Lansing Community College
1967 - 68

Information for prospective students
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, homemakers, 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 curricula have been developed in the health, business, and technical fields as well as in the freshman and sophomore years of liberal arts. These curricula 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. Cannon
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 function 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 freshmen 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 businesses, 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 add 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.

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 serves 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 to appreciate 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.
### Lansing Community College Calendar — 1967-1969

**Fall Term 1967**  
September 15-20  
Faculty and Committee Meetings  
September 25-26  
Full Term Registration  
September 27  
Classes Begin  
November 23-25  
Thanksgiving Holiday  
December 11-15  
Examinations  
December 16  
Term Closes  

**Winter Term 1968**  
January 4-5  
Faculty and Committee Meetings  
January 5-6  
Winter Term Registration  
January 7  
Classes Begin  
March 19-23  
Examinations  
March 23  
Term Closes  

**Spring Term 1968**  
April 1  
Spring Term Registration  
April 2  
Faculty and Committee Meetings  
April 3  
Classes Begin  
May 30  
Memorial Day  
June 12-17  
Examinations  
June 18  
Commencement  
June 19  
Term Closes  

**Summer Term 1968**  
June 19  
Summer Term Registration  
June 20  
Classes Begin  
July 4-5  
Independence Day  
August 17  
Term Closes  

* 1968-1969 schedule tentative.*
Division 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 aid, placement and college activities.

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 application 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 forwarded 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 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 $6 if they carry more than 7 hours credit.
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 an 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 30 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 dates 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 program 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.
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 any way reduces the student from the responsibility of completing all the work of the course to the satisfaction of the instructor in charge. Absence will be excused when incurred by reason of a student's participation in field trips and other events 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 capabilities, and conform to a plan acceptable to the College. The course of study should either be suitable for transfer to a four-year college of his choice, or be 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 honor 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 exercises 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 spring 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 Senior Cum Laude; those who maintain a 3.00 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 programs, 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 classes during the evening hours.

Students may select late afternoon and evening courses as integral parts of a technical or liberal arts and sciences curriculum, or individual selection 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 effective 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: $18.50
- Limit on hours charged: 15
- Maximum per term: $277.50

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: $5.00
- 1-7 credit hours: $5.00
- 8 or more credit hours: $7.00
- College activities fee (each term)
  - 1-6 credit hours: $1.00
  - 7-11 credit hours: $3.00
  - 12 or more credit hours: $5.00

*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: 100% of Tuition
- Withdrawal during 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: 100% of Tuition
- Withdrawal during second week of term: 50% of Tuition
- Withdrawal after second week of term: No Refund

COUNSELING SERVICES

Director of Counseling: Jack Thoensen

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 vocational source material which is readily available to all students. Director's career descriptions, job briefs and educational listings are included in a comprehensive service designed to assist the student in making appropriate educational and vocational 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 counseling and counseling. Counselors assist students with decisions of curriculum choices, vocational development, social and emotional problems of a personal nature which tend to interfere with academic progress.

Orientation

Efforts are 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 freshmen 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 personal 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. Curriculum 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.
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 Aid 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 admitted 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 need, need for funds. The scholarships are renewable so that a student may receive aid for a total of six years.

Trustee 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 $250 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 3.5 grade average.

Practical Nursing

State and National Practical Nursing Associations offer $200-4250 scholarships to applicants showing academic competence and financial need.

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 languages. 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, 1965, 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 freshmen 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 Aid, 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 $500 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 applications for these jobs may be obtained from the Chairman of Financial Aid, 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 Aid.

A. S. Corwin Scholarship in Transportation and Traffic Management
A scholarship made possible by friends of Mr. A. S. Corwin, traffic manager of Okemos, 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 ACTIVITIES

Director: William Zuhl

Strong emphasis is placed on student activities as a total college activity involving students, faculty, administration and members of the 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 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 theatres, has encouraged many students and faculty members to perform in community theatre production and to assist behind the scenes. Considering the Greater Lansing Area as its campus, the 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," "Counsel's "Run For It," and "The Sound of Music." They have also enjoyed internationally known stars, such as Hans Conried, Bert Noyes, 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.
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 50,000 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 1980. The book collection is arranged by Dewey Decimal Classification on open and reserve shelves.

The Library is located at the northeast 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 audiovisual 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 a audio channel.
Course and Department Codes

**Course Numbers**

- **000-099**: 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 101, 201, 203 — 12 credits
- **Natural Science**: Natural Science 101, 102, 103 — 12 credits
- **Social Science**: Social Science 101, 102, 103 — 12 credits
DIVISION OF BUSINESS

Department of Accounting and Office Programs

Department of Management and Marketing
Business Division

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 semiskilled levels. The job openings for this level of training represent the largest growing area of employment in our economy.

Qualified students interested in gaining new skills and assuming greater responsibilities may enroll with an advisor to select courses that will be equivalent to three years, or more, university credits.

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

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

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

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 enable employees to improve, upgrade, or retrain themselves through classroom work. This instruction may be pertinent to the employee's present job requirements or to anticipated advancement. The spectrum of courses offered range from those of fundamental content to those requiring considerable preparation and background.

Changes have occurred with increasing frequency 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 most important aspects of their occupation and their employer's business. The College stands ready to develop, for specific requirements, programs ranging from single lecture meetings to those requiring considerable hours for completion.

Cooperative Internship

Lansing Community College

Internship is an on-the-job work experience program carefully coordinated and integrated with a semester and departmental offering. 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, students are given the opportunity to develop those skills and abilities that are of greatest value to them in their careers.

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

Advantages of internship include the development of occupational competencies at the skilled or semiprofessional level leading to jobs which represent the most rapid growth area of employment in our economy. By combining theory and practical work, the student maintains his classroom relationships. Internship contributes to professional and personal development by providing a basis for decisions in choosing a career, by focusing the realization of personal responsibility in a job well done, and by developing character.

A broader and more meaningful appreciation of the practical application of his formal academic education is gained by the student. The student also gains both college credit and wages comparable to other students in like positions.

To qualify for the internship, students must be able to secure departmental approval through the coordinators 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.
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 the belief that accounting is the language of business and that the measurement and communication of financial data is essential to those who will use that data, not only for its informational value but also as a basis for decision and action. The curriculum will help the student to develop habits of critical logical thinking while he is learning the record, report and integrated 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.

Accounting

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<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101 Communications</td>
<td>3</td>
<td>Principles of English</td>
</tr>
<tr>
<td>BUS 111 Business Mathematics</td>
<td>3</td>
<td>Business Mathematics</td>
</tr>
<tr>
<td>BUS 120 Principles of Accounting I</td>
<td>3</td>
<td>Principles of Accounting I</td>
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</tbody>
</table>
### General Clerical

#### Two-Year Associate Degree Program

The General Clerical curriculum is designed for those office positions where the stenographic skills of shorthand and transcription are not necessary or desired. Students completing this program are equipped to handle the clerical functions in most large offices, including stenographic work where machine transcription is performed, and to efficiently run an office.

<table>
<thead>
<tr>
<th>Program</th>
<th>Basic</th>
<th>Full-Time</th>
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</thead>
<tbody>
<tr>
<td>1977 - 1978</td>
<td>Fall</td>
<td>Spring</td>
</tr>
<tr>
<td>18C</td>
<td>18H</td>
<td>18C</td>
</tr>
<tr>
<td>1901</td>
<td>1902</td>
<td>1901</td>
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<td>Principles of Accounting II</td>
<td>Principles of Accounting I</td>
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<tr>
<td>1903</td>
<td>1904</td>
<td>1903</td>
</tr>
<tr>
<td>General Education</td>
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<td>General Education</td>
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</table>

### General Clerical

#### One-Year Certificate Program

The one-year general clerical program is designed for those students who wish to rapidly develop or increase the basic skills necessary for entrance jobs in the modern office. Upon satisfactory completion of the program, a certificate is awarded. Further courses may be elected on a full-time basis or part-time during evenings which will lead to the associate degree.

<table>
<thead>
<tr>
<th>Program</th>
<th>Basic</th>
<th>Full-Time</th>
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<tbody>
<tr>
<td>1977 - 1978</td>
<td>Fall</td>
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<td>18C</td>
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<td>Principles of Accounting II</td>
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<td>General Education</td>
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</table>

### Accounting and Office Programs

#### Chart and Conference Reporting

The two-year Chart and Conference Reporting curriculum includes the courses between the two regular school years, to give a two-year program designed to prepare students for the many interesting positions in the shorthand field. Some of the occupations for which graduates will be qualified are court reporters, conference reporters, legislative reporters, general reporters, and general reporters. The program teaches mathematics, shorthand, and develops the skill necessary for shorthand reporting. In addition, it teaches legal, medical, and other technical vocabularies and essential information for success in the field.

<table>
<thead>
<tr>
<th>Program</th>
<th>Basic</th>
<th>Full-Time</th>
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<tbody>
<tr>
<td>1977 - 1978</td>
<td>Fall</td>
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<td>18C</td>
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### Audio Visual Terminal Laboratory in Business

- Computer Systems
- Data Processing
- Word Processing
- Business Math
- Technical Writing
- Business Law
- Marketing
- Accounting
- Economics
- Psychology
- Business Communications
- Business Statistics
- Business Ethics
- Business Law
Legal Secretary
Two-Year Associate Degree Program

The Legal Secretary Program is designed for students who wish to specialize in the legal field. The curriculum provides the student with the skills and abilities necessary to manage the office of an attorney and develop understanding of the legal terminology used in the field. An Associate Degree is awarded upon satisfactory completion of the program.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Full-Time</th>
<th>Credit Hours</th>
<th>Part-Time</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Winter</td>
<td>12</td>
<td>12</td>
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<td>Spring</td>
<td>12</td>
<td>12</td>
<td>6</td>
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Medical Secretary
Two-Year Associate Degree Program

Designed for the student who wishes to become a medical secretary, this program provides both clerical skills and the technical understanding necessary to perform the responsibilities of the specialized field. An Associate Degree is awarded upon satisfactory completion of the curriculum.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Fall-Time</th>
<th>Credit Hours</th>
<th>Part-Time</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Winter</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Spring</td>
<td>12</td>
<td>12</td>
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*All the courses have completed high school, one year of Advanced Placement may be sufficient. (*) computer and secretarial skills. A student must have completed 15 units of English, 15 units of Math, 15 units of Science, and 15 units of Social Studies.
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 general stenography to executive secretary. The program provides the skills necessary for entry-level jobs, and sufficient background to enable the student to advance rapidly.

