 101 SS 250 NS 102 103
Cartographic Drafting & Photogrammetry	101 103 106 206	105 111 212 213 214 238				MTH 151 152 153 PHY 201 202 203 ENG 101 102 103 DP 109 SS 250 SPH 104
Civil Technology						
Highway Option	101 103 106	101 102 103 111 201 202 203 204 235 206 207 212 213 214				MTH 151 152 153 PSY 101 ENG 101 102 103 SS 250 PHY 201 202 203
Highway Option Coop	101 103 106	101 102 103 111 201 202 203 204 205 206 207 212 213 214				MTH 151 152 153 PHY 201 202 203 ENG 101 102 103 SS 250 PSY 101
Sanitary Option	101 103 106	101 103 104 111 118 201 205 206 210 219	260			MTH 151 152 153 PHY 201 PSY 101 MIC 103 ENG 101 102 103 CEM 111 112 113 201 SS 250
Structural Option	101 103 106 235	101 102 103 201 203 204 206 207		204		MTH 151 152 153 PHY 201 202 203 ENG 101 102 103 SS 250 CEM 110
Community Development	101 135 236	131 132 133 231 232				MTH 102 104 103 160 EC 201 202 203 PSY 101 ENG 101 102 103 DP 103 109 BUS 107 235
Computer Technology	101		111 112 113 231 232 233 241 242 243	101 102 103		MTH 151 152 153 155 SS 250 ENG 101 102 103 PSY 101 PHY 201 202 203 DP 103
Drafting Technology	101 102 103 104 202	260 261	260 261	101 102 103 201 203 204 207 208 210 211		MTH 151 152 153 CEM 110 ENG 101 102 103 PSY 101 SS 250 PHY 201
Electronics Technology	101		111 112 113 231 232 233 241 242 243 271 272 273 206	101		MTH 151 152 153 ENG 101 102 103 PHY 201 202 203 SS 250
Fire Science Technology		161 162 163 164 160 165 166 167 261 262 263 264 265 266 267				ENG 101 102 103 PHY 201 202 203 SS 250
Mechanical Technology	101 102 103 104 202			101 102 103 201 203 204 207 208 208 209 210 211		MTH 151 152 153 SS 250 ENG 101 102 103 PHY 201 202 203 SS 250
Quality Control Safety Technical Mgmt.						ENG 101 102 103 PHY 201 202 203 SS 250
Pre-Engineering	101 102 103					ENG 101 102 103 MTH 151 SPH 104 SS 250 BUS 229 CEM 110 MTH 151 152 153 SS 250 ENG 101 102 103 PSY 101 PHY 201 CEM 110



Cartographic Drafting and Photogrammetry

Cartographic drawings were among the first methods of transmitting and recording information about land formations, routes, or specific geographic locations. The art of drawing maps has become an essential vocation in our present society. The technique has been refined and tremendously improved since crude maps were made freehand in the field while exploring. Today the work requires solution of cartographic problems involving the investigation, development, evaluation, selection, or adaptation of plans, standards, equipment, methods, or techniques of map, chart design or construction. The United States Coast and Geodetic, Geological and Oceanographic Surveys, State and Federal Highway, Agriculture, and Forest agencies, and private industries are a few of the many organizations which employ photogrammetry experts. Specialists in this field are trained for stereoplotter operation for photogrammetry, as draftsmen, and illustrators. A certificate is awarded for completion of the one-year program in Cartographic Drafting. The Associate Degree in Technology is awarded after completion of the second year.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
DT 101	Engineering Drawing	3	MTH 153	Math. for Technicians	5
CT 105	Aerial Photo Interpretation	3	CT 214	Geodetic Surveying	4
MTH 151	Math. for Technicians	5	PHY 201	Physics	4
ENG 103	Composition	3	DP 109	Fortran	3
PE 101	Physical Education	1			10
		15			
	Winter Term				
DT 106	Engineering Drawing--Civil	3	CT 213	Advanced Surveying	4
DT 103	Descriptive Geometry	3	PHY 202	Physics	4
MTH 152	Math. for Technicians	5	CT 238	Photogrammetry and Stereoplotter Operation	4
ENG 102	Composition	3	SS 250	American Government	4
PE 101	Physical Education	1			16
		15			
	Spring Term				
CT 111	Elementary Plane Surveying	5	PHY 203	Physics	4
CT 212	Route Surveying	4	ENG 103	Composition	3
DT 206	Cartographic Drawing	6	CT 238	Advanced Photogrammetry and Stereoplotter Operation	6
PE 101	Physical Education	1	SPH 104	Fundamentals of Speech	3
		16			16

Engineering Technology



Engineering Technology **Civil Technology**

The civil technician is prepared for a variety of positions in the general construction field, especially areas which demand a working knowledge of drafting, surveying, construction materials, mapping, and topography. The Community College two-year program offers training in the basic areas of mathematics and science as needed in the civil engineering field, and includes both construction laboratory and in-the-field experience as part of the technician program.

The program is designed to afford opportunity for work experience related to the curriculum. Some students will be employed by the Michigan State Highway Department on the cooperative work-study program. Others will secure their on-the-job experience with county or municipal departments or private firms.

Civil Technology Highway Option

A two year curriculum designed to provide the background and skills for immediate employment as an engineering draftsman, topographical draftsman, structural draftsman, structural detailer, instrument man, traffic technician, construction inspector, materials laboratory technician, specification writer, estimator, or construction equipment salesman.

Freshman Year		Credit Hours	Sophomore Year		Credit Hours
	Fall Term			Fall Term	
MTH	151 Mathematics for Technicians	5	CT	203 Soils Testing & Classification	3
DT	101 Engineering Drawing	3	PHY	201 Physics	4
CT	101 Construction Methods	2	CT	202 Highway Technology	4
CT	102 Construction Materials	4	CT	214 Geodetic Surveying	4
CT	103 Construction Costs	2			15
PSY	101 Orientation	1	Winter Term		
		17	PHY	202 Physics	4
			CT	204 Strength of Materials	3
			CT	213 Advanced Surveying	4
			ENG	102 Composition	3
					14
			Spring Term		
			PHY	203 Physics	4
			CT	207 Structural Technology	4
			CT	206 Project Lab	2-3
			ENG	103 Composition	3
			SS	259 American Government	4
					17-18
		17			
			Summer Term		
			TEC	208 Internship Seminar	3



Civil Technology Highway Option Cooperative

Under the Highway Option Program, Lansing Community College participates with the Highway Department in a cooperative program. This is available to students who qualify in a competitive Civil Service examination. During the student's work study program he will work cooperatively, attending classes at the College as well as working for the Highway Department.

Other Cooperative and Internship programs can be arranged for students not directly connected with the Highway Department.

1st Year	Fall Term	Credit Hours	2nd Year	Fall Term	Credit Hours
The students will be working on co-op and will not be in school this term.			The students will be working on co-op and will not be in school this term.		
Winter Term			Winter Term		
MTH	151 Mathematics for Technicians	5	ENG	101 Composition	3
DT	101 Engineering Drawing	3	MTH	153 Mathematics for Technicians	5
CT	101 Construction Methods	2	CT	201 Construction Contracts	3
CT	102 Construction Materials	4	CT	205 Hydrology	3
CT	103 Construction Costs	2	CT	213 Advanced Surveying	4
PSY	101 Orientation	1			18
		17	Spring Term		
			DT	103 Descriptive Geometry	3
			ENG	102 Composition	3
			PHY	201 Physics	4
			CT	203 Soils Testing & Classification	3
			CT	212 Route Surveying	4
			Electives		3-5
					17-18
			3rd Year		
			CT	214 Geodetic Surveying	4
			CT	202 Highway Technology	4
			CT	204 Strength of Materials	3
			PHY	202 Physics II	4
					15
			Winter Term		
			ENG	101 Composition	3
			PHY	203 Physics III	4
			CT	207 Structural Technology	4
			CT	206 Project Laboratory	2-3
			SS	259 American Government	4
					17-18

Graduation at the End of Winter Term



Engineering Technology

Civil Technology -- Sanitary Option

A two year curriculum to provide the background and skills for immediate employment as a sanitary engineering draftsman, sewer or water system construction inspector, sewage treatment plant technician, water treatment plant technician, public health technician, laboratory technician, water pollution investigator, or process and equipment salesman.

Freshman Year			Sophomore Year		
Year	Fall Term	Credit Hours	Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	ENG	101 Composition	3
DT	101 Engineering Drawing	3	PHY	201 Physics	4
GEM	111 General Chemistry	5	CT	101 Construction Methods	2
ET	260 Industrial Electricity OR Elective	3-4	CT	104 Construction Materials (without Lab.)	2
PSY	101 Orientation	1	CT	103 Construction Costs	2
		17-18	CT	118 Water Supply & Treatment	4
Winter Term			Winter Term		
MTH	152 Mathematics for Technicians	5	ENG	102 Composition	3
CEM	112 General Chemistry	5	CT	229 Sewerage & Sewage Treatment	4
DT	106 Engineering Drawing--Civil	3	CT	201 Construction Contracts	3
CT	110 Hydraulics	3	CT	205 Hydrology	3
		16		Elective	3-4
Spring Term			Spring Term		
MTH	153 Mathematics for Technicians	5			16-17
CEM	113 Chemistry OR		MIC	100 Microbiology	4
GEM	201 Chemistry	5	SS	250 American Government	4
CT	111 Elementary Surveying	5	DT	103 Descriptive Geometry	3
	Elective	3-4	CT	206 Project Lab	2-3
		18-19	ENG	103 Composition	3
Summer Term			Summer Term		
TEC	206 Internship-Seminar	3			18-17

Civil Technology -- Structural Option

A two year curriculum to prepare the student for employment as a structural draftsman, construction draftsman, construction estimator, construction inspector, materials laboratory technician, technical specification writer, or building materials and supplies salesman.

Freshman Year			Sophomore Year		
Year	Fall Term	Credit Hours	Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	PHY	201 Physics	4
DT	101 Engineering Drawing	3	CT	203 Soil Testing & Classification	3
CT	101 Construction Methods	2	DT	235 Structural Drawing	3
CT	102 Construction Materials	4		Elective	3-6
CT	103 Construction Costs	2			15-16
		16	Winter Term		
Winter Term			PE	102 Physical Education	1
MTH	152 Mathematics for Technicians	5	CT	204 Strength of Materials	3
DT	106 Engineering Drawing--Civil	3	PHY	202 Physics	4
ENG	101 Composition	3	SS	250 American Government	4
CEM	110 Industrial Chemistry	3		Elective	3
CT	201 Construction Contracts	3			15
		17	Spring Term		
Spring Term			PHY	203 Physics	4
MTH	153 Mathematics for Technicians	5	CT	207 Structural Technology	4
DT	103 Descriptive Geometry	3	ENG	103 Composition	3
ENG	102 Composition	3	CT	206 Project Lab	2
PE	103 Physical Education	1		Elective	3
MT	204 Metallurgy	3			16
		15	Summer Term		
Summer Term			TEC	206 Internship-Seminar	3

Community Development Technology

The training objective of the curriculum in Community Development Technology is to provide the necessary knowledge and manipulative skills for entry and success in positions as community development technicians or urban planning technicians. The subject matter of the courses in this area include the study of population, land usage, community functions, data gathering and analysis, and the legal aspects of planning.

Freshman Year			Sophomore Year		
Year	Fall Term	Credit Hours	Year	Fall Term	Credit Hours
MTH	102 Intermediate Algebra	5	PHY	201 Physics	4
ENG	101 Composition	3	MTH	186 Statistics	5
BUS	107 Business Machines I	3	EC	201 Principles of Economics I	3
PSY	101 Orientation	1	DP	100 Introduction to Data Processing	5
DT	101 Engineering Drawing	3			17
		15	Winter Term		
Winter Term			MTH	184 College Algebra & Trig. I	5
MTH	164 College Algebra & Trig. I	5	ENG	102 Composition	3
ENG	102 Composition	3	ART	101 Drawing I	2
ART	101 Drawing I	2	CT	131 Community Development I	3
CT	131 Community Development I	3		Elective	2-3
		15-16			14
Spring Term			Spring Term		
MTH	165 College Algebra & Trig. II	5	MTH	165 College Algebra & Trig. II	5
DT	135 Pictorial Illustration	3	DT	135 Pictorial Illustration	3
CT	132 Community Development II	3	CT	132 Community Development II	3
CT	133 Community Development Law	3	CT	133 Community Development Law	3
	Elective	2-3		Elective	2-3
		16-17			16
Summer Term			Summer Term		
TEC	206 Internship-Seminar	3			16

Engineering Technology



Engineering Technology Computer Technology

Computer technicians are in demand in many diversified fields. Lansing Community College has undertaken the development of various curricula to meet the increasing need for qualified personnel with such training. Persons interested in programming or data processing should examine the Electronic Data Processing Curriculum located elsewhere in this catalog. Those students interested in the design, internal operation, and repair of computers should enroll in Computer Technology.

Freshman Year			Sophomore Year		
Year	Fall Term	Credit Hours	Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	ET	231 Computer Circuits	3
ENG	101 Composition	3	ET	241 Automation	4
ET	111 Electrical and Electronic Circuits	5	DP	103 Introduction to Data Processing	3
MT	101 Manufacturing Processes	3	PHY	201 Physics	4
PSY	101 Orientation	1			
		17			16
Winter Term			Winter Term		
MTH	152 Mathematics for Technicians	5	ET	232 Computer Circuits	3
ENG	102 Composition	3	ET	242 Automation	4
ET	112 Electrical and Electronic Circuits	5	MT	102 Manufacturing Processes	3
DT	101 Engineering Drawing	3	PHY	202 Physics	4
		16			14
Spring Term			Spring Term		
MTH	153 Mathematics for Technicians	5	ET	233 Computer Circuits	3
ENG	103 Composition	3	ET	243 Automation	4
ET	113 Electrical and Electronic Circuits	5	MT	103 Manufacturing Processes	3
SS	250 American Government	4	MTH	155 Data Processing Mathematics	5
PHY	203 Physics	4			
		17			18

Drafting Technology

Drafting skills are indispensable in virtually every variety of manufacturing, construction, and service industry. The College offers one specific two-year option designed to prepare students to become competent technicians in the area of Architectural Drafting. The Drafting Department also helps in the training of draftsmen for other related industrial fields.