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<thead>
<tr>
<th>Semester</th>
<th>Full Time</th>
<th>Credit Hours</th>
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<tr>
<td>Fall</td>
<td>ENO 101 Fundamentals of Business</td>
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<td></td>
<td>ENO 102 Accounting</td>
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<tr>
<td></td>
<td>ENO 103 Business Mathematics</td>
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<td>ENO 104 Business Communication</td>
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<tr>
<td>Winter</td>
<td>ENO 201 Bookkeeping</td>
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<td>ENO 202 Business Law</td>
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<td>ENO 203 Business Mathematics</td>
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<td>Spring</td>
<td>ENO 301 Bookkeeping</td>
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<td>ENO 302 Business Law</td>
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<td>ENO 304 Business Communication</td>
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Stenography

One-Year Certificate Program

This is an associated program for qualified students. It includes instruction and practice in all primary skills and abilities necessary for a successful career in office occupations. A certificate is awarded for satisfactory completion of the course. Pacing may be provided full or part-time, leading to an associate degree.

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<tr>
<th>Semester</th>
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<td>ENG 101 Composition I</td>
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<td>ENG 201 Advanced Writing</td>
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</table>

Stenographic Stenography

One-Year Certificate Program

This is an associated program for qualified students. It includes instruction and practice in all primary skills and abilities necessary for a successful career in office occupations. A certificate is awarded for satisfactory completion of the course. Pacing may be provided full or part-time, leading to an associate degree.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Full Time</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ENG 101 Composition I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENG 102 Composition II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENG 103 Business Writing</td>
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</tr>
<tr>
<td>Winter</td>
<td>ENG 201 Advanced Writing</td>
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<tr>
<td></td>
<td>ENG 202 Business Law</td>
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<tr>
<td></td>
<td>ENG 203 Business Mathematics</td>
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<tr>
<td>Spring</td>
<td>ENG 301 Composition I</td>
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<tr>
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<td>ENG 304 Business Law</td>
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<tr>
<td></td>
<td>ENG 305 Business Mathematics</td>
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<tr>
<td></td>
<td>ENG 306 Business Communication</td>
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</tr>
</tbody>
</table>

Department of Management and Marketing

Management and Marketing

One-Year Certificate Program

A one-year curriculum in Management is designed primarily for qualified students desiring positions of the first or second level of management. Business students are encouraged to make use of the management courses in the implementation of their career education or promotion program. Consulting with a staff member in the management area is recommended to guide the choice of effective courses towards the desired goal of the student. A certificate is granted to those students successfully completing the curriculum.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Full Time</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
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<tr>
<td></td>
<td>BUS 102 Business Management</td>
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<td>Winter</td>
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<td></td>
<td>BUS 202 Business Law</td>
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<td></td>
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<td></td>
<td>BUS 204 Business Communication</td>
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<tr>
<td>Spring</td>
<td>BUS 301 Business Law</td>
<td>3</td>
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<tr>
<td></td>
<td>BUS 302 Business Management</td>
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<td></td>
<td>BUS 303 Business Administration</td>
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<tr>
<td></td>
<td>BUS 304 Business Communication</td>
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</table>

Baccalaureate Elective in Business

Elective courses may be offered or required.
Management

Associate Degree Program

The Management program offers training for management in various fields, determined by needs of students in the community. Classroom management does not include planning, organization, and control. Students are expected to meet the needs of the field in which they will work. Each course gives the student a professional working who can manage and lead in a business, a factory, or in their own business.

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

Fall Term

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ENG 110</td>
<td>Composition</td>
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</tr>
<tr>
<td>BUS 200</td>
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<td>3</td>
</tr>
<tr>
<td>BUS 210</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 220</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS 230</td>
<td>Business Statistics</td>
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<tr>
<td>BUS 240</td>
<td>Business Ethics</td>
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<tr>
<td>BUS 250</td>
<td>Business Law</td>
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<td>BUS 260</td>
<td>Business Ethics</td>
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Winter Term

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Spring Term

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<td>Business Statistics</td>
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<td>Business Ethics</td>
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</tr>
</tbody>
</table>

Marketing

One-Year Certificate Program

A condensed one-year curriculum in Marketing is offered for qualified students. This course is designed to meet the needs of students and businesses. The curriculum has special value to those already employed in business or promotion. A certificate is granted to those students successfully completing this curriculum.

Electives may be chosen from the courses listed in the upper descriptive section of the college catalog. Each advisor to Business will recommend electives to students in accord with their needs and goals.
Management and Marketing

Data Processing

One-Year Certificate Program

In order to meet the increasing demand for trained data processing personnel, an accelerated program in Data Processing is being offered to qualified students. This one-year program is of special value to students who desire rapid but comprehensive training to enable them to enter the labor market as soon as possible. A certificate is granted upon completion of this program. Also, the courses may be transferred to the two-year program.

**Spring Term**
- BUS 225: Managerial Accounting
  - 5 electives

**Fall Term**
- BUS 110, 130, 220
- BUS 155, 255
- BUS 160, 260

Data Processing

Associate Degree Program

The Data Processing curriculum at Lansing Community College is designed to provide trained graduate capable of meeting the ever increasing demands of the business world. Graduates will have acquired an understanding of the concepts, principles, and techniques of data processing together with a working knowledge of modern, complex, high-speed data processing machines.

The graduate of Lansing Community College, trained in the business applications of data processing equipment, is fully trained for occupations such as computer operator, coder, or computer programmer.

Program Requirements

<table>
<thead>
<tr>
<th>Program</th>
<th>Core Courses</th>
<th>Electives</th>
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</thead>
<tbody>
<tr>
<td>BUS 225</td>
<td>Managerial Accounting</td>
<td>5 electives</td>
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<tr>
<td>BUS 110, 130, 220</td>
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<tr>
<td>BUS 155, 255</td>
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</tr>
<tr>
<td>BUS 160, 260</td>
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</tr>
</tbody>
</table>

**Electives for Management Specialties**
- BUS 203, 204, 205
- BUS 210, 211, 212
- BUS 220, 221, 222
- BUS 230, 231, 232

**Electives for Data Processing Specialties**
- BUS 240, 241, 242
- BUS 250, 251, 252
- BUS 260, 261, 262

**Required electives**

*This catalog may be subject to change without notice.*
Law Enforcement

Associate Degree

This program is designed to prepare men and 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.

<table>
<thead>
<tr>
<th>Winter Term</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101 Composition</td>
<td>ENG 101 Composition</td>
</tr>
<tr>
<td>ENG 102 Foundations of Speech</td>
<td>ENG 201 Principles of Law</td>
</tr>
<tr>
<td>PHY 101 General Science</td>
<td>PHY 102 Police Organization and admin</td>
</tr>
<tr>
<td>MAT 101 Basic Math</td>
<td>MAT 102 Police Operations</td>
</tr>
<tr>
<td>HIS 101 U.S. History</td>
<td>HIS 102 Police Personnel</td>
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<td>HST 101 History of Police</td>
<td>HST 102 Police Training</td>
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<tr>
<td>Approve Elective</td>
<td>Approve Elective</td>
</tr>
</tbody>
</table>

**Note:** All courses are approved by the Law Enforcement Certification.

**Law Enforcement Course Certification**

Certificate Program

Students who are presently engaged in law enforcement work will receive a certificate upon successful completion of the 26 hours of work in the field of law enforcement.

**L. E. 101 (5)** Introduction to Law Enforcement

**L. E. 102 (5)** Police Organization and Administration

**L. E. 105 (5)** Theory of Police

**L. E. 201 (4)** Introduction to Criminal Investigation

**L. E. 202 (5)** Criminal Law and Procedure

**L. E. 203 (2)** Crime Prevention

**S. S. 200 (5)** Juvenile Delinquency

**L. E. 204 (5)** Traffic Law and Accident Investigation
### Library Technology

**Certification Program - 1 year**

<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT 113 Introduction to the Library</td>
<td>3</td>
</tr>
<tr>
<td>LT 160 Library Science</td>
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<tr>
<td>LT 240 Information Science</td>
<td>3</td>
</tr>
<tr>
<td>PT 105 Introduction to Computing</td>
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<tr>
<td>150 Lecture</td>
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</table>

<table>
<thead>
<tr>
<th>Spring Term</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>LV 120 Literature</td>
<td>3</td>
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<tr>
<td>LV 220 Library Issues</td>
<td>3</td>
</tr>
<tr>
<td>LV 221 Library Projects</td>
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<tr>
<td>150 Lecture</td>
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</table>

**Associate Degree - 2 years**

<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>LT 113 Introduction to Library Science</td>
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<tr>
<td>LT 160 Library Science</td>
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</tr>
<tr>
<td>LT 240 Information Science</td>
<td>3</td>
</tr>
<tr>
<td>PT 105 Introduction to Computing</td>
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<tr>
<td>150 Lecture</td>
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<table>
<thead>
<tr>
<th>Spring Term</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>LV 120 Literature</td>
<td>3</td>
</tr>
<tr>
<td>LV 220 Library Issues</td>
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</tr>
<tr>
<td>LV 221 Library Projects</td>
<td>3</td>
</tr>
<tr>
<td>150 Lecture</td>
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</tbody>
</table>

### 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 secretarial, engineering, statistics or related business professions.

<table>
<thead>
<tr>
<th>Program</th>
<th>Fall Term</th>
<th>Credit Hours</th>
<th>Spring Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 110 Business Communication</td>
<td>3</td>
<td>BUS 210 Business Mathematics</td>
<td>3</td>
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<tr>
<td>BUS 210 Business Calculus</td>
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<td>BUS 310 Business Statistics</td>
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<tr>
<td>BUS 310 Business Law</td>
<td>3</td>
<td>BUS 410 Business Management</td>
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<td>150 Lecture</td>
<td>1</td>
<td>150 Lecture</td>
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</tr>
</tbody>
</table>

**Recommended Electives**

- BUS 110 Business Communication
- BUS 210 Business Mathematics
- BUS 310 Business Statistics
- BUS 410 Business Management

### Management and Marketing

**Management and Marketing**

- BUS 110 Business Communication
- BUS 210 Business Mathematics
- BUS 310 Business Statistics
- BUS 410 Business Management

### 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, part-time course in Traffic and Transportation Management will be conducted at the College. Certificates of satisfactory completion will be issued by the College.

This course is designed to meet the needs of traffic agents and other persons interested in the field of traffic and transportation. The course is designed to provide practical training and experience in the field of traffic and transportation management.

<table>
<thead>
<tr>
<th>Program</th>
<th>Fall Term</th>
<th>Credit Hours</th>
<th>Spring Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRM 110 Traffic Theory</td>
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<td>TRM 210 Traffic Engineering</td>
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<td>TRM 210 Traffic Engineering</td>
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<td>TRM 310 Traffic Law</td>
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<td>TRM 310 Traffic Law</td>
<td>3</td>
<td>TRM 410 Traffic Administration</td>
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<tr>
<td>150 Lecture</td>
<td>1</td>
<td>150 Lecture</td>
<td>1</td>
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</tbody>
</table>

**Recommended Electives**

- TRM 110 Traffic Theory
- TRM 210 Traffic Engineering
- TRM 310 Traffic Law
- TRM 410 Traffic Administration

**Credit Hours**

- 150 Lecture
COURSE DESCRIPTIONS

Business

110 Accounting I

Evaluating Assets, Liabilities, and Net Worth

Three credits

Three credits

Provides an overview of the fundamental concepts and principles of accounting, including the preparation of financial statements, basic accounting terminology, and the role of accounting in decision-making processes.

111 Accounting II

Financial Statement Analysis

Four credits

Four credits

Continues the study of accounting principles and practices, focusing on advanced financial statement analysis, cost accounting, and management accounting.

112 Accounting III

Corporate Financial Management

Four credits

Four credits

Introduces the concepts and principles of corporate financial management, including capital budgeting, financial planning, and corporate strategy.

113 Business Law

Three credits

Three credits

Provides an overview of the legal environment in which businesses operate, including contract law, tort law, and intellectual property.

114 Business Mathematics

Three credits

Three credits

Focuses on the application of mathematical concepts to business problems, including algebra, calculus, and statistics.

115 Business Statistics

Three credits

Three credits

Introduces the fundamental concepts of business statistics, including descriptive statistics, probability, and inferential statistics.

116 Marketing

Four credits

Four credits

Focuses on the principles of marketing, including market analysis, product development, and sales strategies.

117 Marketing Research

Four credits

Four credits

Examines the techniques and methods used in marketing research, including survey design, data analysis, and interpretation.

118 Professional Ethics

Four credits

Four credits

Addresses the ethical considerations that arise in the practice of business, including legal and moral issues.

119 Federal Income Taxation

Four credits

Four credits

Introduces the principles of federal income taxation and their application to business entities.

120 Sales and Service Management

Four credits

Four credits

Focuses on the management of sales and service operations, including sales forecasting, customer service, and account management.

121 Financial Management

Four credits

Four credits

Examines the principles of financial management, including capital budgeting, financial planning, and risk management.
Spring Three credits

Business 333 Advertising

Practises methods and techniques in modern advertising, giving information to do the entire advertising job. Covers writing, selection of media, and how the advertiser can approach his problems most effectively are included.

340. Transcription

Four credits

Designed to teach the four sources available to a shorthand writer. Prerequisite: Business 103 and Business 104.

341. Speed Shorthand

Four credits

Comprehension of Business 300. Attention given to specialized vocabulary and high-speed writing. Prerequisite: Business 300.

342. Secretarial Training

Three credits

For the training of office procedures and responsibilities. Emphasizes the importance of pleasant, efficient personality and effective secretarial skills. Prerequisite: Business 103 and Business 104.

344. Business Correspondence

Three credits

Most effective techniques for handling the various types of letters are emphasized.

345. Legal Shorthand

Two credits

Designed to develop skill in writing and transcribing words and phrases occurring in the spoken and written language of the law. Prerequisite: Business 104.

360. Medical Shorthand

Two credits

Develops skill in writing and transcribing words and phrases occurring in the spoken and written language of medicine. Prerequisite: Business 100 or departmental approval.

360. Principles of Accounting I

Four credits

A course designed to explain and apply basic principles of accounting by auditing the balance sheet and income statement approach. Topics include: basic accounting principles, and periodic periodic accounting systems, transactional adjustments to accounts, balance sheet, income statement, and cost flow and inventory systems. Includes the concept for the use of data processing equipment in performing accounting functions. Prerequisite: Sophomore standing or departmental approval.

361. Principles of Accounting II

Four credits

Completion of Business 360. Includes: cost and tax accounting, controlling accounts and subsidiary ledgers, cash records and forecasting, the budgeting system, partnerships, corporations and bonds. Shows how accounting services contribute to the recognition and solution of management problems. Prerequisite: Business 100.

362. Principles of Accounting III

Four credits

Continuation of Business 361 involving the study of income statements, and analysis and preparation of financial statements. Accounting principles are applied to manufacturing companies, merchandising companies, cost accounting, budgeting and sources and uses of funds. Prerequisite: Business 361.
Business 212: Sales Management

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 rate method of selling is employed extensively.

Four credits.

235: Managerial Marketing

Study of the total enterprise regarding problems, analytical tools, and approaches to decisions. Contributes allocation of funds to various areas of marketing, development of promotional strategy, price policy, and management of field selling efforts.

Three credits.

596, 211, 242, and 583: (Arranged) Office Intensive—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, earns credits for satisfactory work performance, and earns wages for hours of work. To participate, the student must receive approval from their department and enroll with the coordinator. Their occupational interests are assessed with their background of 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 supervisor and the college coordinator. Full course load and departmental approval are prerequisites.

246, 247, 248, 249, and 596: (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, earns credits for satisfactory work performance, and earns wages for hours of work. To participate in this program, students must receive approval from their department and enroll with the coordinator. Their occupational interests are assessed with their background of 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 supervisor and the college coordinator.

216: Intermediate Accounting I

Examines basic income and retained earnings statements, the accounting process (bookkeeping systems, voucher systems, adjustments, journals, accounts, inventories, depreciation, closing entries, journal entries, double entry accounts), the accounting process illustrated, cash and temporary investments, receivables, prepayments, inventories, cost procedures, and useful regulatory procedures, including identification, inventory valuation, assets, liabilities (current and permanent), and income determinations. Preerequisite: Business 112.

Four credits.

217: Intermediate Accounting II


Four credits.

233: Intermediate Accounting III

Studies the balance sheet, income and retained earnings statements, the accounting process (bookkeeping systems, journal systems, adjustments, double entry accounts, identifying accounts, inventories, depreciation, closing entries, journal entries, double entry accounts), the accounting process illustrated, cash and temporary investments, receivables, prepayments, inventories, cost procedures, and useful regulatory procedures, including identification, inventory valuation, assets, liabilities (current and permanent), and income determinations. Preerequisite: Business 216.

Four credits.

240: Cost Accounting I

The basic principles of cost accounting are discussed including its contribution to management. Cost concepts, classifications, and systems are presented in a broad and understandable. Skill in developing costing techniques and using cost reports. The elements of cost-motivating, labor, and overhead are treated in detail. Pre-requisite: Business 222.

Four credits.

244: Cost Accounting II

This course is a continuation of Cost Accounting I with emphasis on cost systems. Considerable practical experience is provided in preparing cost accounting, estimating, cost procedures, standard costs, budgeting, and management reports. Prerequisite: Business 244.

Four credits.

247: Federal Income Tax

Course includes all aspects of Federal Income Tax as it concerns individuals. Federal income tax is computed, pertaining to income earned and taxable, including deductions allowable and not allowable, types of returns to be filed, personal status, personal exemptions, medical expenses, etc. With respect to a business, as a sole proprietor, the course includes reporting methods, of business income and losses, extending income tax returns, and basic, self-employment tax, income tax credit, and other pertinent topics. Treatment of capital gains and losses, disposition of business assets, installment sales, and other specialized aspects are covered. Prerequisite: Business 216 or departmental approval.

Four credits.

309-310: Traffic and Transportation Management

Two-year, six-term course leading to a certificate issued by the College. Theoretical, historical, and academic aspects of traffic management are presented with analysis of practical problems and specific cases.

Four credits.

250: Accounting Systems and Procedures

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 card and punched card systems. Skill and development is provided for flowcharting, forms design, methods of coding and classification of information, punched card design and application of techniques to the designed system. Prerequisite: Survey of Cost Accounting, or Business Division-approved.