Architectural Drafting

Freshman Year			Sophomore Year		
Year	Fall Term	Credit Hours	Year	Fall Term	Credit Hours
DT	131 Architectural Drafting	6	DT	231 Architectural Drawing	6
NS	105 Natural Science (Chemistry-Physics)	4	CT	204 Strength of Materials	3
ENG	101 Composition	3	CT	241 Office Practices and Procedures	4
MTH	151 Mathematics for Technicians	5	CT	242 Building Plumbing Systems	1
PE	101 Physical Education	1	ENG	103 Composition	3
		19			17
Winter Term			Winter Term		
DT	132 Architectural Drawing	6	DT	232 Architectural Drafting	4
NS	105 Natural Science (Astronomy-Geology)	4	CT	243 Building Electrical Systems	1
MTH	152 Mathematics for Technicians	5	DT	135 Pictorial Illustration	3
	Elective	2-3	CT	207 Structural Technology	4
		17-18	DT	234 Landscaping	2
				Elective	3
					17
Spring Term			Spring Term		
DT	230 Architectural Drawing	6	DT	232 Architectural Drawing	6
DT	103 Descriptive Geometry	3	CT	245 Urban Planning	2
ART	101 Drawing I	2	CT	246 Heating and Air Conditioning	1
ENG	102 Composition	3	CT	247 Architectural History	2
GEO	200 Elements of Geography	3	CT	201 Construction Contracts	3
		17			14

Drafting Technology (Industrial)

Freshman Year			Sophomore Year		
Year	Fall Term	Credit Hours	Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	PHY	201 Physics	4
MT	101 Manufacturing Processes	3	DT	104 Jigs and Fixtures	3
DT	101 Engineering Drawing	3	MT	209 Machine Design I	4
ENG	101 Composition	3	ET	260 Industrial Electricity	3
PSY	101 Orientation	1	MT	201 Machine Methods and Costs	3
		15			17
Winter Term			Winter Term		
MTH	152 Mathematics for Technicians	5	CEM	110 Industrial Chemistry	3
MT	102 Manufacturing Processes	3	ET	261 Industrial Electricity	3
DT	102 Engineering Drawing	3	MT	203 Industrial Management	3
ENG	102 Composition	3	MT	207 Automation Mechanics I	3
PE	103 Physical Education	1	MT	210 Machine Design II	4
		15			16
Spring Term			Spring Term		
MTH	153 Mathematics for Technicians	5	ENG	103 Composition	3
MT	103 Manufacturing Processes	2	MT	204 Metallurgy	3
DT	103 Descriptive Geometry	3	MT	208 Automation Mechanics II	3
SS	250 American Government	4	MT	211 Machine Design III	4
PE	101 Physical Education	1	DT	202 Die Design	3
		15			16

Electronics Technology

Electronics Technicians are employed in many fields, especially in those industries considered necessary for national defense. Many are found in research and development laboratories engaged in experimental, analytical, or testing work on types of equipment necessitating a broad knowledge of electrical and electronic phenomena. The Electronics Technician requires specialized training and education in the application of electronic theory. He should be familiar with the purpose and many uses of vacuum tubes, transistors, transducers and other components of electronic circuits. He repairs and maintains complex electronic equipment such as digital and analog computers, servomechanisms, photoelectric controls, automatic guidance equipment, and devices used in automation. He may be called upon to test precision electronic equipment such as airborne control and navigation equipment (avionics), machine tool controls, and radar. He may design wired and printed circuitry to meet prescribed specifications, using "breadboard" techniques and modifying circuits to obtain desired performance.

Freshman Year			Sophomore Year		
Year	Fall Term	Credit Hours	Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	ET	231 Computer Circuits	3
ENG	101 Composition	3	ET	241 Automation	4
ET	111 Electrical and Electronic Circuits	5	ET	271 Communications	5
MT	101 Manufacturing Processes	3	PHY	201 Physics	4
PSY	101 Orientation	1			
		17			16
Winter Term			Winter Term		
MTH	152 Mathematics for Technicians	5	ET	232 Computer Circuits	3
ENG	102 Composition	3	ET	242 Automation	4
ET	112 Electrical and Electronic Circuits	5	ET	272 Communications	5
DT	101 Engineering Drawing	3	PHY	202 Physics	4
		16			16
Spring Term			Spring Term		
MTH	153 Mathematics for Technicians	5	ET	233 Computer Circuits	3
ENG	103 Composition	3	ET	243 Automation	4
ET	113 Electrical and Electronic Circuits	5	ET	273 Communications	5
SS	250 American Government	4	PHY	203 Physics	4
		17			18

Engineering Technology Fire Science Technology

There are few occupations that have a history as colorful or romantic as the fire fighters. The bucket brigade and the horsepulled hand pumper answered the call of FIRE. However, the losses were great in both life and property.

Today the personal dangers are even greater, the hazards are more complex, and the value loss may be very high.

Fire control is more urgently needed today than it has ever been because of the concentration of value in business and industry.

To effectively cope with the tremendous hazards, fire science personnel must be trained to function in a team effort on a variety of technical equipment. Accuracy, timing, and good judgment are demanded if human life is to be preserved, property protected, and insurance rates held down.

There is an acute shortage of skilled fire and industrial protection personnel throughout the country.

Young men who have average mechanical skills, technical aptitudes, good health, and the desire to preserve and protect property, are eligible to enroll in the Fire Science Curriculum.



Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
CT	151 Basic Fire Protection	4	ENG	101 Composition	3
CT	152 Basic Fire Suppression	4	CT	261 Hazardous Materials II	6
CT	153 Basic Fire Prevention	4	CT	262 Ordnances and Codes I	3
MTH	151 Mathematics for Technicians	3	BUS	229 Public Relations	3
		17		Elective	3-4
Winter Term			Winter Term		
PE	103 Physical Education	1	ENG	102 Composition	3
SPH	104 Fundamentals of Speech	3	CT	263 Building Construction for Fire Security	3
CEM	110 Industrial Chemistry	4	CT	264 Fire Investigation I	3
CT	160 Fire Strategy and Tactics	5	CT	265 Emergency Rescue Procedures	4
CT	164 Protection Systems Equipment	3			15
		16	Spring Term		
Spring Term			Spring Term		
PE	103 Physical Education	1	ENG	103 Composition	3
CT	165 Hazardous Materials I	4	CT	266 Fire Investigation II	3
CT	166 Ordnances and Codes I	3	CT	267 Organizational Procedure	3
CT	167 Fire Hydraulics	4	SS	250 American Government	4
		3-4		Elective	1-4
		15-16			16-17



Engineering Technology

Mechanical Technology

It has long been evident that machines will be one of the most important factors in our future economy. History records many sequences such as the horse, the steam locomotive, the automobile, the aircraft, and now the missile. Men with a full understanding of machinery will never be idle because the need for machines is expanding everywhere. Automation prescribes machines that operate themselves, but automation does not and will not displace the man who designs, who builds, or repairs the machines. The need for mechanical technicians exists in every industry, steel mills, wood processing, construction, transportation, communications, chemical, food, clothing, medical, and almost all other divisions of our economy.

DESCRIPTIONS OF TYPICAL POSITIONS

Draftsman and Machine Designers

A person trained to translate his or someone else's ideas into mechanical drawings and who has a thorough knowledge of mechanisms, materials, and the latest developments in industrial processes.

Cost Estimator

A person who has not only a complete knowledge of manufacturing processes in general, but also a thorough working knowledge of the machines and processes in his own plant so that he can accurately figure the manufacturing cost of any component from a drawing.

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	3	PHY	201 Physics	4
MT	101 Manufacturing Processes	3	DT	104 Jigs and Fixtures	3
DT	101 Engineering Drawing	3	MT	209 Machine Design I	4
ENG	101 Composition	3	ET	208 Industrial Electricity	3
PSY	101 Orientation	1	MT	201 Machines Methods and Costs	3
		15			17
Winter Term			Winter Term		
MTH	152 Mathematics for Technicians	3	CEM	110 Industrial Chemistry	3
MT	102 Manufacturing Processes	3	ET	201 Industrial Electricity	3
DT	102 Engineering Drawing	3	MT	203 Industrial Management	3
ENG	102 Composition	3	MT	207 Automation Mechanics I	3
PE	103 Physical Education	1	MT	210 Machine Design II	4
		15			16
Spring Term			Spring Term		
MTH	153 Mathematics for Technicians	3	ENG	103 Composition	3
MT	103 Manufacturing Processes	2	MT	204 Metallurgy	3
ED	103 Descriptive Geometry	3	MT	206 Automation Mechanics II	3
SS	250 American Government	4	MT	211 Machine Design III	4
PE	103 Physical Education	1	DT	203 Die Design	3
		15			16

Engineering Technology

Pre-Engineering

Freshman Year	Fall Term	Credit Hours
MTH 180	College Algebra and Trigonometry	5
ENG 101	Composition	3
CEM 111	General Chemistry (Inorganic)	5
PSY 101	Orientation	1
PE 101	Physical Education	1
		15
Winter Term		
MTH 213	Analytic Geometry and Calculus I	5
ENG 102	Composition	3
CEM 112	General Chemistry (Inorganic)	5
	Elective	3-4
PE 102	Physical Education	1
		17-18
Spring Term		
MTH 214	Analytic Geometry and Calculus II	5
ENG 103	Composition	3
CEM 113	Qualitative Analysis	5
	Elective	3-4
PE 103	Physical Education	1
		17-18

Sophomore Year	Fall Term	Credit Hours
MTH 215	Analytic Geometry and Calculus III	5
PHY 211	Physics	4
DT 101	Engineering Drawing	3
SS 101	Sociology	4
		16
Winter Term		
MTH 216	Analytic Geometry and Calculus IV	5
PHY 212	Physics	4
DT 102	Engineering Drawing	3
SS 102	Economics	4
		16
Spring Term		
MTH 219	Differential Equations	4
PHY 213	Physics	4
DT 103	Descriptive Geometry	3
SS 103	Political Science	4
		15

TECHNICAL INTERNSHIP

TEC 205, 206, 207 and 208 (Arranged) Internship-Seminar Three credits

After successful completion of basic courses, usually following the freshman year, students may elect internship. This course allows the student to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages for hours of work. To participate in this program students must be qualified to receive approval from their department and enroll with the coordinator. Their occupational interests are considered with their background or related classes to determine employment arrangements. The flexibility of developing individual programs for interested students in any related occupational opening is accomplished on the basis of developing a practical training program in agreement with the training station supervisors and the college coordinator.



Engineering Technology

Cooperative Education

at the University of Michigan Dearborn Center

Cooperative education is one of the unique characteristics of the Dearborn Center. In essence, it consists of a carefully controlled and integrated plan for combining class room work with actual experience in business or industry. The student alternates semesters of attendance on the campus with periods of employment at the selected "work assignment."

The Dearborn Center operates the year around with three full semesters each calendar year, registration dates being in September, February, and June. A minimum of three semesters of work assignments, alternated with a minimum of four semesters of classroom work is required for graduation.

One of the greatest assets of the cooperative program is the wealth of appropriate and rewarding work assignments available in the area. The employers have expressed their enthusiastic support of the cooperative program. Student work assignments in industry are carefully selected from the wide variety of available opportunities in order to yield the greatest educational value.

While the co-op student in engineering is on the work-assignment semester, he will be well compensated by his employer. This compensation recognizes the caliber of the student, his permanent employment potentialities, and the high requirements of the associated classroom program. Consequently, the student's earnings could well make him totally self-supporting.

The student applying for admission at the third year must present 93 term-credit hours including the following courses:

Subject	Term Hours
English Composition	12
Engineering Drawing	9
Mathematics (Including Analytic Geometry and Calculus)	24
Physics	15
Chemistry (General and Inorganic)	12
Engineering Mechanics (Statics)	4.5
Economics	9
Chemical-Metallurgical Engineering and Mechanical Engineering (Engineering Materials and Processes)	7.5
Total Credit Hours	93

Transportation Training Program

Coordinator: Leonard Snider

The Transportation Training program has been established with the objective of providing training in preparation for a career in the transportation industry. Although the curriculum will ultimately include training in many of the diverse activities of this industry, the current program offering consists of driver and operator training.

This program includes studies on the following subjects:

- | | |
|---------------------------------------|----------------------------------|
| Accident Prevention and Reporting | History & Importance of Industry |
| Air Brake System | I.C.C. Safety Regulations |
| Communications | Job Injury Prevention |
| Customer and Public Relations | Labor Relations |
| Driver's Daily Logs | Loading & Securing Loads |
| Driver's Responsibility & Maintenance | Mathematics |
| Driver Situations | Orientation |
| Fire Fighting | Psycho-Physical |
| Freight Handling | Registration |
| Health & First Aid | State Code |
| Highway Regulations & Laws | |

Transportation Training Program



Leonard Snider

**Transportation
Training Program****Transportation Training Program (continued)**

Range instruction consists of 100 hours actual driving time in diesel rigs. An extended road trip is taken during the final week of training. The four-week training course is conducted five days a week from 8:00 a.m. to 5:00 p.m.

The range program with which the student is occupied during the other half of each day consists of exercises on the college driving range combined with actual road training conducted on public highways.

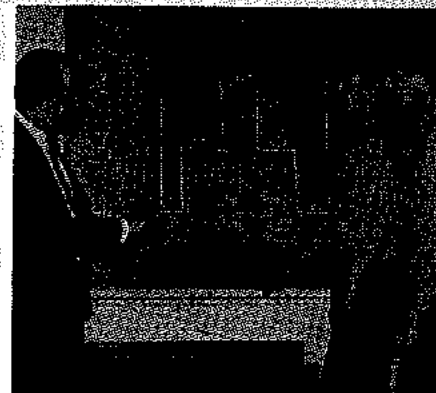
Enrollment requirements for this program include good health, ability to communicate in the English language, both spoken and written, a good driving record, good moral character, freedom from addiction to drugs or excessive use of alcohol, and must be between the ages of 18 and 45.

Enrollment in this transportation training program differs from the enrollment in other programs. In the transportation program only, the enrollment steps are outlined below:

1. Write or telephone the coordinator, Transportation Training Center, Lansing Community College, 419 North Capitol Avenue, Lansing, Michigan 48914, requesting application forms.
2. Complete the forms you receive and return them to the coordinator along with the application fee (\$5.00) and tuition deposit (\$25.00). The forms you will receive include Interstate Commerce Commission physical examination blank to be completed by a doctor and the American Transportation Association application for employment.
3. After your application is reviewed by the Lansing Community College staff and a screening committee composed of representatives of the trucking industry, you will be notified of your acceptance and the time, date, and location for the first class.
4. The balance of the tuition fee must be paid in full when registering for the class unless special arrangements are made with the coordinator. A \$25 tuition deposit is required with the application, and will be credited toward full tuition on acceptance, refunded only if the applicant does not pass the entrance requirements.
5. The tuition deposit is returned to those applicants not accepted for the program.
6. Students who withdraw for any reason during the course will be charged prorata for the weeks of training received, less \$25 with no refunds after completion of the second full week of training.

In addition to the program described above, an evening course is conducted to allow individuals to complete the Truck Driver Training program without resigning from their daytime jobs. This evening course is conducted for 4 hours each evening and lasts for 8 weeks.

From time to time a special training program is conducted for safety personnel for truck driving companies. This safety program consists of training safety personnel in the application of their assignments to the profession of driving trucks.

**COURSE DESCRIPTIONS****Civil Technology**

011 Fundamentals of Surveying (Variable Institutional Credit)
Specifically designed for those engaged in surveying, who do not possess the prerequisites for CT 111; or for those not directly engaged in surveying, who nevertheless need to acquire a background in the theory, methods, procedures, terminology, and equipment involved. Subject matter consists of fundamental elements normally taught in Elementary Plane Surveying and Route Surveying. Special emphasis is placed upon developing a simple, but sound, mathematical background in each subject area. This fundamental subject matter is augmented by special topics of interest or importance to the participants. The course may be accompanied by field work assignments if the needs of the participants so dictate.

101 Construction Methods Two credits
Study of techniques and equipment used in constructing highway structures, pipelines, and buildings. Also undertakes the study of earthmoving projects.

102 Construction Materials Four credits
A course dealing with determination of the properties of concretes, asphalts, aggregates, steel, wood, clay products, and miscellaneous construction materials. Teaches methods of sampling and testing these materials. Includes discussion of the application of this knowledge to proper design procedures. Two hours lecture, four hours laboratory.

103 Construction Costs Two credits
Designed to familiarize the student with general methods of preparing material take-offs and labor estimates, and applying current unit costs to estimate construction costs. Provides for the itemizing and discussion of indirect costs and discussion of methods for predicting the trend of future costs. Teaches the student to recognize and evaluate hidden costs. Prerequisite: Civil Technology 101, 102.

104 Construction Materials Two credits
Same course content as Civil Technology 102 but without the laboratory.

105 Aerial Photo Interpretation Three credits
Covers identification of terrain features (both geologic and geomorphology), suitability and identification of ground survey control, elementary soil classification, and identification of vegetation.

111 Elementary Plane Surveying Five credits
An introductory course in surveying which includes the study of terminology, the use of tape, level, transit measurement of distances, angles and elevations, analysis and use of verniers, and the study of the public land system, traverses and topographic surveys and mapping. Two hours lecture, four hours laboratory. Prerequisite: Mathematics 103.

131 Community Development I Three credits
Formerly CDT 101
Study of land use, population growth, area economics and housing. Land measurements and community functions are also investigated.

132 Community Development II Three credits
Formerly CDT 102
A continuation of Community Development 131 with emphasis on data gathering and analysis. Reports, including graphic illustrations and tables are reviewed. Two hours lecture, two hours laboratory.

**Engineering
Technology****Civil**

- Engineering Technology** **133 Community Development Law** **Three credits**
Formerly CDT 103
Civil A course dealing with the establishment of agency planning boards and the various aspects of master planning including but not limited to ownership rights, eminent domain, development of private property, various building codes and zoning ordinances.
- 160 Fire Fighting Strategy and Tactics** **Three credits**
Formerly FST 110
Fundamentals of fire fighting strategy and tactics; planning methods of attack and preplanning fire problems. Prerequisite: Civil Technology 161.
- 161 Basic Fire Protection** **Three credits**
Formerly FST 101
An investigation of local, county, state, Federal and private fire protection agencies as to organization and function. Study of the history of loss of life and property by fire, and the history and philosophy of fire protection. Also considers future employment and career opportunities.
- 162 Basic Fire Suppression** **Four credits**
Formerly FST 102
An investigation of characteristics and behavior of fire, fire hazard properties of common materials, basic methods employed in fire suppression, extinguishing agents and extinguishers. Fire suppression organization and equipment and effect of fire suppression activities and equipment on public relations.
- 163 Basic Fire Prevention** **Three credits**
Formerly FST 103
An investigation of the recognition of fire hazards, solution of the hazard, enforcement of the solution, techniques of mapping and surveying, fire prevention functions and organizations, the effect of fire prevention activities and equipment on public relations.
- 164 Fire Protection Systems and Equipment** **Three credits**
Formerly FST 111
Study of fire detection and alarm systems, special hazard protection systems, sprinkler systems and fire extinguishing equipment.
- 165 Hazardous Materials I** **Four credits**
Formerly FST 120
Fire fighting methods relating to hazardous materials, to include solids, liquids and gases and their storage. Consideration also given to the laws, standards and handling techniques of hazardous materials. Prerequisite: Chemistry 110.
- 166 Related Ordinances and Codes I** **Three credits**
Formerly FST 121
Study of state laws and regulations, local ordinances and national standards including Interstate Commerce Commission regulations as to fire prevention.
- 167 Fire Hydraulics** **Four credits**
Formerly FST 122
Fundamentals of fire hydraulics. Includes a study of water supply problems, standards on pump requirements, formulas, test criteria and physical laws relating to hydraulics, and practical application to fire fighting problems. Prerequisite: 130 Mathematics 151.

- 201 Construction Contracts** **Three credits** **Engineering Technology**
Preparation of specifications, requests for quotations, bid analysis, proposals and contracts, and change orders. Fundamentals of law in engineering, liability, and workmen's compensation. Prerequisites: Civil Technology 103. *Civil*
- 202 Highway Technology** **Four credits**
Covers plan and profile drawings, highway planning, financing, organization, geometrical design, traffic studies, structural design of pavements, mass diagrams, earthwork computations and costs. Also includes discussion of trends in mass transportation. Two hours lecture, six hours laboratory. Prerequisites: Civil Technology 203, Civil Technology 205, Civil Technology 212.
- 203 Soil Testing & Classification** **Three credits**
Designed to teach testing and classification of soils: A.S.T.M., A.A.S.H.O. and pedological systems. Also includes discussion of elementary geologic principles as related to soils. Prerequisite: Civil Technology 101, Civil Technology 102.
- 204 Strength of Materials** **Three credits**
Study of: beams, shear and moment diagrams; stress, strain, creep, fatigue, yield, equilibrium-reactions, free body analyses; combined stresses; deflections; shear, flexure, compression, tension, and horizontal shear stresses. Two hours lecture, three hours laboratory. Prerequisites: Civil Technology 102, Physics 201.
- 205 Hydrology** **Three credits**
Analysis of run-off and the study of designs of devices to control it. Includes discussion of drainage and culverts, stream flow, open channel flow, Bernoulli's Theorem, rainfall, storm-water studies, ground water, and water tables. Two hours lecture, three hours laboratory. No prerequisite.
- 206 Project Lab** **Variable credit**
Affords the student the opportunity to undertake and complete an independent study or project under the supervision of the staff. Prerequisite: Graduation term.
- 207 Structural Technology** **Four credits**
Covers plans of sight and structure for bridges, steel detailing, concrete detailing, elementary theory of reinforced concrete, elementary analysis of structural steel, costs and economics of structures, types of bridges and building frames, connections, riveting and bolting details and truss analysis. Two hours lecture, six hours laboratory. Prerequisite: Civil Technology 204.
- 208 Structural Technology I** **Four credits**
Elementary theories of reinforced concrete, elementary analysis of structural steel and elementary analysis of timber construction as they pertain to bridges and highways. Various types of structures, connections, riveting and bolting details, and truss analysis are included. Lecture and laboratory (2-4-6).
- 209 Structural Technology II** **Four credits**
Continuation of Structural Technology I emphasizing the application of the technical knowledge as it pertains to foundations and structural members of low and high rise buildings. Lecture and laboratory (2-4-6).
- 210 Hydraulics** **Three credits**
Hydrostatics; laminar and turbulent flow in pipes and fittings, pump characteristics, Venturi meters, cavitation, flow in open channels, orifices, weirs, critical depths, subcritical and critical flow, channel transitions. Two hours lecture, three hours laboratory.

Engineering Technology Civil	212 Route Surveying	Four credits
	Study of profiles, horizontal curves, vertical curves, surveying and computations, superelevation, spirals, and compound and reversed curve. Two hours lecture, four hours laboratory. Prerequisite: Civil Technology 111.	
	213 Advanced Surveying	Four credits
	Theory of modern and advanced surveying methods; photogrammetry, ground and aerial; astronomy; stellar and solar observations and calculations; and precise surveying principles. Three hours lecture, two hours laboratory. Prerequisite: Mathematics 201, Civil Technology 212.	
	214 Geodetic Surveying	Four credits
	Study of precise first and second order measuring methods, base lines, level circuits, triangulation, barometric leveling, least squares, the theory of probable errors, three wire leveling, the use of tilting levels, and theodolites. Two hours lecture, four hours laboratory. Prerequisite: Civil Technology 213.	
	218 Water Supply and Treatment	Four credits
	Study of sources of water supply; quality and quantity measurements; process and structural devices to accomplish sedimentation, coagulation, filtration, softening, iron removal, and sterilization; distribution systems. Two hours lecture, six hours laboratory.	
	219 Sewerage and Sewage Treatment	Four credits
	Design, construction, and functioning of sewerage and sewage treatment facilities; includes sedimentation, coagulation, filtration, aeration, digestion, sludge processing, and sterilization; quality of effluent. Two hours lecture, six hours laboratory.	
231 Project Lab <i>Formerly CDT 201</i>	Three credits	
The first course of a two course series covering the selection of a project, project research and report outline. Six hours laboratory.		
232 Project Lab <i>Formerly CDT 202</i>	Three credits	
Continuation of CT 231, covering completion of the selected project, research and written report. Data, sketches, and photographs are properly assembled and the report and recommendation presented. Methods and costs of reproduction of sketches, etc. included separately. Six hours laboratory.		
238 Photogrammetry and Stereoplotter Operation <i>Formerly ED 208</i>	Four credits	
Covers in detail: aerial photography, stereoscopy, mosaic construction, radial line plotting, project planning, and operations management. Extensive training will be provided in the actual operation of stereoplotting devices and equipment.		
241 Office Practices and Procedures <i>Formerly AD 201</i>	Four credits	
Covers general specifications, supplemental or job specifications, material specifications, building codes, use of reference material, shop drawings, bidding practices, office reduction of field data, and field inspection procedures.		
242 Plumbing Systems for Buildings <i>Formerly AD 202</i>	One credit	
Components and arrangement of residential and commercial plumbing systems. 132 Emphasis placed on code and specification requirements. Three hours laboratory.		

	243 Electrical Systems for Buildings <i>Formerly AD 203</i>	One credit	Engineering Technology Civil
Components and arrangement of residential and commercial electrical systems. Emphasis placed on code and specification requirements. Three hours laboratory.			
	245 Urban Planning <i>Formerly AD 205</i>	Two credits	
Large area redevelopment plans with emphasis on (1) the population and its socio-economic influence; (2) land usage and economics, and (3) community services and functions. One hour lecture, three hours laboratory.			
	246 Heating and Air Conditioning <i>Formerly AD 206</i>	One credit	
Components and arrangement of residential and commercial heating and air conditioning systems. Emphasis is placed on environmental factors, specification requirements, and code provisions. Three hours laboratory.			
	247 Architectural History <i>Formerly AD 207</i>	Two credits	
Development of architecture as an art form in each of the civilizations or architectural periods from antiquity to contemporary.			
	250 Engineering Review	Three credits*	
First in a series of three courses which provide a theoretical background in the engineering sciences for people with limited academic background, or who desire an extended review to prepare for engineering registration. A student may enroll for any or all of the courses. Topics include mathematics, physics, statics and dynamics.			
	251 Engineering Review	Three credits*	
Continuation of Civil Technology 250. Includes fluid mechanics, hydraulics, thermodynamics and mechanics of materials.			
	252 Engineering Review	Three credits*	
Continuation of Civil Technology 251. Includes chemistry, electricity, electronics, engineering economics, contract law and professional ethics.			
	260 Radiation Shielding Design	Five credits	
For architects and engineers involved with building design. Prepares student for examination by Federal Government and licensing on nuclear radiation shielding. Latest information on the resistance of the effects of nuclear warfare, and design of buildings to provide proper protection, will be available from the Department of Defense, Office of Civil Defense.			
	261 Hazardous Materials II <i>Formerly FST 200</i>	Four credits	
Continuation of Civil Technology 165.			
	262 Related Ordinances and Codes II <i>Formerly FST 201</i>	Three credits	
Continuation of Civil Technology 166.			
	263 Building Construction for Fire Security <i>Formerly FST 210</i>	Five credits	
Involves the essentials of building design and construction. Includes special features and considerations related to fire security. Prerequisites: Civil Technology 165, 166, 261 and 262.			
* Institutional credit			

- Engineering Technology** **264 Fire Investigation I** **Three credits**
Formerly FST 211
 Civil Fire behavior and importance of determining origin. Procedures used in identifying accidental, incendiary or arson type fires. Methods of recognizing and identifying motivation for arson. Laws relative to the intentional setting of fires. Prerequisites: Civil Technology 166 and 262.
- 265 Emergency Rescue Procedures** **Four credits**
Formerly FST 212
 Study of emergency first-aid and rescue practices. Training with resuscitation and rescue equipment and its application for mutual aid, major disaster and civil defense.
- 266 Fire Investigation II** **Three credits**
Formerly FST 221
 Continuation of Civil Technology 264. Preservation of evidence and photographic coverage of fire. Methods of interrogation related to fire investigation and conduct for investigators. Study of libel, slander and court procedures relative to evidence and statements. Importance of cooperation between investigative agencies; records, reports and case histories.
- 267 Organizational Procedures** **Three credits**
Formerly FST 222
 Further study of fire department organization. Considers personnel administration, communications, records and reports, maintenance, training, fire equipment, fire prevention and fire fighting, fire company organization and duties of the company officer. Prerequisite: Civil Technology 161.
- Engineering Technology** **Drafting Technology**
Drafting
- 011 Beginning Mechanical Drawing** **Two credits***
 For those who have had no previous drafting or are in need of a refresher for understanding of orthographic projection. Lettering and free-hand sketching also stressed. DT 011 is preliminary to entering DT 101 for those who have not had at least one year of high school drawing. Recommended to students interested in reading blueprints as well as to art students.
- 101 Engineering Drawing** **Three credits**
Formerly ED 101
 A course in drafting which is designed for the purpose of enabling the student to be thoroughly efficient in reading, understanding, and drawing of orthographic views. The points to be stressed will be dimensioning, sectioning, auxiliary views, and cams, gears, and linkage problems. Two hours lecture, three hours laboratory. Prerequisites: Drafting Technology 011 or one year of high school drafting.
- 102 Engineering Drawing** **Three credits**
Formerly ED 102
 Continuation of Drafting Technology 101 in which further work is given in the principles of dimensioning. Emphasizes practice in perspectives to help students develop skill in technical sketching. Includes development and detailing of assembly drawings. Six hours laboratory. Prerequisite: Drafting Technology 101.
- 103 Descriptive Geometry** **Three credits**
Formerly ED 103
 A basic course in the science of graphic representation and solution of space problems through the practice of fundamental principles of advanced orthographic

134 * Institutional credit

projection. Covers the following topics: points, lines, and planes; primary and successive auxiliary views; parallelism; perpendicularity; concurrent vectors; developments and intersections; pictorial projections; shades and shadows. Makes a study of Civil and Mechanical engineering problems. Six hours laboratory. Prerequisite: Drafting Technology 102 or Civil Technology 106.