Four credits.

257: Governmental and Institutional Accounting I

Provides instruction in the characteristics of governmental and institutional accounting and how it differs from commercial accounting. The essentials of fiscal accounting, appropriations, allotments, reappropriation and limitations and levies are covered. Prerequisite: Business 216 (Business 216 preferred).
1967-1968 Lansing Community College Course Catalog  

Business  
241 - Governmental and Institutional Accounting II  
Four credits  
Continuation of Governmental Accounting I, covering detailed accounting procedures and accepted practices in governmental accounting, including institutional accounting for units such as hospitals and schools. Instruction is also provided in summarization and preparation of financial statements. Prerequisite: Business 239. 

249 - Governmental and Institutional Accounting III  
Four credits  
Continuation of Governmental Accounting III, with emphasis on recent changes and current practices in different government units. Considerable instruction and work is devoted to planning budgeting and financial reporting. Prerequisite: Business 239. 

279 - Real Estate Essentials  
Two credits  
Designed for those with no real estate background and those interested in entering the real estate profession. Covers the essentials of marketing property, salesmanship, financing practices, offers to purchase, Michigan Law, ethics, etc. Prerequisite: completion of courses in Business 239. 

281 - Real Estate Business II  
Three credits  
Fundamentals of real estate business, including a C.B.I., and preparation toward the State Real Estate License examination. 

283 - Life Insurance Essentials  
Three credits  
An introductory course in insurance covering various phases of insurance, including the history, principles, and types of life, fire, and the state agencies regulating insurance. Prerequisite: completion of courses in Business 239. 

Court and Conference Reporting  
101 - Machine shorthand I  
Four credits  
Theory and techniques of machine shorthand. Designed to develop a vocabulary and speed. 

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 150 words a minute. 

105 - Machine speed building  
Four credits  
Continuation of CCR 104. Introduction of new speed-building techniques. Speed development to 150 words a minute. 

202 - Machine Speed Building  
Four credits  
Continuation of CCR 201. Introduction of new speed-building techniques. Speed development to 200 words a minute. 

Economics  
101 - Applied Economics  
Three credits  
An introductory survey of business economics. Emphasis on careers and policy. Includes a logical approach to economic analysis. 

201 - Principles of Economics I  
Three credits  
Principles of Economics includes business cycles, price theory, and institutional problems. Business organization, including competitive, individual, and industrial relations, labor and capital, and the theory of money determination. Prerequisite: Economics 101. 

202 - Principles of Economics II  
Three credits  
Continuation of Economics 201. Includes business cycles, price theory, and institutional relations. Business organization, including competitive, individual, and industrial relations, labor and capital, and the theory of money determination. Prerequisite: Economics 201. 

203 - Principles of Economics III  
Three credits  
Fall Five credits

151. Systems Development and Design
A course designed to aid the student through the stages of the evolution of business data processing systems, including analysis of present information flow, system effectiveness, and equipment selection, and implementation of the system. Special emphasis on understanding the need for the skills and knowledge needed for the effective and efficient data processing equipment in meeting the information needs of business. Prerequisite: CSE 204 Programming Systems and CSE 203 Computer Programming II.

155. Systems and Applications II (formerly DP 150)
Continuation of DP 150 and open only to those who have successfully completed data processing through actual work experiences. Understanding of systems is provided as a basis for the study of methods of business with computer-oriented solutions. (Note: Data Processing 150 and Data Processing 155 may be combined to substitute for Data Processing 204 with the approval of an advisor.)

166. Data Processing Internship and Field Project
Three credits

Winter Six credits

131. Survey of Data Processing
General survey course designed to acquaint the student with electronic data processing, its uses, terminology, and management.

153. Systems & Applications I
A basic understanding of computer systems-oriented solutions to the problems and procedures of the business environment is emphasized as well as an understanding of the terminology, principles, and procedures of data processing. Emphasis is placed on general systems techniques and the general principles and practices of data processing equipment in the business environment.

157. Computer Programming III
Continuation of Data Processing 105, including expanded use of principles presented in the previous programming course and including a study of integrated systems programming techniques and random access data processing. Four lecture hours, four laboratory hours. Prerequisite: Data Processing 105 Computer Programming II.

Winter Five credits

124. Computer Programming IV
Designed to familiarize the student with the programming systems and language concepts related to the implementation of a computer system. Units include machine instructions, assembly language, programming systems as assembler, compiler, run-time environment, test program, and others, including high level languages. Should provide the student with knowledge of programming systems as assembler, compiler, and environment. Prerequisite: DP 203 Computer Programming III.

Spring Six credits

133. Programming Languages
An introductory course in computer languages, providing an overview of several languages. This course is designed to acquaint the student with the fundamental concepts and programming principles of various computer languages. The course includes an introduction to programming systems as assembly language, compiler, run-time environment, and environment. Prerequisite: DP 203 Computer Programming III.

135. Systems Development and Design
A course designed to aid the student through the stages of the evolution of business data processing systems, including analysis of present information flow, system effectiveness, and equipment selection, and implementation of the system. Special emphasis on understanding the need for the skills and knowledge needed for the effective and efficient data processing equipment in meeting the information needs of business. Prerequisite: CSE 204 Programming Systems and CSE 203 Computer Programming III.

137. Systems and Applications II (formerly DP 150)
Continuation of DP 150 and open only to those who have successfully completed data processing through actual work experiences. Understanding of systems is provided as a basis for the study of methods of business with computer-oriented solutions. (Note: Data Processing 150 and Data Processing 155 may be combined to substitute for Data Processing 204 with the approval of an advisor.)

146. Data Processing Internship and Field Project
Three credits

Spring Three credits

166. Data Processing Internship and Field Project
Three credits

Hotel Motel and Food Service Mid-Management Technology

101. Introduction to the Hospitality Industry
Introduction to the hotel, motel, and food service industries, and to management, business, and food service operations. Credit for satisfactory performance. Prerequisite: CSE 204 Programming Systems and CSE 203 Computer Programming III.

121. Basic Food Management & Production
Basic concepts in menu planning, food purchasing, nutrition, sanitation, and food storage. Demonstrations and laboratory.

122. Food Production Techniques & Practice
Food production as applied to quality production and application. Includes laboratory exercises.

124. Internship and Seminar
Three credits

125. Food Service Operations
The food service of management with emphasis on supervision and management.

126. Hotel, Motel Operations
Food production and service in a hotel, motel, and food service operations.

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

128. Maintenance and Equipment
Four credits
Proper essential equipment in maintenance and maintenance of maintenance equipment and to maintain operating routines.
Business

211 Merchandising for the Hospitality Industry
Three credits
Sales promotion and methods used to obtain public recognition and good will.

214 Law as Related to Merchandising
Three credits
An analysis of the law as it relates to merchantable products as well as the law as it relates to the business of merchandising in general. Issues such as false advertising, contracts, and legal issues.

215 Advanced Food Production
Three credits
Advanced commercial food production. A laboratory course.

217 Hospitality Management
Three credits
General concepts and management including personnel, guest, and operations present and future.

222 Food & Labor Cost Control
Three credits
Supervisory procedures in the control of two major areas of operation.

223 Front Office Procedures
Four credits
Organization and control of the front office as applied in the restaurant and retail stores. Includes looking at accurate accounts, presenting bills of sales, and receiving payments.

224 Catering & Beverage Operation
Four 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 police functions.

102 Police Organization and Administration
Four credits
A study of the organization and administration of the police department. A study of the police department's role in the community. The structure, function, and activities of police departments. A study of the police department's role in the community. The structure, function, and activities of police departments.

103 History of Police
Three credits
A study of the history of the police department and its role in society.

104 Introduction to Criminal Investigation
Four credits
A study of the principles and techniques of criminal investigation, including the techniques of surveillance, search of the scene of the crime, and the use of evidence. A study of the techniques of criminal investigation, including the techniques of surveillance, search of the scene of the crime, and the use of evidence.

105 Criminal Law and Procedure
Four credits
A study of the principles of criminal law, including the principles and functions of criminal law, the elements of crime, and the principles of criminal procedure. A study of the principles of criminal law, including the principles and functions of criminal law, the elements of crime, and the principles of criminal procedure.

106 Police Officer I
Six credits
A study of the principles and techniques of criminal investigation, including the techniques of surveillance, search of the scene of the crime, and the use of evidence. A study of the principles of criminal law, including the principles and functions of criminal law, the elements of crime, and the principles of criminal procedure.
Business

302. 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.*

305. 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 1 and including practice in the preparation of simple bibliographies, cataloging correct forms.*

301. 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, problems, SIMPLIFIED LIBRARY CATALOGING, by Susan Grey Allen. 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 filling in the various library catalogs—dictionary catalog, authority file, and shelf list.*

305. Literary Problems  Three credits

Semester 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 transmission is included.*

504. Coordinated Work Experience (on approved electives)  Three credits

Prerequisite: LT 102. 104. and 105.

*Prerequisite: LT 101.
Division of Technology

Division Chairman: William B. Monroe

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

I. If a student wishes to obtain a four-year Engineering degree, he can enroll in the Pre-Engineering curriculum and complete his first two years of study at Lansing Community College. Lansing Community College is accredited by the 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 career 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 certificate, 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.

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

The increasing mechanization of American Industry, especially in the last ten years, has created a de novo need for trained technicians. Young people who have additional pre-technical and technical training above the high school level, who fill the gap between untrained and graduate engineer. To meet this need, Lansing Community College offers a variety of intensive two-year technology programs: Chemical Technology, Civil Technology (with Highway, Sanitary, and Structural options), Computer Technology, Community Development, Drafting Technology, Fine Science, Electronics Technology, Mechanical Technology, Quality Control and Systems Technology.