104 Jig and Fixture Design **Three credits**
Formerly ED 104

Presents the structure of fixtures to hold work being machined or welded. Six hours laboratory. Prerequisites: Drafting Technology 101 and 102; Mechanical Technology 101.

106 Engineering Drawing—Civil **Three credits**
Formerly ED 106

Offers practice in techniques of transferring field survey notes to the drawing and includes Traverse Plotting, Topographic Maps, Profiles, Cross Sections, Earthwork Plans, Lags of Boxing, and Plat Maps.

107 Engineering Drawing **Three credits**
Formerly ED 107

This course covers pencil, ink, and stylus drafting on mylar. The newer techniques in drafting and reproduction methods will be covered. The emphasis will be on applications within the student's particular area of interest.

131 Residential Planning **Three credits**
Formerly AD 101

For those who desire to learn home design. Topics include construction details as well as architectural style and planning concepts. Some reading of blueprints and training in drawing house plans. Two hours lecture, four hours laboratory.

132 Architectural Drafting **Six credits**
Formerly AD 102

Beginning course in architectural drafting fundamentals. Student develops skill in use of drawing instruments and gains understanding of orthographic projection, sketching, and sections. Introduction to principles of dimensioning and techniques of lettering. 12 hours laboratory.

133 Pictorial Illustration **Three credits**
Formerly AD 102

A fundamental course for those interested in becoming or who are working as draftsmen or illustrators. Course covers principles of axiometric projection, perspective shading, and shadows, with experience offered in the use of various rendering medias. Six hours laboratory.

136 Architectural Drawing **Three credits**
Formerly AD 110

First in series of architectural drawing courses designed to serve the basic needs of individuals presently employed or wishing to find employment as architectural draftsmen, estimators, salesmen, or in other allied fields of employment within the construction industry. Course deals primarily with the graphic representation of construction details, materials, and practices in residential construction. Includes some emphasis on building codes and government specifications. Six hours laboratory. Prerequisites: Drafting Technology 101, 102 and 103. For drafting technology majors; others, approval of department.

202 Die Design **Three credits**
Formerly ED 202

Teaches the student to design the many types of sheet metal dies used in industry. 135

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Drafting

- Engineering Technology**
Drafting
- Six hours laboratory. Prerequisites: Drafting Technology 101, 102, 103 and Mechanical Technology 101.**
- 205 Electrical and Electronics Drawing** **Three credits**
Formerly ED 205
- Designed to acquaint the student with the drawing and reading of electrical and electronic circuit diagrams. Includes the study of the use of tubes, transistors and technical manuals, catalogs, and periodical technical literature. Attention given to pictorial drawings, connection diagrams, block diagrams, logic diagrams and schematics, using the latest symbology and practice, and using material based on A.S.A., I.R.E. and Mil-Stds. Includes study of circuit tracing and sketching. Six hours laboratory. Prerequisite: Drafting Technology 101.
- 206 Cartographic Drawing and Photogrammetry** **Six credits**
Formerly ED 206
- Essentials of large area mapping and characteristics of the various map projections. Drainage, Geological, Land Subdivision, and Route Location Maps are also studied and prepared. Some time devoted to overlay construction for color separation on printed maps. Course also includes fundamentals of photogrammetry and actual operation of stereo plotter.
- 207 Cartographic Drawing** **Four credits**
Formerly ED 207
- Covers in detail the preparation of large area maps. Drainage, Geological, Land Subdivision, and Route Location Maps are also studied in detail. Some time devoted to overlay construction for color separation on printed maps.
- 218 Electrical and Electronics Drawing** **Six credits**
Formerly ED 218
- First of series of two seminar courses allowing the student majoring in Electrical and Electronics Drafting Technology to select a project that will, at the completion of the second term, constitute a resume of his drafting skills and his general knowledge of the specific field. A project shall be chosen, designed, technical material gathered and preliminary drawings shall be drawn during this course. Twelve hours laboratory. Prerequisite: Satisfactory completion of first term, second year curriculum.
- 219 Electrical and Electronics Drawing** **Six credits**
Formerly ED 219
- Concluding course of a two part seminar. Student completes a resume exhibiting his drafting skills and his general knowledge of his selected field. Course shall involve refinement of design, technical data, detail drawings, and assembly drawings. Twelve hours laboratory. Prerequisite: Drafting Technology 218.
- 230 Architectural Drawing** **Three credits**
Formerly AD 210
- A continuation of Drafting Technology 136, with primary emphasis placed upon commercial and industrial construction. Course covers both low-rise and high-rise buildings. Six hours laboratory. Prerequisite: Drafting Technology 136 for drafting technology majors; others, approval of department.
- 231 Architectural Drawing** **Six credits**
Formerly AD 211
- First of series of two seminar courses designed to allow the student with the guidance of the instructor, to exemplify his present skills and knowledge as they pertain to the construction industry. The student would, during this term, select an architectural project, design same, render design drawings, select proper materials, and prepare preliminary working drawings in accordance with the needs of a

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mythical customer and as dictated by local building codes. Twelve hours laboratory. Prerequisite: Drafting Technology 230.

- 232 Architectural Drawing** **Six credits**
Formerly AD 212

Conclusion of 231 where the student prepares final working drawings and completes a set of specifications covering the project designed in 231. The final result of 231 and 232 should be a well prepared resume of the student's architectural drafting abilities and his general knowledge of the construction industry. Twelve hours laboratory.

- 233 Architectural Drafting** **Four credits**
Formerly AD 213

Covers proper selection of building materials and the preparation of architectural details using these materials. Emphasis is placed upon using reference material and developing working drawings from architectural sketches. Eight hours laboratory.

- 234 Landscaping** **Two credits**
Formerly AD 204

Site development, earthwork, grading plans, site structures, parking layouts, tree and shrub selection, and planting layouts. Four hours laboratory.

- 235 Structural Drawing** **Three credits**
Formerly AD 214

Acquaints the student with the standard graphic representation of various structural designs using concrete, steel, and wood; of structural components, and of structural details. Six hours laboratory.

- 236 Reproduction Methods** **Two credits**
Formerly CDT 203

A survey course covering various reprinting aids and their cost, including but not limited to, photo, offset, hot type, and silk screen composing.

Electronics Technology

- 111 Electrical and Electronic Circuits I** **Five credits**

An introduction of basic electrical circuits with the emphasis on direct current. Covers electrical units, Ohms law, Kirchoff's laws, network theorems, inductance and capacitance. Voltage, current, and resistance measurements are emphasized in the lab, through the use of the VOM, VTVM, Ohmmeter, and Wheatstone bridge. Simple mezers are constructed and tested. Three hours lecture, four laboratory.

- 112 Electrical and Electronic Circuit II** **Five credits**

Continuation of ET 111 with emphasis on sinusoidal voltage and current and vacuum tube theory. Analysis of RC, RL, and RLC circuits, both series and parallel. Resonance, network theorems, and coupled circuits are discussed. The vacuum tube is presented and simple amplifiers are studied. Laboratory work emphasizes AC measurements and vacuum tube characteristics through the use of the oscilloscope, voltmeter, milliammeter, signal generators, AC bridge, curve tracers, and tube testers. Three hours lecture, four laboratory.

- 113 Electrical and Electronic Circuits III** **Five credits**

A continuation of ET 112 with major emphasis on the transistor. Semiconductor theory, small signal characteristics, biasing, and practical applications are studied. Laboratory work enforces the lecture through the construction and testing of the various amplifier circuits. The oscilloscope, voltmeter, milliammeter, signal gen-

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Technology
Electronics**

erators, curve tracers, and transistor testers are used. Three hours lecture, four laboratory.

206 Project Laboratory (Variable credit)

Student selects a project compatible with his chosen field of work. The student, under the guidance of the instructor and through research, designs, constructs, and tests an electric or electronic device.

220, 221, and 222 International Morse Code One credit*

Principles of International Morse Code transmission, reception, and speed building. The course may be continued under the course numbers indicated in successive terms. Three hours laboratory.

231 Computer Circuits I Three credits

First of series of three courses designed to cover the area of pulse, digital, and switching circuits. Includes basics of number systems, logic, waveforms, and switching characteristics of tubes and transistors. Laboratory work emphasizes pulse measurement through use of pulse generators and oscilloscopes. Two hours lecture, four laboratory.

232 Computer Circuits II Three credits

Continuation of ET 231. Major emphasis on switching and pulse circuits, including multivibrator, Schmitt trigger, blocking oscillator and time-base generator. Applications drawn from field of instrumentation. Simple circuits drawn from field of instrumentation and constructed and tested in the lab. Two hours lecture, four laboratory.

233 Computer Circuits III Three credits

Continuation of ET 232. Major emphasis on digital computer units. Laboratory work provides operation and testing of these blocks. Two hours lecture, four laboratory.

241 Automation I Four credits

First of three courses covering rotating machines and circuits and devices used to control them. Two hours lecture, four laboratory.

242 Automation II Four credits

Continuation of Electronics Technology 241. Two hours lecture, four laboratory.

243 Automation III Four credits

Continuation of Electronics Technology 242. Two hours lecture, four laboratory.

260 Industrial Electricity Three credits

Covers electrical control systems employed on industrial machinery. Includes discussion of basic direct and alternating current theory and application, and study of typical industrial control circuitry and devices. Lecture and laboratory.

261 Industrial Electricity Three credits

Continuation of ET 260 with emphasis on circuit diagram reading, sequencing, and maintenance of industrial electrical controls. Lecture and laboratory.

271 Communications I Five credits

First of series of three courses dealing with electronic communication. Includes study of transmission lines, antennae, RF oscillators, class C amplifiers, and coupling circuits. Laboratory work emphasizes the use of RF measuring instruments such as slotted coax, SWR bridge, impedance bridge, heterodyne frequency meter, and RF power meters. Three hours lecture, four laboratory.

138 * Institutional credit

272 Communications II Five credits

A continuation of ET 271. Includes the theory of modulation circuits, AM and FM demodulation, and the superhetrodyne receiver. Laboratory work emphasizes use of RF signal generator, sweep signal generator, and spectrum analyzer. Three hours lecture, four laboratory.

273 Communications III Five credits

A continuation of ET 272. Includes the television system, UHF, and microwave principles. Laboratory work utilizes television linearity pattern generator, color bar generator, slotted waveguide, reflectometer, and various waveguide components. Three hours lecture, four laboratory.

Mechanical Technology**101 Manufacturing Processes (Machine Tools and Sheet Metal) Three credits**

Designed to teach the theory and practice in the operation and set up of machine tools; lathe, milling machine, shaper, drill press, grinder, metal sawing, bench work and measuring instruments, including discussion of sheet metal and plastics forming methods. Two hours lecture, four laboratory.

102 Manufacturing Processes (Welding and Foundry) Three credits

Continuation of MT 101 designed to teach all types of gas and arc welding on both AC and DC machines. Includes study of pattenmaking, sand molding, melting of metals, and pouring castings. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 101.

103 Manufacturing Processes Two credits

Continuation of 102. Course content varies to suit the individual need of the student. Prerequisite: Mechanical Technology 102.

104 Numerical Control I—Fundamentals of Numerical Control Four credits

General introduction to modern concepts of numerical control of machine tools including the interrelationship of these new manufacturing methods in the various departments of a company. Emphasizes controlling media, introductory programming and limited machine operation. Two hours lecture, four hours laboratory.

105 Numerical Control II—Manual Programming for Numerical Control Three credits

Continuation of MT 104 with emphasis on developing skill in manual programming of two and three-axis, point-to-point positioning, numerically controlled machine tools. Operation of Flexowriter and vertical milling machine provides important part of this course. Two hours lecture, four hours laboratory.

106 Numerical Control III—Introduction to Computer Assisted Programming Three credits

Study of types of parts which can be programmed to advantage, using a computer, and actual experience programming typical elementary examples. Includes survey of various computer programming languages and methods used to apply them to numerically controlled machine tools. Equipment used includes computer, Flexowriter and numerically controlled milling machine.

201 Machine Methods and Cost (Applied Time and Motion Study) Three credits

Elemental costs in machine work. Demonstrates the effect on cost of various alterations in method. Includes study of time and motion as they are employed in actual shop situations. Investigates methods of eliminating idle machine time in production cycles. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 101.

**Engineering
Technology
Electronics****Mechanical**

- Engineering Technology Mechanical**
- 203 Industrial Management** (Processing, plant layout, investment program) **Three credits**
Lecture section in management problems. Employs the use of machine laboratory. Includes actual processing and cost analysis of an assembly item of production and develops the results to meet a proposed production schedule from which a determination of manufacturing facilities is made. Includes the designing of a plant for optimum production and investment economy under simulated realistic circumstances. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 102 and 201.
- 204 Metallurgy** **Three credits**
Study of the crystalline state of metals, phase diagram theory of alloys, process of iron and steel manufacture, iron-carbon diagram, lever principle, the heat treatment of steel, hardness tests and microscopic study of grain structure under the metallograph. Lecture and laboratory. Prerequisites: Mechanical Technology 101 and Chemistry 110.
- 207 Automation Mechanics I (Fluid Mechanics, Servo Principles)** **Three credits**
The elements of hydraulics, fluid power, the pitot tube, Bernoulli's theorem, viscosity, Reynold's number. Includes study of the servo-mechanical principles available for exploitation in hydraulic systems, combination of air, electric, and hydraulic controls. Lecture and laboratory. Prerequisite: Physics 200.
- 208 Automation Mechanics II (Labor Saving and Feed Back Devices)** **Three credits**
Economic implications and ultimate use of labor-saving machinery; mathematical and structural study of dies, power processes, production turning, boring, transfer machines. Investigates solution of cost problems in production by the use of fixtures, dtals, and devices auxiliary to machines that enable unit operations to be combined into continuous automatic production. Examines some mechanical structures and applications of the feed-back principle used in machinery to replace manual operation. Prerequisites: Mathematics 153, Drafting Technology 102, Mechanical Technology 102 and 207.
- 209 Machine Design I (Kinematics, Linkages and Machine Elements)** **Four credits**
Study of movement direction, velocity and acceleration in linkages, cams and gears. Requires students to complete a set of drawing plates. Employs machine laboratory to help construct models and study existing mechanisms. Develops ability to analyze and comprehend the interaction of parts in ingenious mechanisms. Three hours lecture, three laboratory. Prerequisite: MT 102, Mathematics 103.
- 210 Machine Design II (Strength of Materials)** **Four credits**
Principles of stress and strain, equilibrium of forces, center of gravity, moment of inertia, section modulus; tension, compression, shear bending, torsion, combined stress, and Mohr's circle. Includes the drawing of diagrams of shear bending, and deflection in beams. Considers factors of safety, column formulas and fatigue stresses. Prerequisites: Mathematics 153, Physics 200.
- 211 Machine Design III (Design Origination, Strength, Rigidity, Functional Worth)** **Four credits**
Analyzes, by the use of principles involved in statics, dynamics, kinematics, and strength of materials, the shafts, gear, bearings, and structural parts of a machine unit, e.g. overhead traveling crane or a hydraulic lift truck. Emphasizes practice on selection of parts of proper size to meet safety factors. Three hours lecture, three laboratory. Prerequisites: Mechanical Technology 209 and 210.

Systems Technology

Some techniques, disciplines, methods, and procedures apply to the entire Systems in contrast to the specific technology disciplines, such as mechanics, electrical, civil, and mechanical technology. These systems disciplines have been grouped in the Systems Technology area. As our society continues with its rapid technological development, more and more systems-oriented technology is developing. Current offerings in the discipline of systems technology include the following:

- 101 Critical Path Method** **Two credits**
Formerly VT 300

The CPM method of project control involves planning, scheduling, and monitoring. The course includes construction of the arrow logic diagram, float calculations, management and crew restraints, time-cost functions, manpower and equipment leveling, project expediting, and network flow calculations. PERT probability estimates are discussed and various computer techniques are investigated and compared. Lecture and laboratory.

- 102 Statistical Quality Control** **Four credits**
Formerly VT 325

An introductory course in quality control methods. The program develops basic statistical concepts and orients the student to a recognition of variation in whatever form it may occur. Graphical solution of quality control problems is emphasized. Actual case studies are used as the basis of class projects.

Department of Applied Technology

Department Chairman: Harold J. Walper

The Department of Applied Technology offers curricula and courses providing training leading to a career as craftsman in the fields of building trades, industrial trades, and service trades. The field of building trades applies to commercial and home construction, and includes careers in:

- | | |
|-------------|--------------------------|
| Bricklaying | Painting and Decorating |
| Carpentry | Plumbing and Pipefitting |
| Electrical | Sheet Metal |

Industrial trades careers include:

- | | |
|--------------------------|------------------------------|
| Die Design | Millwright |
| Die Making | Model Making |
| Die Sinking | Printing |
| Drafting (Architectural) | Structural Steel Fabrication |
| Drafting (Mechanical) | Tool Design |
| Electrical (Industrial) | Tool Inspection |
| Engraver-Die | Tool Making |
| Machine Repair | Tool and Die Making |
| Machinist | |

Service trades careers include those of:

- | | |
|----------------------|---|
| Automotive Servicing | Heating, Air Conditioning and Refrigeration |
| Truck Mechanics | Radio and Television Servicing |
| Diesel Mechanics | |

In addition to training leading to a career, students can enroll to take special courses to improve their performance or extend their abilities in their present activity. In general, courses are open to everyone except that, in some cases, preference is given to apprentices and journeymen. From time to time courses may be set up for special groups.

Engineering Technology Systems

Applied Technology



Harold J. Walper

Applied Technology

The various curricula in which a student can enroll are given in the following pages. In each case, the curriculum and the career pertaining to that curriculum are discussed briefly and the specific courses that are required to obtain a certificate are listed. In the subsequent section each of these courses is described more fully.

The Applied Technology offerings are open to apprentices or journeymen. Many are open to individuals from industry who are interested in up-grading on present jobs or preparing for new positions. Courses not presently listed may be offered if enough individuals are interested and enroll. The Applied Technology Department offers courses in Building, Industrial and Service Trades.

Lansing Community College does not provide apprentice placement service, except through referral of applicants or students at the request of prospective employers, nor does the College exercise control over selection of apprentices. Joint Apprenticeship Committees do, however, place apprentices in the building trades.

Apprentice training offers the individual the opportunity to learn a skilled craft or trade while he works at the trade for wages and takes related instruction to learn more about the job. A person desiring apprentice training must, therefore, be employed as an apprentice before entering class. The potential is unlimited. Many of the key men in industry today began as apprentices.

Upon completion of his training program, the apprentice is awarded the status of journeyman signifying that he is a skilled craftsman or tradesman.

To qualify for apprenticeship in any of the skilled trades, a young man must have mechanical aptitude, perseverance, ambition and initiative. In addition, he must have good health, be mentally alert and genuinely interested in the training. Most trades require high school graduation. Age limits are, in general, 18 through 25, but exceptions are sometimes made. School records, test results and personal interviews are used by most committees in determining the qualifications of an applicant.

Applications for most apprenticeships may be secured from the Applied Technology Office. No common procedure can be outlined here since each trade differs in its selection and placement procedure. An applicant must reside within the jurisdictional area of the joint apprenticeship committee of the building trade for which he is making application.

Applicants approved for apprentice training are assigned a day to report for classes by the coordinator. After enrollment via the Applied Technology Office, building trades apprentices are referred to the instructor for the trade.

An apprenticeship coordinator advises all apprentices as to courses which they must take during their training programs. Apprentices must have the approval of the coordinator for courses selected each term in conformity with the apprenticeship standards for the individual trade and company.

Service Trades

The progress that industry is making in providing people with automobiles, and appliances, added to the great abundance and ease of obtaining them, has expanded the need for a new area of training. This new area is one of servicing.

The automobile industry alone is placing more automobiles on the roads today than can be adequately serviced by the existing mechanics. The appliance servicing areas are also increasing.

Along with the areas of service that take care of family needs we also have those which aid industry. The trucking industry is in great need of diesel and gas engine mechanics. The farm implement dealers have a similar need for mechanics.

The need for service trades in the future will expand and be more demanding on manpower—whether it is servicing an electric stove for the home, an automated production line for industry, or an electric computer for business—more people

Applied Technology

At Lansing Community College automotive servicing, truck mechanics, and diesel mechanics are included among the programs in apprenticeship training.

Applied Technology Department

Certificate Programs

The one-year certificate programs offered by the Applied Technology Department are designed for initial job placement. They should also enable many students to begin apprenticeship training programs and receive partial or full pre-credit for their courses taken. These courses may also be taken on a part-time basis.

Some may wish to enroll in a certificate program for the purpose of job advancement or to seek a new field of employment. Others may wish to transfer to an Associate Degree program after completion if they are enrolled as regular students.

A minimum of 45 credit hours is required with a Grade Point Average of 2.00 or above, in order to complete the certificate program. A certificate is awarded for satisfactory completion of the courses.

The following programs are offered under the above plan:

- | | |
|---|--|
| Pre-Apprenticeship (see General Studies) | Metal Trades |
| Automotive Service | a. Die Maker, Tool and Die Maker |
| Draftsman — Electrical & Electronics | b. Machine Repairman, Machinist, Toolmaker |
| Draftsman — Mechanical | c. Millwright |
| Electrician — Industrial | Sheet Metal |
| Heating, Air Conditioning and Refrigeration | Welder |

Automotive Service

Fall Term		Credit Hours	Spring Term		Credit Hours
STR 104	Principles of Speech	3	ENG 103	Composition	3
STR 100	Automotive Service I	4	STR 106	Automotive Drive Lines	4
STR 102	Automotive Brakes	4	STR 107	Automotive Steering and Front End	4
STR 108	Engines	5	STR 111	Customer Service	6
STR 115	Welding for Automotive	3			
		<u>19</u>			<u>17</u>
Winter Term		Credit Hours			
STR 150	Basic Mathematics	3			
STR 101	Automotive Electricity	4			
STR 108	Engine Diagnosis & Tune-up	4			
STR 110	Service Orientation	6			
STR 130	Customer Relations	2			
		<u>19</u>			

Die Maker or Tool and Die Maker

Fall Term		Credit Hours	Spring Term		Credit Hours
MT 101	Manufacturing Processes	3	MT 103	Manufacturing Processes	2
MT 104	Technical Engineering Drawing	3	ITR 114	Die Construction II	3
MT 151	Applied Algebra	5	ITR 153	Applied Plane Trigonometry	4
MT 111	Die Blueprint Reading	3	PHY 201	Physics Elective	4
MT 112	Template Making & Model Checking	3			<u>23</u>
		<u>17</u>			<u>15-16</u>
Winter Term		Credit Hours			
MT 102	Manufacturing Processes	3	ITR 130	Employer-Employee Relations	2
MT 152	Applied Plane Geometry	4	ITR 135	Safe Practices & First Aid	3
MT 113	Die Construction I	4	ITR 170	General Welding I	4
MT 114	Die Construction I	3	ITR 171	General Welding II	4
MT 116	Machinery Handbook I	3	CEM 110	Industrial Chemistry	4
	Elective	23	MT 307	Automation Mechanics I	3
		<u>15-16</u>			

Applied Technology **Draftsman (Mechanical)**

Fall Term		Credit Hours	Spring Term		Credit Hours
MT	101 Manufacturing Processes	3	MT	103 Manufacturing Processes	3
ITR	151 Applied Algebra	5	ITR	153 Applied Plane Trigonometry	4
DT	101 Engineering Drawing	3	DT	103 Descriptive Geometry	3
	Elective	3-4	MT	204 Metallurgy	3
		14-15		Elective	3
Winter Term			Recommended Electives		15
MT	102 Manufacturing Processes	3	ITR	130 Employer-Employee Relations	2
ITR	140 Machinery Handbook	3	ITR	135 Safe Practices and First Aid	2
ITR	152 Applied Plane Geometry	4	DT	104 Jig and Fixture Design	3
DT	102 Technical Engineering Drawing	3	PHY	201 Physics	4
CEM	110 Industrial Chemistry	4	MT	207 Automation Mechanics I	3
		17	MT	210 Machine Design II	4

Electrician (Industrial)

Fall Term		Credit Hours	Spring Term		Credit Hours
MTH	151 Mathematics for Technicians I	5	MTH	153 Mathematics for Technicians III	5
ET	111 Electrical & Electronics Circuits I	5	ET	113 Electrical & Electronics Circuits III	5
BTR	125 National Electric Code I	3	BTR	127 National Electric Code III	3
	Elective	2-3	DT	205 Electrical & Electronics Drawing	3
		15-16			16
Winter Term			Recommended Electives		
MTH	152 Mathematics for Technicians II	5	ITR	130 Employer-Employee Relations	2
ET	112 Electrical & Electronics Circuits II	5	ITR	135 Safe Practices and First Aid	2
BTR	126 National Electric Code II	3	PHY	201 Physics	4
ET	211 Industrial Electricity	3	PHY	202 Physics	4
		16	MT	207 Automation Mechanics I	3
			MT	208 Automation Mechanics II	3

Heating, Air Conditioning and Refrigeration

Fall Term		Credit Hours	Spring Term		Credit Hours
CT	246 Heating and Air Conditioning	3	CEM	110 Industrial Chemistry (Inorganic)	4
DT	131 Architectural Drafting	3	MT	207 Hydraulics and Pneumatics	3
ET	260 Industrial Electricity	3	STR	121 Refrigeration Servicing I	4
ITR	150 Applied Mathematics	3	STR	126 Gas and Oil Burner Service II	4
PHY	201 Applied Physics	4	STR	130 Customer Relations	2
		14			17
Winter Term			Recommended Electives		
DT	230 Architectural Drafting	3	ITR	130 Employer-Employee Relations	2
MT	210 Strength of Materials	4	ITR	135 Safe Practices & First Aid	2
STR	120 Refrigeration Servicing I	4	PHY	201 Physics	4
STR	125 Gas and Oil Burner Service I	4			15

Machinist, Machine Repairman, Toolmaker

Fall Term		Credit Hours	Spring Term		Credit Hours
MT	101 Manufacturing Processes	3	MT	103 Manufacturing Processes	3
ITR	151 Applied Algebra	5	ITR	153 Applied Plane Trigonometry	4
DT	101 Technical Engineering Drawing	3	DT	103 Technical Engineering Drawing	3
	Elective	3-4		Elective	3-4
		14-15			15-16
Winter Term			Recommended Electives		
MT	102 Manufacturing Processes	3	ITR	130 Employer-Employee Relations	2
ITR	152 Applied Plane Geometry	4	ITR	135 Safe Practices and First Aid	2
DT	102 Technical Engineering Drawing	3	ITR	170 General Welding I	4
ITR	140 Machinery Handbook I	3	ITR	171 General Welding II	4
	Elective	3-4	DT	104 Jig & Fixture Design	3
		16-17	PHY	201 Physics	4

Millwright

Fall Term		Credit Hours	Spring Term		Credit Hours
MT	101 Manufacturing Processes	3	ITR	153 Applied Plane Trigonometry	4
ITR	170 General Welding I	4	DT	102 Engineering Drawing	3
ITR	151 Applied Algebra	5		OR	
DT	011 Beginning Mechanical Drawing	3	DT	103 Descriptive Geometry	3
	OR		ITR	141 Machinery Handbook II	3
DT	101 Engineering Drawing	3	DT	235 Structural Drawing	3
		14-15		Elective	2-3
Winter Term			Recommended Electives		15-16
ITR	171 General Welding II	4	PHY	201 Physics	4
DT	101 Engineering Drawing	3	MT	204 Metallurgy	3
	OR			OR	
DT	102 Engineering Drawing	3	MT	210 Strength of Materials	3
ITR	152 Applied Plane Geometry	4	ITR	130 Employer-Employee Relations	2
ITR	140 Machinery Handbook I	3	ITR	135 Safe Practices & First Aid	2
DT	230 Architectural Drawing	3			3
		17			

Pipefitter

Fall Term		Credit Hours	Spring Term		Credit Hours
ITR	180 Welding for Pipefitters I	4	ITR	182 Welding for Pipefitters III	4
ITR	151 Applied Algebra	5	ITR	153 Applied Plane Trigonometry	4
DT	011 Beginning Mechanical Drawing	2	BTR	156 Blueprint Reading for Plumbers	3
	Elective	3-4		Elective	3-4
		14-15			14-15
Winter Term			Recommended Electives		
ITR	181 Welding for Pipefitters II	4	ITR	130 Employer-Employee Relations	2
ITR	152 Applied Plane Geometry	4	ITR	135 Safe Practices & First Aid	2
BTR	155 Blueprint Reading for Plumbers	3	PHY	201 Physics	4
DT	101 Technical Engineering Drawing	3			4
CEM	110 Industrial Chemistry	4			18

Radio and Television Servicing

Fall Term		Credit Hours	Spring Term		Credit Hours
STR	160 Radio Servicing	8	STR	162 Advanced Television Servicing	8
Winter Term			Recommended Electives		
STR	161 Television Servicing	8			8

Sheet Metal

Fall Term		Credit Hours	Spring Term		Credit Hours
MT	101 Manufacturing Processes	3	ITR	153 Applied Plane Trigonometry	4
ITR	151 Applied Algebra	5	DT	103 Descriptive Geometry	3
DT	101 Technical Engineering Drawing	3	ITR	172 General Welding III	4
BTR	175 Sheet Metal I	3	BTR	177 Sheet Metal III	3
ITR	170 General Welding I	4			14
		18	Recommended Electives		
ITR	152 Applied Plane Geometry	4	ITR	130 Employer-Employee Relations	2
ITR	102 Technical Engineering Drawing	3	ITR	135 Safe Practices & First Aid	2
BTR	176 Sheet Metal II	3			2
ITR	171 General Welding II	4			14

Welder

Fall Term		Credit Hours	Spring Term		Credit Hours
ITR	170 General Welding I	4	ITR	173 General Welding III	4
ITR	100 Blue Print Reading I	3	ITR	153 Applied Plane Trigonometry	4
ITR	151 Applied Algebra	5	DT	102 Technical Engineering Drawing	3
DT	011 Beginning Mechanical Drawing	2	ITR	130 Employer-Employee Relations	2
ET	260 Industrial Electricity	3	ITR	135 Safe Practices and First Aid	2
		17			15
Winter Term			Recommended Electives		
ITR	171 General Welding II	4	ITR	140 Machinery Handbook I	3
ITR	152 Applied Plane Geometry	4	ITR	141 Machinery Handbook II	3
ITR	101 Engineering Drawing	3	MT	204 Metallurgy	3
ET	261 Industrial Electricity	3	MT	210 Strength of Materials	4
		14	PHY	201 Physics	4
			CEM	210 Industrial Chemistry	4

LANSING COMMUNITY COLLEGE
Applied Technology Department

CERTIFICATE PROGRAMS & COURSES

(A minimum of 45 credit hours is required with a minimum Grade Point Average of 2.00 except for the apprentice certificate program which is offered in cooperation with the U. S. Department of Labor.)