The technicians from each of these programs are trained with "how to do it" and "why" so that they can 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 of the increasing mechanization of American Industry is the need 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 complements the 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 area of technology, 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 is required to take selected courses of a general education nature that should 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 the individual to upgrade himself in the present position or to qualify him 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 vocation. 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 may enroll are given in the following table. 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 and a list of the equipment necessary will be included. In the subsequent sections each of these courses is described more fully.
Cartographic Drafting and Photogrammetry

Cartographic drawings and maps have become an essential means of transmitting and receiving information about land formations, routes, or specific geographic locations.

The art of drawing maps has become an essential means in our present society. The technique has been refined and tremendously improved since crude maps were made back in the field while exploring. Today the work requires solution of cartographic problems involving the investigation, development, evaluation, direction, 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 Highways, 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 stereophotograph operation for photogrammetry, or drafting, and illustration.

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.

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<thead>
<tr>
<th>Semester</th>
<th>Full Term</th>
<th>Credits</th>
<th>Course Title</th>
<th>Hours</th>
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<td>Architectural Drawing</td>
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<td>Physical Education</td>
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<tr>
<td>Winter</td>
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<td>Engineering Drawing - Civil</td>
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<td>Drafting Graphics</td>
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<td>Mathematics for Technicians</td>
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Spring Term

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<tr>
<td>Business Law</td>
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<td>Physical Education</td>
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### Civil Technology

Civil Technology 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 offers training in the basic areas of mathematics and science related to the civil engineering field, and includes both construction laboratory and in-the-field experience as part of the technology 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, 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 drafter, topographical draftsman, structural drafting, structural designer, instrument man, traffic technician, construction inspector, materials laboratory technician, specification writer, estimator, or construction equipment salesmen.

<table>
<thead>
<tr>
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<tr>
<td>Summer Term</td>
<td>TEC 111</td>
<td>Internship Survey</td>
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#### Graduation at the End of Winter Term

- MTH 111: Mathematics for Technicians
- ETR 111: Engineering Drawing
- CT 111: Construction Materials
- CT 111: Construction Codes
- CT 111: Construction Hydraulics
- CT 111: Conservation
- CT 111: Conservation
- CT 111: Conservation
- CT 111: Surveying
- TEC 111: Internship Survey

#### Civil Technology Cooperative Program

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.

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</table>

#### Course Descriptions

- **Mathematics for Technicians (MTH 115)**
- **Engineering Drawing (ETR 111)**
- **Construction Materials (CT 111)**
- **Construction Codes (CT 111)**
- **Construction Hydraulics (CT 111)**
- **Conservation (CT 111)**
- **Project Lab (CT 111)**
- **Surveying (CT 111)**
- **Internship Survey (TEC 111)**
### Civil Technology - Sanitary Option

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

<table>
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</thead>
<tbody>
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### 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.

<table>
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### 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 and land use, community functions, data gathering and analysis, and the legal aspects of planning.

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### Engineering Technology

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### Engineering 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, data processing, or industrial electronics 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Fall Term</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MTH 111 Mathematics for Technicians</td>
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</tr>
<tr>
<td>ENG 103 Composition</td>
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<td></td>
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<tr>
<td>ET 111 Electrical and Electronic Circuits</td>
<td>3</td>
<td></td>
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<tr>
<td>ET 112 Electronics and Electrical Equipment</td>
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<tr>
<td>PHY 211 Physics</td>
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<td>CHEM 101 Chemistry</td>
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### 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

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<th>Course</th>
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</thead>
<tbody>
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<td>DT 101 Architectural Drawing</td>
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<tr>
<td>SS 101 Structural Analysis</td>
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<tr>
<td>ENG 102 Computer Science</td>
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<td>MTH 111 Mathematics for Technicians</td>
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### 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 operational equipment utilizing 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 uses of vacuum tubes, transistors, transmitters, and other components of electronic circuits. He should be familiar with the use of electronic devices such as digital and analog computer, servomechanism, phototransistor circuitry, and other components of electronic equipment. He may be called upon to perform precision electronic equipment such as airborne control and navigation equipment (aircraft), machine tool controls, and radar. He may design and layout electrical circuits to meet prescribed specifications, using "headboard" techniques and installing circuits to obtain desired performance.

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</table>
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 hand-pulled hand pump 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 as a team effort on a variety of technical equipment, accuracy, timing, and good judgment are demanded of human life 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.

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 airplane, 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 machine that operate themselves, but automation does not and will not replace the man who designs, who builds, who repairs the machines. The need for mechanical technicians exists in every industry, steel mill, wood processing, construction, transportation, communications, chemical, food, clothing, medical, and almost all other divisions of our economy.

DISCRIPTION OF TYPICAL POSITIONS

Draftsmen and Machine Designers

A person trained to translate his or someone else's ideas into mechanical drawings and who has a thorough knowledge of mechanics, 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 machinery and processes in his own plant so that he can accurately figure the manufacturing cost of any component from a drawing.
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 at 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 the 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.

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 semester 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 values.

While the co-op student is engineering on the work-assignment semester, he will be well compensated by his employer. This compensation recognizes the efforts of the student, his personnel employment possibilities, 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 to the third year must present 95 term credit hours including the following courses:

Subject

<table>
<thead>
<tr>
<th>English Composition</th>
<th>Language Arts</th>
<th>Mathematics (Including Analytic Geometry and Calculus)</th>
<th>Physics</th>
<th>Chemistry (General and Inorganic)</th>
<th>Industrial Engineering and Mechanical Engineering (Engineering Materials and Processes)</th>
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<tbody>
<tr>
<td>11</td>
<td>4</td>
<td>34</td>
<td>12</td>
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<td>Total Credit Hours</td>
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Transportation Training Program

Coordinator: Leonard Sodle

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 in the following subjects:

- Accident Prevention and Reporting
- Air Brake System
- Communications
- Customer and Public Relations
- Driver's Daily Log
- Driver's Responsibility & Maintenance
- Driver's Situations
- Fuel Filling
- Freight Handling
- Health & First Aid
- Highway Regulations & Laws

Leonard Sodle

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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, 410 North Capital Avenue, Lansing, Michigan 48914, requesting application forms.
2. Complete the forms you receive and return them to the coordinator along with the application fee ($35.00) 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 15% tuition deposit is required with the application, and the balance for the 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 50% of the weeks of training received, less $35 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.
113 Community Development Law

Three credits
Formerly GDT 100
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.

100 Fire Fighting Strategy and Tactics

Three credits
Formerly FST 110

Fundamentals of fire fighting strategy and tactics; planning methods of attack and preplanning fire protection. Prerequisite: Civil Technology 101.

111 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.

112 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.

113 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 function and organizations, the effect of fire prevention activities and equipment on public relations.

114 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.

115 Hazardous Materials

Four credits
Formerly FST 104

Fire fighting methods relating to hazardous materials, to include solids, liquids and gases and their storage. Conservation also given to the laws, standards and handling techniques of hazardous materials. Prerequisite: Chemistry 110.

116 Related Ordinances and Codes I

Three credits
Formerly FST 110

Study of state laws and regulations, local ordinances and national standards including Interstate Commerce Commission regulations as to fire prevention.

117 Fire Hydraulics

Four credits
Formerly FST 120

Fundamentals of fire hydraulics. Includes a study of water supply problems, standards on pump requires, formulas, test criteria and physical laws relating to hydraulics, and practical application to fire fighting problems. Prerequisite: Mathematics 131.

118 Construction Contracts

Three credits

Preparation of specifications, requests for quotations, bid analysis, proposals and contracts, and change orders. Fundamentals of law in engineering, liability, and engineering specialties. Prerequisite: Civil Technology 113.

119 Highway Technology

Four credits

Covers plan and profile drawings, highway planning, financing, organization, geometric design, traffic studies, structural design of pavements, mass diagrams, engineering computations and costs. Also includes discussion of trends in mass transportation. Two hours lecture, six hours laboratory. Prerequisites: Civil Technology 103, Civil Technology 123, Civil Technology 125.

120 Land Surveying

Three credits

Surveying and land surveys. Principles of highway engineering and surveying, applications of surveying to engineering and construction projects. Review of surveying principles. Three hours lecture, six hours laboratory. Prerequisite: Civil Technology 113.

121 Soils Testing & Classification

Three credits

Designed to teach testing and classification of soils: A.S.T.M., A.A.S.H.O. and geological principles. Also includes discussion of elementary seismic principles as related to soils. Prerequisite: Civil Technology 101, Civil Technology 113.

122 Strength of Materials

Three credits

Study of beams, shafts and moment diagrams; stress, strain, creep, fatigue, yield; equilibrium and force, free body analysis; combined stress; deflection; shear, moment, compression, tension, and horizontal shear stress. Two hours lecture, three hours laboratory. Prerequisites: Civil Technology 101, Physics 104.

123 Hydraulics

Three credits

Analysis of pipe flow and the study of designs of devices to control flow. Includes discussion of drainage and culverts, stream flow, open channel flow, Bernoulli’s Theorem, tailwater, storm-water studies, ground water, and water tables. Two hours lecture, three hours laboratory. No prerequisite.

124 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 from a three-year associate program.

125 Structural Technology I

Four credits

Covers plans of right and structure for bridges, steel detailing, concrete detailing, elementary theory of reinforced concrete, elementary analysis of structural steel, code and construction of structures, type of bridges and building frames, connections, riveting and bolting details and statics analysis. Two hours lecture, six hours laboratory. Prerequisite: Civil Technology 204.

126 Structural Technology II

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 statics analysis are included. Lecture and laboratory (2-4-4).

127 Structural Technology III

Four credits

Construction of Structural Technology I emphasizing the application of the technical knowledge as it pertains to structures and structural members of low and high rise buildings. Lecture and laboratory (2-4-4).

128 Hydraulics

Three credits

Hydraulics, laminar and turbulent flow in pipes and fittings, pump characteristics, head losses, friction losses, turbulence, flow in open channels, critical, stable, critical flow, submergence and critical flow, channel trapezoids. Two hours lecture, three hours laboratory.
### Engineering Technology

#### Civil

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td>Electrical Systems for Buildings</td>
<td>One credit</td>
</tr>
<tr>
<td></td>
<td>formerly AD 217</td>
<td></td>
</tr>
<tr>
<td>212</td>
<td>Components and arrangement of residential and commercial electrical systems. Emphasis placed on code and specification requirements. Three hours laboratory.</td>
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</tr>
<tr>
<td>213</td>
<td>Urban Planning</td>
<td>Two credits</td>
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<tr>
<td></td>
<td>formerly AD 218</td>
<td></td>
</tr>
<tr>
<td>214</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>215</td>
<td>Heating and Air Conditioning</td>
<td>One credit</td>
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<tr>
<td></td>
<td>formerly AD 219</td>
<td></td>
</tr>
<tr>
<td>216</td>
<td>Components and arrangement of residential and commercial heating and air conditioning systems. Emphasis is placed on environmental factors, specification requirements, and code provisions. Three hour laboratory.</td>
<td></td>
</tr>
<tr>
<td>217</td>
<td>Architectural History</td>
<td>Two credits</td>
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<tr>
<td></td>
<td>formerly AD 220</td>
<td></td>
</tr>
<tr>
<td>218</td>
<td>Development of architecture as an art form in each of the civilizations or architectural periods from antiquity to contemporary.</td>
<td></td>
</tr>
<tr>
<td>219</td>
<td>Engineering Review</td>
<td>Three credits*</td>
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<tr>
<td></td>
<td>formerly CDT 215</td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>Continuation of Civil Technology 210. Includes fluid mechanics, hydraulics, thermodynamics and mechanics of materials.</td>
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<tr>
<td>221</td>
<td>Engineering Review</td>
<td>Three credits*</td>
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<tr>
<td></td>
<td>formerly CDT 221</td>
<td></td>
</tr>
<tr>
<td>222</td>
<td>Continuation of Civil Technology 211. Includes chemistry, electricity, electronics, engineering economics, contract law and professional ethics.</td>
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<tr>
<td>223</td>
<td>Radiation Shielding Design</td>
<td>Five credits</td>
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<tr>
<td></td>
<td>formerly PST 210</td>
<td></td>
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<tr>
<td>224</td>
<td>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 resistence 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.</td>
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</tr>
<tr>
<td>225</td>
<td>Hazardous Materials II</td>
<td>Four credits</td>
</tr>
<tr>
<td></td>
<td>formerly PST 212</td>
<td></td>
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<tr>
<td>226</td>
<td>Continuation of Civil Technology 215.</td>
<td></td>
</tr>
<tr>
<td>227</td>
<td>Related Ordinances and Codes II</td>
<td>Three credits</td>
</tr>
<tr>
<td></td>
<td>formerly PST 211</td>
<td></td>
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<tr>
<td>228</td>
<td>Continuation of Civil Technology 216.</td>
<td></td>
</tr>
<tr>
<td>229</td>
<td>Building Construction for Fire Safety</td>
<td>Five credits</td>
</tr>
<tr>
<td></td>
<td>formerly PST 212</td>
<td></td>
</tr>
<tr>
<td>230</td>
<td>The essentials of building design and construction. Includes special features and considerations related to fire security. Prerequisite: Civil Technology 219, 219, 219, 219, and 219.</td>
<td></td>
</tr>
<tr>
<td>231</td>
<td>Institutional credit</td>
<td></td>
</tr>
</tbody>
</table>

#### Geodetic Surveying

- Four credits
- Theory of modern and advanced surveying methods, photogrammetry, ground and aerial photography, lidar, and geometric principles. Three hours lecture, six hours laboratory. Prerequisite: Math 218 or 

#### Water Supply and Treatment

- Four credits
- Study of sources of water supply, quality and quantity measurements, process and structural design to accomplish sedimentation, coagulation, filtration, softening, iron removal, and sterilization. Distribution systems. Two hours lecture, six hours laboratory. 

#### Sewage and Sevage Treatment

- Four credits
- Design, construction and operating of sewage and sevage treatment facilities. Includes sedimentation, coagulation, filtration, aeration, digestion, sludge processing, and sterilization. Quality of effluent. Two hours lecture, six hours laboratory. 

#### Project Lab

- Three credits
- formerly CDT 954 
- The first course of a two course series covering the selection of a project, project research and report outline. Six hour laboratory. 

#### Project Lab

- Three credits
- formerly CDT 351 
- Continuation of CDT 351, covering compilation 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. will be included separately. Six hour laboratory. 

#### Photogrammetry and Stereoptoes Operation

- Four credits
- formerly ED 389 
- Covers in detail: aerial photography, stereoptoscopy, mosaic construction, radian line plotting, proper planning, and operations management. Extensive training will be provided in the actual operation of stereoptoscopy devices and equipment. 

#### Office Practices and Procedures

- Four credits
- formerly AD 261 
- Covers general specifications, supplemental or job specifications, material specifications, building codes, use of reference material, shop drawings, bidding practices, office reduction of field data, field inspection procedures. 

#### Plumbing Systems for Buildings

- One credit 
- formerly AD 322 
- Components and arrangement of residential and commercial plumbing systems. 

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*Instructional credit
Engineering

**Technology**

**Civil**

204. Fire Investigation I
Formerly FST 214

Three credits

Three credits

Fire behavior and importance of determining origin. Procedures used in identifying accidental, boundary or scene type fires. Methods of recognizing and identifying the origin of fires. Fire scene investigation. Civil Technology 106 and 107.

205. Emergency Rescue Procedures
Formerly FST 212

Four credits

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.

206. Fire Investigation II
Formerly FST 221

Three credits

Continuation of Civil Technology 204. Preservation of evidence and photographic coverage of fire. Methods of interrogation related to fire investigation and conduct for interrogation of suspects. Study of liability, slander, and court procedures relative to evidence and statements. Importance of cooperation between investigative agencies; record-keeping and case histories.

207. Organizational Procedures
Formerly FST 222

Three credits

Further study of fire department organization. Consideration of personnel administration, communications, record-keeping, maintenance, training, fire equipment, fire protection and fire fighting, fire company organization and duties of the company officer. Prerequisite: Civil Technology 101.

Engineering

**Drafting Technology**

101. 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 a prerequisite to entering DT 102 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.

102. Engineering Drawing
Formerly ED 101

Three credits

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 curve, gear, and linkage problems. Two hours lecture, three hours laboratory. Prerequisite: Drafting Technology 101 or one year of high school drafting.

103. Descriptive Geometry
Formerly ED 100

Three credits

A basic course in the science of graphic representation and solution of space problems through the practice of fundamental principles of advanced orthographic projection. Covers the following topics: points, lines, and planes; primary and secondary auxiliary views; parallelism, perpendicularity; concurrent vectors; developments and intersections; pictorial projection; edges and shadows. Makes a study of Civil and Mechanical engineering problems. Six hours laboratory. Prerequisite: Drafting Technology 102 or Civil Technology 100.

104. jig and Fixture Design
Formerly ED 104

Three credits

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

105. Engineering Drawing—Civil
Formerly ED 105

Three credits

Offers practice in techniques of transferring field survey notes to the drafting board and includes Traverse Plotting, Topographic Maps, Profiles, Cross Sections, Earthwork Plans, Sape of Boring, and Flat Maps.

107. Engineering Drawing
Formerly ED 107

Three credits

This course covers pencil, ink, and styles of drafting on vellum. 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.

121. Residential Planning
Formerly AD 112

Three credits

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 laying out in drawing house Plans. Two hours lecture, four hours laboratory.

122. Architectural Drafting
Formerly AD 102

Six credits

Beginning course in architectural drafting fundamentals. Student develops skill in use of drafting instruments and gains understanding of orthographic projection, sectioning, and sections, introduction to principles of dimensioning and techniques of lettering. Six hours laboratory.

125. Pictorial Illustration
Formerly AD 102

Three credits

A fundamental course for those interested in becoming or who are working as draftsmen or engineers. Course covers principles of axonometric projection, perspective shading, and shadows, with emphasis given to the use of various rendering mediums. Six hours laboratory.

130. Architectural Drawing
Formerly AD 110

Three credits

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

152. Die Design
Formerly ED 102

Three credits

Teaches the student to design the necessary tools and dies used in industry. 15
Engineering Technology

60 \text{ credits}

1967 - 1968 Lansing Community College Course Catalog

1967 - 1968 Lansing Community College Course Catalog

Six hours laboratory. Prerequisite: Drafting Technology 101, 102, 103 and Mechanical Technology 101.

205 Electrical and Electronics Drawing

Formerly ED 205

Designed to acquaint the student with the drawing and drafting of electrical and electronic circuit diagrams, including the study of the use of tubes, transistors, and technical manuals, catalogues, and periodical technical literature. Attention given to pictorial drawings, connection diagrams, block diagrams, logic diagrams and schematics, using the latest symbology and practices, and using material based on A.S.A., I.E.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

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 plotters.

207 Cartographic Drawing

Formerly ED 207

Four credits

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.

213 Electrical and Electronics Drawing

Formerly ED 213

Six credits

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 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, first year curriculum.