CURRICULUM	APPLIED TECHNOLOGY		Other (See General Studies Program) SPH 104
	Building Trade	Service Technology	
Pre-Apprenticeship*			
APPRENTICESHIP			
Auto Mechanic		100 101 102 105 106 107 108 115 130	
Bricklayer	100 (Itinerant)		
Carpenter	110 (Itinerant)		
Electrical (Construction)	120		
Painting & Decorating	140		
Plumbing & Pipefitting	150 (Itinerant)		
Sheet Metal	170		
OTHER			
Draftsman (Mechanical)	140 151 152 153		
Electrician (Industrial)	125 126 127		
METAL TRADES			
Machine Repair			
Machinist, Toolmaker			
Millwright			
Tool & Die Maker or Die Maker			
Pipefitter			
Sheet Metal (also offered above under APPRENTICESHIP Welder**)			
Heating, Air Conditioning, and Refrigeration			
Radio and Television Servicing			

NOTE: *No certificate is granted for the Pre-Apprenticeship program. The individual is expected to follow the General Studies offerings.
**The certificate program for a welder is not intended to be a substitute for a Certified Welder Program.

COURSE DESCRIPTIONS

Building Trades

100 Apprentice Bricklaying
Formerly VT 400

Institutional credit

For apprentice bricklayers on registered programs with the Lansing Bricklaying and Stonemasonry Joint Apprenticeship Committee. Includes manipulative practices, related theory, mathematics, estimating, blueprint reading and drawing.

110 Apprentice-Carpentry
Formerly VT 401

Institutional credit

For apprentice carpenters on registered programs with the Lansing Carpentry Joint Apprenticeship Committee. Covers free-hand sketching and drawing, blueprint reading, mathematics, use of steel square, estimating and layout, building codes, safety practices, manipulative practices and applied science. Includes light and heavy construction practices.

120 Apprentice-Electrical
Formerly VT 402

Institutional credit

Open to electrical apprentices indentured to the Lansing Electrical Joint Apprenticeship Committee. Covers blueprint reading and drawing, electrical theory, laboratory work, electrical code and mathematics.



Building Trades

- Applied Technology Building Trades**
- 125 National Electric Code I (Fall only)** **Three credits**
Formerly ET 250
First in a series of three courses covering the National Electric Code. The first course is a study of the code from the beginning to Article 430. General wiring provisions are studied. Students with appropriate experience should be able to pass the licensing examination upon completion of the three classes.
- 126 National Electric Code II (Winter only)** **Three credits**
Formerly ET 251
Continuation of Building Trades 125. Second in series of three courses covering the National Electric Code. Study of the Code from Article 430 to the end of the Code.
- 127 National Electric Code III (Spring only)** **Three credits**
Formerly ET 252
Continuation of Building Trades 126. Third in a series of courses covering the 1962 Code, amendments to the Code as they are accepted by the State.
- 128 Journeyman Electricians Welding I (on demand)** **Four credits**
Formerly VT 108
Open to electrical journeymen and apprentices. Includes some fundamentals of oxyacetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. \$5.00 laboratory fee. Six laboratory hours.
- 129 Journeyman Electricians Welding II (on demand)** **Four credits**
Formerly VT 109
Open to electrical journeymen and apprentices. More advanced coverage of fundamentals of Building Trades 128. Prerequisite: Building Trades 128 or permission of instructor. \$5.00 laboratory fee. Six laboratory hours.
- 130 Journeyman Electricians Power Controls (on demand)** **Two credits**
Formerly VT 500
Power control wiring and associated power control theory for electrical journeymen. One hour lecture, two laboratory.
- 131 Journeyman Electricians Transformer Connections and Circuit Characteristics (on demand)** **Two credits**
Formerly VT 501
Theoretical analysis and basic hook-up of transformers. Currents, voltages and unbalances involved in the following sequence: 220-110, 3 wire single phase, Delta-Delta, open Delta, Y, six phase Y and Scott connections. One hour lecture, two laboratory.
- 132 Journeyman Electricians Theory (on demand)** **Two credits**
Formerly VT 502
Alternating current theory and application for electrical journeymen. Lecture, laboratory. Three class hours per week.
- 140 Apprentice Painting and Decorating** **Three credits**
Formerly VT 403
Open to apprentice painting and decorating apprentices on registered programs with the Lansing Painting and Decorating Joint Apprenticeship Committee. Includes trade techniques, color mixing and matching, mathematics related to the trade, estimating and paperhanging. Lecture, laboratory. Four class hours per week.

148

- Applied Technology Building Trades**
- 145 Estimating for Painting Trades (on demand)** **Three credits**
Formerly VT 260
Principles of estimating materials and labor. Includes mathematics and blueprint reading essential to the above. Specifications and contracts, estimating take-off procedures, forms and usage will be covered. Construction prints are used. Open to painting tradesmen only. Lecture, laboratory. Four class hours per week.
- 150 Apprentice Plumbing or Pipefitting** **No credit**
Formerly VT 404
For apprentice plumbers and pipefitters indentured to the Lansing Joint Plumbing and Pipefitting Apprenticeship and Training Committee. Includes mathematics, manipulative practices, theory, blueprint reading and drawing, job analysis, physics and other science, and supplementary courses from the regular college offerings approved by the J.A.C.
- 155 Blueprint Reading for Plumbers I (Winter only)** **Three credits**
Formerly VT 101
Covers orthographic projection, linear and angular measurement and reading of prints whose three views are given in the three principal planes of projection. Examples apply to the plumbing trades. Two two-hour periods per week.
- 156 Blueprint Reading for Plumbers II (on demand)** **Three credits**
Formerly VT 113
Continuation of Building Trades 155 with emphasis on more complex prints. Actual construction prints are used whenever possible. Prerequisite: Building Trades 155 or permission of instructor. Two two-hour periods per week.
- 160 Journeyman Pipefitters Welding I (on demand) (Fall)** **Four credits**
Formerly VT 102
Students who enter this class should be Journeyman Plumbers or Steamfitters. Apprentices to the plumbing or fitting trades will be admitted when the degree of training they have achieved meets the approval of the Joint Apprenticeship Committee on Plumbing.
Training begins with a review of welding fundamentals and proceeds rapidly into more advanced skills according to the need of the individual student. Teaches welding of all kinds of pipe, including stainless steel by the heliarc method. \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- 161 Journeyman Pipefitters Welding II (Winter, on demand)** **Four credits**
Formerly VT 103
Continuation of Building Trades 160. Prerequisite: Building Trades 160. \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- 162 Journeyman Pipefitters Welding III (Spring, on demand)** **Four credits**
Formerly VT 104
Continuation of Building Trades 161. Prerequisite: \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- 170 Apprentice Sheet Metal** **Three credits**
Formerly VT 405
Open to apprentices indentured to the Lansing Sheet Metal Joint Apprenticeship Committee. Covers manipulative practices, layout, mathematics and drafting. Lecture, laboratory. Four class hours per week.

- Applied Technology**
Building Trades
- 175 Sheet Metal I (Fall only)** **Three credits**
Formerly VT 099
Course includes mathematics and pattern drafting related to sheet metal. Covers straight line, parallel line, radial line and triangulation pattern development. Shop work includes layout of fittings with hand and machine tools. Current techniques of fabrication emphasized. Lecture, laboratory. Four class hours per week.
- 176 Sheet Metal II (Winter only)** **Three credits**
Formerly VT 100
Continuation of Sheet Metal I with more advanced problems. Prerequisite: Building Trades 175 or permission of instructor. Lecture, laboratory. Four class hours per week.
- 177 Sheet Metal III (Spring only)** **Three credits**
Formerly VT 121
Continuation of Sheet Metal II with specialty work. Prerequisite: Building Trades 176. Lecture, laboratory. Four class hours per week.
- 180 Sheet Metal Welding I (on demand)** **Four credits**
Formerly VT 126
Arc welding as applied to sheet metal. Introduction to heliarc. \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- 181 Sheet Metal Welding II (on demand)** **Four credits**
Formerly VT 127
Continuation of Building Trades 180 with additional emphasis on heliarc. Prerequisite: Building Trades 180 or approval of instructor. \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- Industrial Trades**
- 100 Blueprint Reading I** **Three credits**
Formerly VT 115
Covers orthographic projection, linear and angular measurement and reading of prints with three views given in the three principal planes of projection. Deals mainly with part prints. Two two-hour periods per week.
- 101 Blueprint Reading II (Winter, Spring)** **Three credits**
Formerly VT 116
Covers application of orthographic projection principles in more detailed blueprints than Industrial Trades 101. Deals with part prints and assembly drawings. Prerequisite: Industrial Trades 101 or permission of instructor. Two two-hour periods per week.
- 111 Die Blueprint Reading (Fall)** **Three credits**
Formerly VT 118
Course acquaints student with specialized techniques used by die designers in making die drawings. Includes interpretation of actual drawings from which dies have been produced. Prerequisite: Industrial Trades 101, Drafting Technology 101 or permission of instructor. Two two-hour periods per week.
- 112 Template Making and Model Checking (Fall)** **Three credits**
Formerly VT 122
Functions of models and how to check models using sine bar and height gauge. Functions of templates and how they are made and used. Types of aids made from models and how these aids are used. Interpretation and sectioning of drawings used for template making and model checking. Prerequisite: Industrial Trades 150, Drafting Technology 101. Two two-hour periods per week.

- Applied Technology**
Industrial Trades
- 113 Die Construction I (Winter)** **Three credits**
Formerly VT 123
Layout and processing related to die construction. Types of aids used in die construction and how to use these aids. How to select steels used in die construction. Limitations on accuracy and finish of parts used in die construction explored, such as grinding and lapping. Covers various types of die construction used in industry, and presses related to die construction. Prerequisite: Industrial Trades 111 or equivalent. Two two-hour periods per week.
- 114 Die Construction II (Spring)** **Three credits**
Formerly VT 124
Continuation of layout and processing from Industrial Trades, 113. Covers theory of heat treat, welding, types of steels and types of aids used in die construction. Auxiliary equipment to dies such as lifters, loaders, kickers, stackers, hoppers, dial feeds covered. Repair and maintenance of dies considered as well as how dies should be built to make maintenance possible and provide long die life. Prerequisite: Industrial Trades 113. Two two-hour periods per week.
- 115 Die Construction and Design I (Fall)** **Three credits**
Formerly VT 224
Designed to cover the effective utilization of information contained in die design handbooks. Will design die around part given students in class or work from part print. Covers the importance of good die design. Prerequisite: Industrial Trades 112, 114. Two two-hour periods per week.
- 116 Die Construction and Design II (Winter)** **Three credits**
Formerly VT 225
Emphasizes actual die design, working from actual piece parts produced by industry and also part drawings. Includes cost, ordering and handling of raw material used for die construction and depreciation of equipment and tools used. Prerequisite: Industrial Trades 115. Two two-hour periods per week.
- 117 Die Construction and Design III (Spring)** **Three credits**
Formerly VT 226
Working with actual die drawings from industry, using these drawings for discussion, processing and sketching. Covers composite die sections, templates, heat treat, cutters. Includes how press data affects the design and construction of dies. Prerequisite: Industrial Trades 116. Two two-hour periods per week.
- 130 Employer-Employee Relations (Fall, Spring)** **Two credits**
Formerly VT 130b
Emphasizes the interdependence of capital, labor and management. Includes personal and physical qualities essential to success. Two class hours per week.
- 135 Safe Practices and First Aid** **Two credits**
Formerly BTR 135
This course is designed to acquaint individuals with First Aid and treatment through lectures, demonstrations, and practice as outlined in the course of study issued by the American Red Cross or equivalent. Safe working practices in performing work with hand tools and around machines are stressed. Information about the safety devices of machines and how to identify and use them is covered. Upon successful completion of the course, a certificate may be granted. Two hours per week.
- 140 Machinery Handbook I (Winter)** **Three credits**
Formerly VT 220
Designed to familiarize the student with the effective utilization of information contained in this handbook. Two two-hour periods per week.