215 Electrical and Electronics Drawing

Formerly ED 215

Six credits

Concluding course of a two part seminar. Student completes a resume exhibiting his drafting skills and his general knowledge of his select field. Course shall involve refinement of design, technical data, detail drawings, and assembly drawings. Twelve hours laboratory. Prerequisite: Drafting Technology 213.

219 Architectural Drawing

Formerly AD 219

Three credits

A continuation of Drafting Technology 106, with primary emphasis placed upon commercial and industrial construction. Course covers both low-rise and high-rise building. Six hours laboratory. Prerequisite: Drafting Technology 106 for drafting technology majors; others, approval of department.

221 Architectural Drawing

Formerly AD 221

Six credits

First of series of three 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 mythical customer and as dictated by local building codes. Twelve hours laboratory. Prerequisite: Drafting Technology 220.

229 Architectural Drafting

Formerly AD 229

Six credits

Completion of 221 where the student prepares final working drawings and completes a set of specifications covering the project designed in 221. The final set of 221 and 229 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

Formerly AD 233

Four credits

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.

244 Landscaping

Formerly AD 244

Two credits

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

245 Structural Drawing

Formerly AD 245

Three credits

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

258 Reproduction Methods

Formerly CD 258

Two credits

A survey course covering various reproduction aids and their costs, including but not limited to photostat, offset, heat type, and silk screen composing.

Electronics Technology

111 Electrical and Electronic Circuits I

Five credits

An introduction to basic electrical circuits with emphasis on direct current. Covers electrical units, Ohm's law, Kirchoff's laws, network theorems, induction, and capacitance. Voltage, current, and resistance measurements are emphasized. The principles of the VOM, VTM, Ohmmeter, and Wheatstone bridge. Simple meters are constructed and tested. Three hours lecture, four laboratory.

112 Electrical and Electronic Circuits II

Five credits

Continuation of ET 111 with emphasis on sinusoidal voltage and current and analysis of AC, RL, and RC circuits as well as series and parallel networks, network theorems, and coupled circuits are discussed. The vacuum tube is presented and simple amplifiers are studied. Laboratory work emphasizes the analysis of circuits and the characteristics of the vacuum tube. Voltmeters, millimeters, signal generators, AC bridge, curve tracer, and the oscilloscope. Three hours lecture, four laboratory.

113 Electrical and Electronic Circuits III

Five credits

Continuation of ET 112 with major emphasis on the transistor, Semiconductor device theory, small signal characteristics, biasing, and practical applications are studied. Laboratory work emphasizes the lecture through the construction and testing of the vacuum tube circuits. The oscilloscope, voltmeter, millimeter, signal generator, AC bridge, and curve tracer are used. Three hours lecture, four laboratory.
Engineering Technology

Electronics

1968 Project Laboratory

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 electronic or electronic device.

1976, 221, and 222 International Morse Code

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 lecture, four laboratory.

211 Computer Circuits I

Three credits

First of series of three courses designed to cover the area of pulse, digital, and switching circuits. Includes basic 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.

212 Computer Circuits II

Three credits

Continuation of ET 211. Major emphasis on the use of pulse circuits, including multivibrators, 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.

213 Computer Circuits III

Three credits

Continuation of ET 212. Major emphasis on digital computer units. Laboratory work provides operation and testing of these blocks. Two hours lecture, four laboratory.

214 Automation I

Four credits

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

215 Automation II

Four credits

Continuation of Electronics Technology 214. Two hours lecture, four laboratory.

216 Automation III

Four credits

Continuation of Electronics Technology 214. Two hours lecture, four laboratory.

310 Industrial Electricity

Three credits

Covers electrical control systems employed in 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.

311 Industrial Electricity

Three credits

Continuation of ET 310. Emphasis on circuit diagram reading, troubleshooting, and maintenance of industrial electrical equipment. Lecture and laboratory.

312 Communications I

Five credits

First of series of three courses dealing with electronic communication. Includes study of transmission lines, antennas, 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.

312* Institutional credit

512 Communications II

A continuation of ET 312. Includes the theory of modulation circuits, AM and PM demodulation, and the superheterodyne receiver. Laboratory work emphasizes the use of RF signal generator, sweep signal generator, and spectrum analyzers. Three hours lecture, four laboratory.

513 Communications III

Five credits

A continuation of ET 512. Includes the television system, UHF, and microwave techniques. Laboratory work utilizes laboratory frequency pattern generator, color bar generator, swept 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 the use of all types of gas and arc welding on both AC and DC machines. Includes study of patternmaking, sand molding, casting of metals, and pouring castings. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 101.

103 Manufacturing Processes

Two credits

Continuation of MT 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 interfacing of these new manufacturing methods in the various departments of a company. Emphasis is placed on numerical control of machine tools. Use of numerical control and verification of numerical control systems. Two hours lecture, four laboratory.

105 Numerical Control II: Manual Programming for Numerical Control

Three credits

Continuation of MT 104. Emphasis on the development of skill in numerical programming of the more common parts of NC machines. Emphasis is placed on understanding numerical control system and on the interpretation of machining operations. Two hours lecture, four laboratory.

106 Numerical Control III: Introduction to Computer Assisted Programming

Three credits

Study of typical 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 computer to numerically controlled machine tools. Equipment used includes computer, computer peripherals and numerically controlled milling machine.

107 Machine Methods and Cost (Applied Time and Motion Study)

Three credits

Emphasis is on the cost of machine work. Demonstrates the effect of variations in labor and materials on the cost of production. Includes study of time and motion as they are employed in actual manufacturing situations. Investigates methods of eliminating idle machine time in actual situations. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 101.
Systems Technology

Some techniques, disciplines, methods, and procedures apply to the entire Systems Technology field. Specific technical 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:

104. Critical Path Method
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, and crew assignments. Time-cost trade-offs, milestone, and equipment leveling, project expediting, and network flow calculations. Probability estimates are discussed and various computer techniques are investigated and compared. Lecture and laboratory.

105. Statistical Quality Control
Formerly VT 225
An introductory course in quality control methods. The program develops basic statistical concepts and orientates the student to a recognition of variation in whatever form it may occur. Graphical solution of quality control procedures 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 courses and programs providing training leading to a career as craftsmen 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
- Carpentry
- Electrical
- Painting and Decorating
- Plumbing and Pipefitting
- Sheet Metal

Industrial trades careers include:
- Air Conditioning and Refrigeration
- Automotive Servicing
- Diesel Mechanics
- Heating, Air Conditioning and Refrigeration
- Radio and Television Servicing
- Millwright
- Model Making
- Printing
- Structural Steel Fabrication
- Tool Design
- Tool Inspection
- Tool Making
- Tool and Die Making

Secretary trades careers include those of:
- Office Management
- Office Systems

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 careers. In general, courses are open to everyone except that, in some cases, preference is given to apprentices and journeymen. From time to time courses should be set up for special groups.
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 upgrading 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 apprenticeship 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 journeymen 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 general, 15 through 26, 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 contact the jurisdictional area of the joint apprenticeship committee of the building trade for which he is seeking application.

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

An apprenticeship coordinator advises all apprentices as to courses which they must take during their training program. 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 growing so fast that it can be adequately serviced by the existing mechanics. The appliance servicing areas are also increasing.

Along with the growth of service that take care of family needs we also have those who 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 be vast and be more dependent on manpower—whether it is an electric stock for the home, an automatic production line for industry, or an electric computer for business—more people are needed for the service trades.
## Applied Technology

### Draftsman (Mechanical)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Fall Term MT 101 Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>TR 101 Applied Algebra</td>
<td>3</td>
</tr>
<tr>
<td>DT 101 Electrical Drafting</td>
<td>3</td>
</tr>
<tr>
<td>CEM 101 Industrial Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Winter Term MT 101 Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>TR 101 Applied Algebra</td>
<td>3</td>
</tr>
<tr>
<td>DT 101 Electrical Drafting</td>
<td>3</td>
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<tr>
<td>CEM 101 Industrial Chemistry</td>
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</table>

### Electrician (Industrial)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Fall Term MT 101 Electrical &amp; Electronic Talks I</td>
<td>3</td>
</tr>
<tr>
<td>ET 101 Electrical &amp; Electronics</td>
<td>3</td>
</tr>
<tr>
<td>PST 101 National Electric Code I</td>
<td>3</td>
</tr>
<tr>
<td>ST 101 Industrial Electricity</td>
<td>3</td>
</tr>
<tr>
<td>Winter Term MT 101 Electrical &amp; Electronic Talks I</td>
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### Heating, Air Conditioning and Refrigeration

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Fall Term CT 101 Heating and Air Conditioning</td>
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<tr>
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### Machinist, Machine Repairman, Toolmaker

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<tr>
<td>TR 101 Applied Algebra</td>
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### Millwright

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<tr>
<td>CEM 101 Industrial Chemistry</td>
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<td>CEM 101 Industrial Chemistry</td>
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### Radio and Television Servicing

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### Sheet Metal

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### Welder

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</table>
Course Descriptions

**Certification Programs & Courses**

(A minimum of 45 credit hours is required with a minimum Grade Point Average of 2.0, except for the apprentice certificate program which is offered in cooperation with the U.S. Department of Labor.)