Applied Technology Industrial Trades	<p>150 Basic Mathematics (Summer, Fall) <i>Formerly VT 201</i> Three credits</p> <p>Review of basic arithmetic operations: whole numbers, common fractions and decimals, percentage, ratio and proportion. Introduction to basic algebraic operations and formulae in plane geometry. Two one-and-one-half hour periods per week.</p> <p>151 Applied Algebra (Fall) <i>Formerly VT 202</i> Five credits</p> <p>Applications of algebraic equations to shop work. Two two-and-one-half hour periods per week.</p> <p>152 Applied Plane Geometry (Winter) <i>Formerly VT 203</i> Four credits</p> <p>Application of geometric functions to the solution of practical shop problems. Introduction to trigonometry. Prerequisite: Industrial Trades 151. Two two-hour periods per week.</p> <p>153 Applied Plane Trigonometry (Spring) <i>Formerly VT 204</i> Four credits</p> <p>Emphasis on analysis of industrial problems utilizing trigonometric solutions by logarithms. Prerequisite: Industrial Trades 152. Two two-hour periods per week.</p> <p>154 Advanced Applied Trigonometry (Fall) <i>Formerly VT 205</i> Four credits</p> <p>Continuation of Industrial Trades 153. Provides broad experience in solution of problems taken directly from industry. Prerequisite: Industrial Trades 153. Two two-hour periods per week.</p> <p>155 Compound Angles I (Winter) <i>Formerly VT 206</i> Four credits</p> <p>Combination of solid geometry and advanced (solid) trigonometry enabling student to solve setup problems involving angles and tilted work. Prerequisite: Industrial Trades 154. Two two-hour periods per week.</p> <p>156 Compound Angles II (Spring) <i>Formerly VT 207</i> Four credits</p> <p>Continuation of Industrial Trades 155. Emphasis on application of actual tooling setups for complex machining operation. Prerequisite: Industrial trades 155. Two two-hour periods per week.</p> <p>160 Precision Inspection I (Fall, on demand) <i>Formerly VT 160</i> Three credits</p> <p>Advanced techniques of tool and gauge inspection: micrometers, verniers, gauge blocks, fixed dial and thread gauges, test indicators, gear and comparator measurement, hardness testing. Prerequisite: Mechanical Technology 101, Industrial Trades 101, Industrial Trades 153, or equivalent. Two two-hour periods per week.</p> <p>161 Precision Inspection II (Winter, on demand) <i>Formerly VT 161</i> Three credits</p> <p>Precision layout work related to gauges and inspection problems. Prerequisite: Industrial Trades 160. Two two-hour periods per week.</p> <p>170 General Welding I (all terms) <i>Formerly VT 105</i> Four credits</p> <p>Study of principles and fundamentals in application and safe operation of metal arc welding equipment. Beading, fillet and multiple pass welding of butt, lap and</p>
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corner type joints in flat and horizontal positions. \$10.00 Laboratory fee. Lecture and Laboratory. Two three-hour sessions per week.

171 General Welding II (all terms)
Formerly VT 106 **Four credits**

Study of principles and fundamentals in application and safe operation of oxyacetylene welding and cutting equipment. Beading and fillet welding of butt, lap and corner type joints in all positions. Introduction to brazing of sheet metals is also presented. \$10.00 Laboratory fee. Lecture and Laboratory. Two three-hour sessions per week.

172 General Welding III (all terms)
Formerly VT 107 **Four credits**

Vertical and overhead bead, multiple pass fillet and groove welds in butt, lap and corner type joints. Use and interpretation of fillet and groove welding symbols relative to butt, lap, tee and corner type joint design. \$10.00 Laboratory fee. Prerequisite: Industrial Trades 170. Two three-hour sessions per week.

175 Advanced Welding I (Spring)
Formerly VT 110 **Four credits**

Specialized instruction in arc welding of structural steel, sheet metal, steel pipe, tool steel and aluminum. Introduction to Heliarc welding. \$10.00 Laboratory fee. Prerequisite: Industrial Trades 172. Lecture and Laboratory. Two three-hour sessions per week.

176 Advanced Welding II (Fall)
Formerly VT 111 **Four credits**

Specialized instruction in the oxyacetylene welding and brazing of sheet metal, steel plate, steel pipe, cast iron and aluminum. Silver brazing and solder techniques are also presented. \$10.00 Laboratory fee. Prerequisite: Industrial Trades 171. Two three-hour sessions per week.

177 Advanced Welding III (Winter)
Formerly VT 112 **Four credits**

A study of tungsten inert-gas arc welding process (Heliarc) on variety of shapes in all positions. Instruction on mild steel, tool steel, stainless steel, aluminum and magnesium alloys. \$10.00 Laboratory fee. Prerequisite: General Welding I and II. Two three-hour sessions per week.

180 Welding for Pipefitters I
Formerly BTR 165 **Four credits**

This is a practical welding course designed to develop skill in the welding of pipes. Since electric or gas welding experience is desirable, a review of basic welding skills is first given. As the basic skills increase, the student applies these principles to the welding of pipes. Additional skills in laying out, flamecutting, and welding of different joints on different types and sizes of pipes are covered. Sheet and bar stock may also be used. The student may be required to pass performance tests. \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.

181 Welding for Pipefitters II
Formerly BTR 166 **Four credits**

A continuation of 180. Prerequisite 180. \$10.00 laboratory fee. Lecture and Laboratory. Two three-hour periods per week.

**Applied
Technology
Industrial Trades**

- Applied Technology**
Industrial Trades
- 182 Welding for Pipefitters III** **Four credits**
Formerly BTR 167
A continuation of 181. Prerequisite: 181. \$10.00 laboratory fee. Lecture and Laboratory. Two three-hour periods per week.
- 200 Metallurgical Testing of Welds I (on demand)** **Four credits**
Formerly VT 234
Welding of low carbon steels in various ways, and testing of all welds to determine quality and reliability characteristics of weld metal. Study of internal strains, cracking, shrinkage and warpage. \$15.00 Laboratory fee. Prerequisite: Mechanical Technology 204. Industrial Trades 177. Lecture and Laboratory. Two three-hour sessions per week.
- 201 Metallurgical Testing of Welds II (on demand)** **Four credits**
Formerly VT 235
Oxyacetylene welding and brazing of various metals and testing of all welds for quality and reliability. Welds are etched and examined under metallograph. Reasons for weld defects (porosity, slag inclusions and lack of fusion, etc.) are explored. \$15.00 Laboratory fee. Prerequisite: Mechanical Technology 204. Industrial Trades 200. Lecture and Laboratory. Two three-hour sessions per week.
- 202 Metallurgical Testing of Welds III (on demand)** **Four credits**
Formerly VT 236
Shielded metal arc welding of carbon steel, groove type welds, face, root and side bend tested for quality and reliability. Reasons for weld defects (cracks, porosity, lack of fusion, slag inclusions, undercut and overlap, etc.) are explored. \$15.00 Laboratory fee. Prerequisite: Industrial Trades 201. Laboratory and Lecture. Two three-hour sessions per week.
- 205 Welding for Certification I (on demand)** **Four credits**
Formerly VT 240
Designed to give student intensified practice in arc welding, for those who wish to pass certification tests conforming to AWS-ASME codes and specifications. Students desiring only to attain an equivalent level of competence may also take this course. \$15.00 Laboratory fee. Prerequisite: Industrial Trades 202. Lecture and Laboratory. Two three-hour sessions per week.
- 206 Welding for Certification II (on demand)** **Four credits**
Formerly VT 241
Continuation of Industrial Trades 205. Course covers oxyacetylene welding and brazing. \$15.00 Laboratory fee. Prerequisite: Industrial Trades 202. Lecture and Laboratory. Two three-hour sessions per week.
- 207 Welding for Certification III (on demand)** **Four credits**
Formerly VT 242
Designed to give the student intensified practice in Heliarc welding of stainless steel, aluminum and magnesium, in preparation for AWS-ASME certification requirements. \$15.00 Laboratory fee. Prerequisite: Industrial Trades 202. Lecture and Laboratory. Two three-hour sessions per week.
- 245 Body Design I (Fall)** **Three credits**
Basic automotive body design will acquaint the student with the techniques and drafting procedures used in actual industry drafting rooms. The tools, materials and techniques differ from those used in mechanical drawing in many ways, principally because of the preponderance of curved lines and surfaces. Prerequisite: 154. Drafting Technology 103. Lecture and laboratory. Two three-hour periods per week.

- 250 Body Design II (Winter)** **Three credits**
Formerly VT 119
Applied Technology
Industrial Trades
Reviews basic descriptive geometry as applied to actual automotive true view problems. Includes basic study of simple and compound surface development, surface development and true view practice applied to actual automotive design problems. Prerequisite: Drafting Technology 103. Lecture and laboratory. Two three-hour periods per week.
- Service Trades**
Service Trades
- 100 Automotive Service I (Fall)** **Four credits**
Teaches understanding of basic tools and ability to use service manuals. Includes safety instruction. Student learns to work on exhaust systems, cooling systems, fuel systems, lubrication, battery service, automobile accessories, and tires. Lecture and laboratory. Six hours per week.
- 101 Automotive Electricity (Winter)** **Four credits**
Basic electricity as it applies to the automobile. The student will learn to adjust and/or repair storage batteries, ignition systems, charging systems, starting systems, instrumentation, and chassis electricity. Lecture, laboratory. Six hours per week.
- 102 Automotive Brakes (Fall)** **Four credits**
Student learns to adjust brakes, reline brakes, turn down brake drums, grind lining, and service the hydraulic system. Lecture and laboratory. Six hours per week.
- 105 Engines (Fall)** **Four credits**
A background in principles, design, operation, and service procedures of modern gasoline engines. Prepares student to begin practical experience in engine maintenance and service. Lecture and laboratory. Seven hours per week.
- 104 Automotive Drive Lines (Spring)** **Four credits**
Teaches student to service clutches, manual transmissions, overdrives, universal joints, drive shafts, differentials, and rear axles. Lecture and laboratory. Six hours per week.
- 107 Automotive Steering and Front End (Spring)** **Four credits**
Students learn to check, adjust, and service manual and power steering gears, front suspensions, and power steering components. Lecture and laboratory. Six hours per week.
- 109 Engine Diagnosis and Tune-up (Winter)** **Four credits**
Teaches diagnosing and tuning-up an engine in regard to the engine's fuel, ignition, starting, and charging system. Lecture and laboratory. Six hours per week.
- 110 Service Orientation (Winter)** **Six credits**
Students perform service and maintenance jobs on customers automobiles. The instructor devotes time to individual student work. Twelve hours laboratory per week.
- 111 Customer Service (Spring)** **Six credits**
Emphasis in practical application of service procedures and techniques. Supervised practical experience program with students doing actual service work. Twelve hours laboratory per week.

- Applied Technology Service Trades**
- 115 Welding for Automotive (Fall) Three credits**
A student who successfully completes this course will be competent in both gas and electric welding. He will be able to perform those duties which are required of him in welding as an automotive technician. \$5.00 laboratory fee. Lecture and laboratory. Four hours per week.
- 120 Refrigeration Servicing I (Winter) Four credits**
Instruction for beginners in the refrigeration servicing field. Domestic refrigerators are studied in detail. Most common types of refrigerators are covered thoroughly, with particular attention given to principles of construction and operation of complete refrigeration systems. Discussions included on theory and principles underlying repairing and practical shop work. The student performs such jobs as tube bending, flaring, and soldering, as well as the charging and testing of refrigeration equipment. Six hours per week.
- 121 Refrigeration Servicing II (Spring) Four credits**
Advanced course for those who have completed Refrigeration Servicing I, or who have had some practical experience in the refrigeration servicing field. More complex refrigeration systems are discussed, and students connect various components to make complete refrigeration systems. Students receive practical work in adjusting and servicing refrigerant valves and controls, and in trouble shooting multiple refrigeration systems. Six hours per week.
- 125 Gas and Oil Burner Servicing I (Winter) Four credits**
Information about construction and operation of various types of automatic heating equipment for servicemen, steamfitters, sheetmetal men, and others interested. Material covered includes construction and operation of high-pressure oil burners; installation of conversion burners; servicing of nozzles, electrodes, and pumps; and basic controls and control circuits. Six hours per week.
- 128 Gas and Oil Burner Servicing II (Spring) Four credits**
Continuation of STR 125, including work on various types of oil burners other than high-pressure burners; gas burner installation and servicing; checking and adjusting burners for combustion efficiency; more complex wiring systems, and practice in locating and correcting service faults in a variety of heating systems. Six hours per week.
- 130 Customer Relations (Winter) Two credits**
Teaches competence in talking to and performing work for customers. Some background in sales but emphasis is placed upon customer service problems. Two hours lecture per week.
- 140 Radio Servicing (Fall) Eight credits**
Covers A.C. and D.C. theory and circuitry, trouble shooting principles, oscilloscope, and its use, FM and AM principles, stereo and multiplex systems. The student will build a vacuum tube volt meter, R.F. generator, and do radio repair. Twelve hours per week.
- 161 Television Servicing (Winter) Eight credits**
Covers black and white T.V. and the principles under which it operates. The student will construct an oscilloscope for his use, and will repair black and white television. Twelve hours per week.
- 162 Advanced Television Servicing (Spring) Eight credits**
Work in the area of color television, and the servicing of color television. Student will also make a signal tracer. All equipment made in these courses is kept by the student upon completion. Twelve hours per week.

ADMINISTRATION

Board of Trustees
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David D. Dicht
Chairman



Albert C. Boyd
Secretary



Cecil H. MacDonald
Treasurer



John H. Dart
Trustee



David L. Frisk
Trustee



Lee A. Trumble
Trustee



Marilyn Morris Wanger
Trustee

Lansing Community College Board of Trustees

At a special election held December 15, 1964, voters adopted a proposal creating the Ingham County Community College District, with six trustees elected to serve for a period of two years. Meeting on January 6, 1965, the newly elected Board of Trustees resolved, "that the Ingham Community College Board of Trustees desires to enter into negotiations with the Lansing Board of Education concerning the orderly transfer of the operation and control of the institution now known as the Lansing Community College and to establish by July 1, 1965, the new area community college." At a subsequent meeting the Board agreed to retain the name of Lansing Community College.

Under the new tax base, greater than that previously determined by the Lansing School District, it became possible to provide more education and training programs for more people of all ages. Since the election of this first Board of Trustees, site planning has been completed for the 52-acre downtown campus; construction is underway for the new Health Careers-Liberal Arts and Sciences unit; the renovation of Old Central is nearing completion, and student enrollment totaled 4,147 students in the fall of 1966.



*Bruce Newman
Controller*



*Kenneth Spruill
Dean of
Student
Personnel
Services*



*Thomas MacChure
Dean of Special
Projects and
College Services*



*W. Stephen Nicholson
Academic Dean*

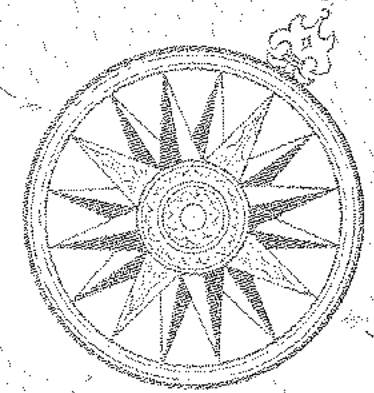


*Frank Benedict
Director of
Instructional Services
and Personnel*



*Philip J. Cannon
President*

PRESIDENT'S CABINET



Faculty Directory



Faculty Directory **Faculty Directory**

ANDERSON, Raymond O. Registrar
B.S., University of Michigan; M.A., University of Michigan; D.A.C.S., Michigan State University; Doctoral Candidate, Michigan State University.

ANTICO, John Associate Professor, Language Arts
B.A., Wayne State University; M.A., Wayne State University; Graduate Study, Michigan State University.

ANTONIDES, Chris Instructor, Language Arts
B.A., New York University; M.A. New York University; Graduate Study, Michigan State University.

ARGANIAN, David Chairman, Humanities Department
B.A., University of Wisconsin; M.A., University of Wisconsin; Doctoral Candidate, Michigan State University.

BAILEY, Perry Professor, Social Science
B.A., Western Michigan University; M.A., Columbia University; Ph.D., Ohio State University.

BANKS, James Assistant Professor, Science
B.A., University of Louisville; M.A.T., Michigan State University.

BAZYLEWICZ, Joseph Instructor, Applied Technology
B.S.M.E., Michigan State University

BECK, Norman Instructor, Language Arts
B.A., University of Rhode Island; M.A., University of Rhode Island; Graduate Study, Michigan State University.

BENEDICT, Frank Director, Informational Services and Personnel
B.M., Michigan State University; M.A., University of Michigan; Graduate Study, Michigan State University.

BERGMANN, Edwin C. Chairman, Engineering Technology Department
B.S., Bowling Green University; M.S., Stout State College; Doctoral Candidate, Michigan State University.

BOGNER, John R. Assistant Professor, Student Personnel Services
B.S., Western Michigan University; M.A., Michigan State University.

BOROFF, George Apprentice Coordinator, Applied Technology
Associate Degree, Lansing Community College; B.S., Michigan State University; M.A., Michigan State University.

BOUCK, Robert J. Instructor, Management and Marketing
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BOUTERSE, Gloria Chairman, Health Careers Department
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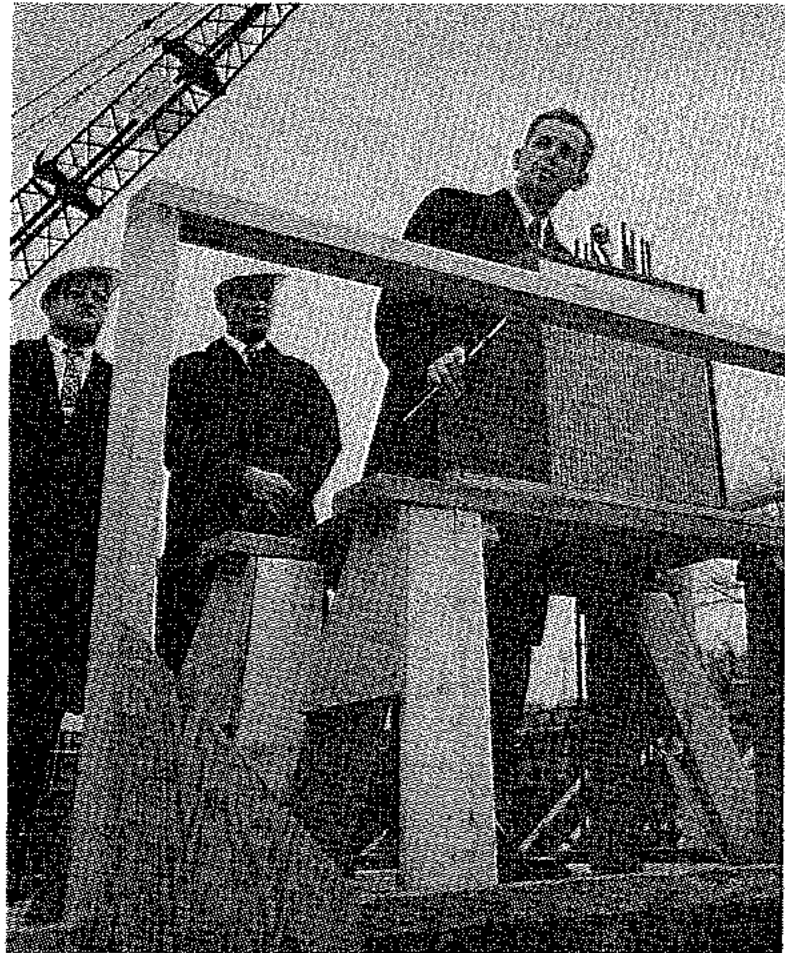
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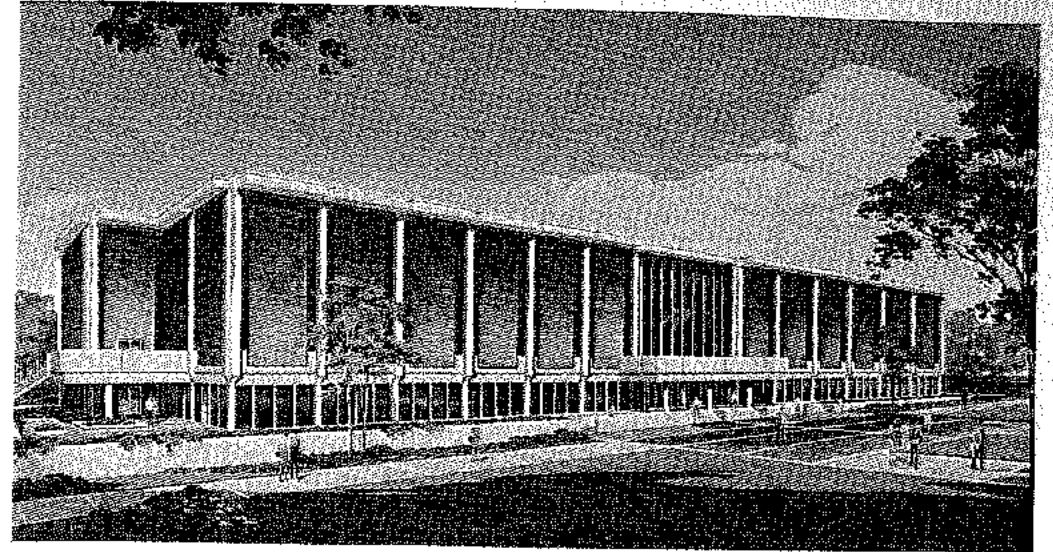
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Artist's rendition of Health Careers, Liberal Arts and Sciences Building

Ground Breaking Ceremony
Oct. 10, 1965



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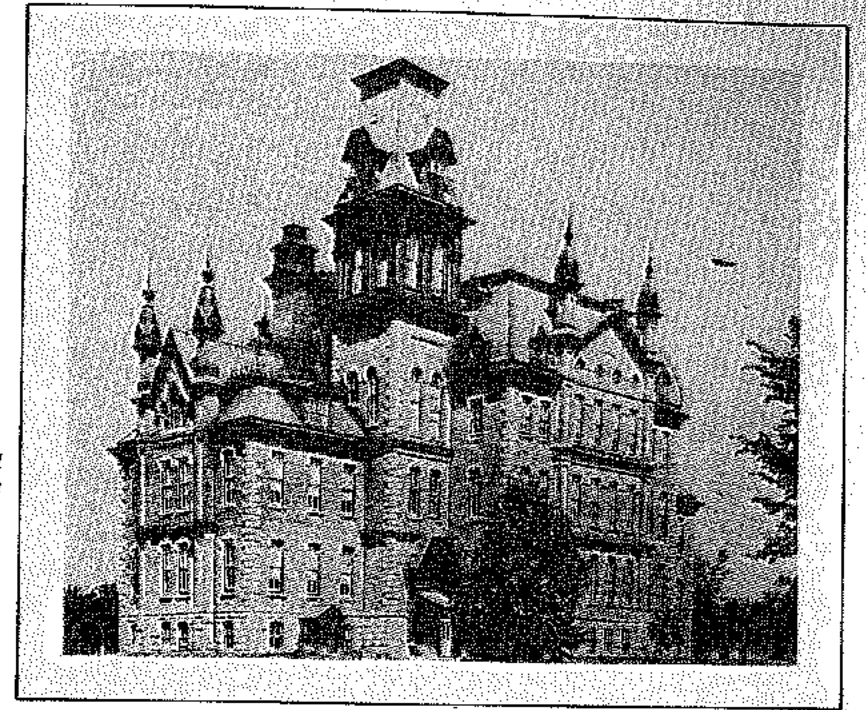
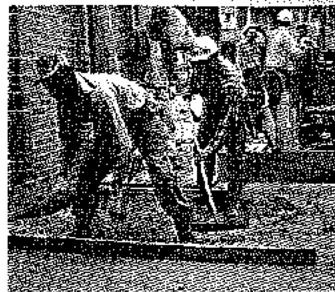
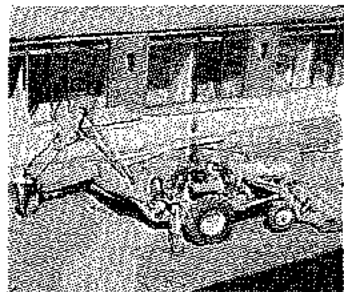
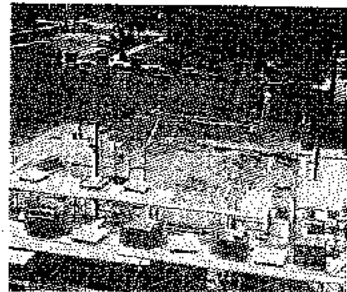
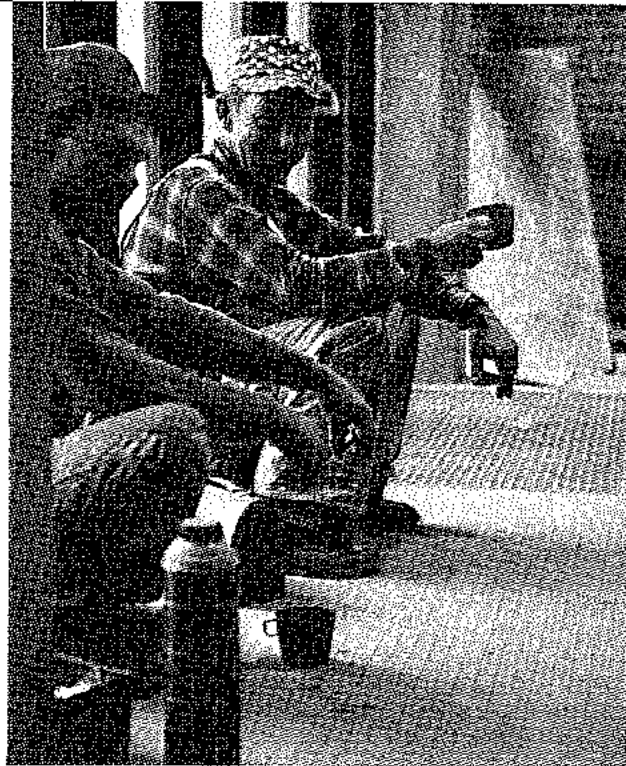
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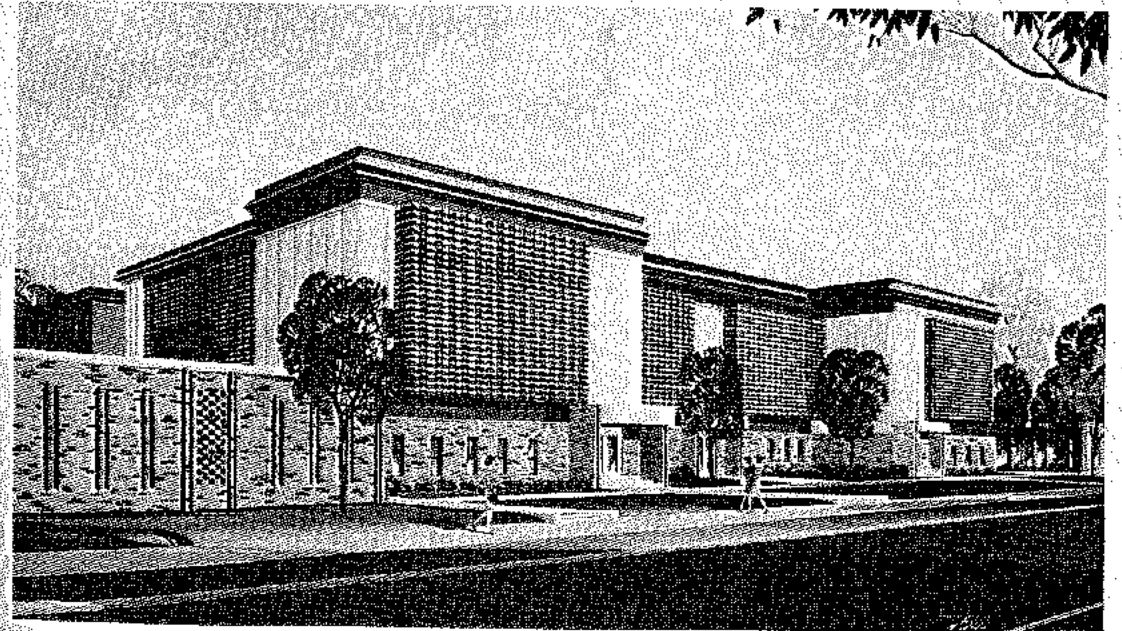


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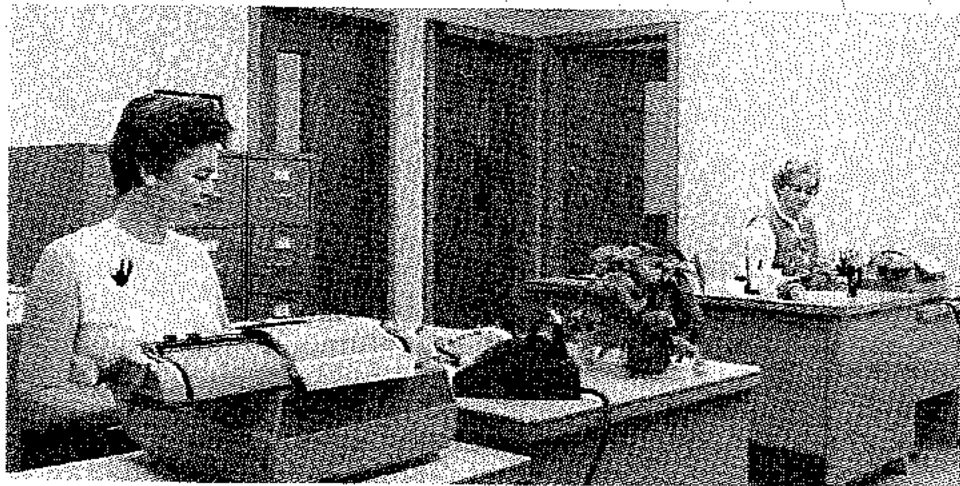
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