**Curriculum**

Applied Technology

- Pre-Apprenticeship
- Apprenticeship

**Applied Technology**

- Building Trades
- Industrial
- Service
- Civil
- Drafting
- Electronic
- Mechanical Systems
- Technology
- Technology: Technology Technology Technology Technology Technology Technology Technology
- Other

**Pre-Apprenticeship**

- Auto Mechanic
- Bricklayer
- Carpenter
- Electrical (Construction)
- Plumbing & Heating
- Sheet Metal

**Apprenticeship**

- Unfinished (Mechanical)
- Electrician (Industrial)
- Sheet Metal (170)

**Metal Trades**

- Machine Repair
- Machinist, Toolmaker
- Millwright
- Tool & Die
- Dismantle
- Pipefitter
- Sheet Metal (175)
- 170 170 170

**Other**

- 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.**

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**Certification Programs & Courses**

- APPRENTICESHIP
- Industrial
- Drafting
- Mechanical Systems
- Technology: Technology Technology Technology Technology Technology Technology Technology Technology
- Other

**CURRICULUM**

- Pre-Apprenticeship
- Apprenticeship

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- Pipefitter
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- 170 170 170

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- Radio and Television Servicing

**NOTE:**

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- **The certificate program for a welder is not intended to be a substitute for a Certified Welder Program.**
135 National Electric Code I (Fall only)  Three credits
    Formerly ET 250

Building Trades
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. Circuit wiring practices are studied. Students with appropriate experience should be able to pass the licensing examination upon completion of the three courses.

136 National Electric Code II (Winter only)  Three credits
    Formerly ET 251


137 National Electric Code III (Spring only)  Three credits
    Formerly ET 252

Continuation of Building Trades 136. Third in a series of courses covering the 1962 Code, amendments to the Code as they are accepted by the State.

138 Journeyman Electricians Welding I (on demand)  Four credits
    Formerly VT 188

Open to electrical journeymen and apprentices. Includes some fundamentals of oxy-acetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. $60.00 laboratory fee. Six laboratory hours.

139 Journeyman Electricians Welding II (on demand)  Four credits
    Formerly VT 190

Open to electrical journeymen and apprentices. More advanced coverage of fundamentals of Building Trades 138. Prerequisite: Building Trades 138 or permission of instructor. $60.00 laboratory fee. Six laboratory hours.

140 Journeyman Electricians Power Controls (on demand)  Two credits
    Formerly VT 599

Power control wiring and associated power control theory for electrical journeymen. One hour lecture, two laboratory.

141 Journeyman Electricians Transformer Connections and Circuit Characteristics (on demand)  Two credits
    Formerly VT 301

Theoretical analysis and basic hook-up of transformers. Currents, voltages and impedances involved in the following sequences: 3PH-1PH, single phase, Delta-Delta, open Delta, T, star phase R and S and Y connections. One hour lecture, two laboratory.

142 Journeyman Electricians Theory (on demand)  Two credits
    Formerly VT 500

Alternating current theory and application for electrical journeymen. Lecture, laboratory. Three class hours per week.

143 Apprentice Painting and Decorating  Three credits
    Formerly VT 401

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 paper-hanging. Lecture, laboratory. Four class hours per week.

144 Estimating for Painting Trades (on demand)  Three credits
    Formerly VT 500

Principles of estimating materials and labor. Includes mathematics and blueprint reading essential to the above. Specifications and contracts, estimating takeoff procedures, forms and usage will be covered. Construction prints are used. Open to painting tradesmen only. Lecture, laboratory. Four class hours per week.

145 Apprentice Plumbing or Pipelining  No credit
    Formerly VT 600

For apprentice plumbers and pipelayers indentured to the Lansing Joint Plumbing and Pipelining Apprenticeship and Training Committee. Includes mathematics, manipulative practice, theory, blueprint reading and drawing, job analysis, physics and other sciences. Corequisites: courses from the regular college offerings approved by the J.A.C.

146 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.

147 Blueprint Reading for Plumbers II (on demand)  Three credits
    Formerly VT 113

Continuation of Building Trades 125 with emphasis on more complex prints. Actual construction prints are used when appropriate. Prerequisite: Building Trades 125 or permission of instructor. Two two-hour periods per week.

148 Journeyman Pipelayers Welding I (on demand) (Fall)  Four credits
    Formerly VT 115

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 upwards to more advanced skill according to the needs of the individual student. Teaches welding of all kinds of pipe, including stainless steel by the balance method. $60.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.

149 Journeyman Pipelayers Welding II (Winter, on demand)  Four credits
    Formerly VT 115

Continuation of Building Trades 125. Prerequisite: Building Trades 125. $60.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.

150 Journeyman Pipelayers Welding III (Spring, on demand)  Four credits
    Formerly VT 115

Continuation of Building Trades 125. Prerequisite: $60.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.

151 Apprentice Sheet Metal  Three credits
    Formerly VT 405

Open to apprentices indentured to the Lansing Sheet Metal Joint Apprenticeship Committee. Covers manipulative practice, layout, mathematics and drafting. Lecture, laboratory. Four class hours per week.

152 Automotive Engines  Four credits
    Formerly VT 302

Study of internal combustion engines. Emphasis is placed on theory and manipulation of gasoline engines. Lecture, laboratory. Four class hours per week.

153 Electrical and Electronic Measurements  Four credits
    Formerly VT 302

Study of electrical and electronic measurement equipment. Laboratory work includes use of equipment with lecture material. Lecture, laboratory. Four class hours per week.

154 Electrical and Electronic Measurements  Four credits
    Formerly VT 302

Study of electrical and electronic measurement equipment. Laboratory work includes use of equipment with lecture material. Lecture, laboratory. Four class hours per week.
### Applied Technology

<table>
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<tr>
<td>114</td>
<td>Die Construction II (Spring)</td>
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<tr>
<td>115</td>
<td>Die Construction and Design I (Fall)</td>
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<td>116</td>
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<td>117</td>
<td>Die Construction and Design III (Spring)</td>
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</tr>
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<td>118</td>
<td>Employer-Employee Relations (Fall, Spring)</td>
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<td>119</td>
<td>Drafting Technology 101</td>
<td>Three</td>
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### Industrial Trades

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<td>105</td>
<td>Die Blueprint Reading (Summer)</td>
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</tr>
<tr>
<td>106</td>
<td>Die Blueprint Reading (Winter)</td>
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### Notes
- 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. Course techniques of fabrication emphasized. Lecture, laboratory. Four class hours per week.
- Continuation of Sheet Metal I with more advanced problems. Prerequisite: Building Trades 100 or permission of instructor. Lecture, laboratory. Four class hours per week.
- Continuation of Sheet Metal II with specialty work. Prerequisite: Building Trades 100. Lecture, laboratory. Four class hours per week.
- Continuation of Building Trades 100 with additional emphasis on blueprint reading. Prerequisite: Building Trades 100 or approval of instructor. Ten hours laboratory fee, Lecture, laboratory. Two three-hour periods per week.
- Emphasizes actual die design, working from actual part drawings produced by industry and also part drawings. Includes cost, ordering and handling of raw material used for die construction and the preparation of equipment and tools used. Prerequisite: Industrial Trades 110. Two two-hour periods per week.
- Working with actual die drawings from industry, using these drawings for dimensioning, processing and sketching. Covers composite die sections, templates, heat treat, etc. Includes how prints data affects the design and construction of dies. Prerequisite: Industrial Trades 110. Two two-hour periods per week.
- Emphasizes the interdependence of capital, labor management. Includes personal and physical qualities essential to success. Two class hours per week.
- This course is designed to acquaint individuals with First Aid and treatment. This course consists of the course 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 machinery are stressed. Information about the safety desirable 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.
- Designed to familiarize the student with the effective utilization of information contained in this handbook. Two two-hour periods per week.
Industrial Trades

150 Applied Mathematics (Summer, Fall)
Formerly VT 301
Review of basic arithmetic operations: whole numbers, common fractions and decimals; percentages, ratios, and proportions. Introduction to basic algebraic operations and formulas in plane geometry. Two one-and-one-half hour periods per week.

Three credits

151 Applied Algebra (Fall)
Formerly VT 322
Applications of algebraic equations to shop work. Two two-and-one-half hour periods per week.

Five credits

152 Applied Plane Geometry (Winter)
Formerly VT 323
Application of geometric functions to the solution of practical shop problems. Introduction to trigonometry. Prerequisite: Industrial Trades 151. Two two-hour periods per week.

Four credits

153 Applied Plane Trigonometry (Spring)
Formerly VT 324
Emphasis on analysis of industrial problems utilizing trigonometric solutions by logarithms. Prerequisite: Industrial Trades 151. Two two-hour periods per week.

Four credits

154 Advanced Applied Trigonometry (Fall)
Formerly VT 325
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.

Four credits

155 Compound Angles I (Winter)
Formerly VT 326
Continuation 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.

Four credits

156 Compound Angles II (Spring)
Formerly VT 327
Continuation of Industrial Trades 155. Emphasis on application of actual tooling setups for complex machining operations. Prerequisite: Industrial Trades 155. Two two-hour periods per week.

Four credits

160 Precision Inspection I (Fall, on demand)
Formerly VT 130
Advanced techniques of tool and gauge inspection: micrometers, verniers, gauge blocks, dial calipers and thread gauges, test indicators, gear and comparator measurement, hardness testing. Prerequisite: Mechanical Technology I, Industrial Trades 101, Industrial Trades 155, or equivalent. Two two-hour periods per week.

Three credits

161 Precision Inspection II (Winter, on demand)
Formerly VT 131
Precision layout work related to gauges and inspection problems. Prerequisite: Industrial Trades 160. Two two-hour periods per week.

Three credits

170 General Welding I (all terms)
Formerly VT 110
Study of principles and fundamentals in application and safe operation of metal 32 arc welding equipment. Reading, filler and multiple pass welding of butt, lap and corner type joints in flat and horizontal positions. 10.00 Laboratory fee. Lecture and Laboratory. Two three-hour sessions per week.

Four credits

171 General Welding II (all terms)
Formerly VT 111
Study of principles and fundamentals in application and safe operation of oxy-acetylene welding and cutting equipment. Reading and filler welding of butt, lap and corner type joints in all positions. Introduction to brazing of sheet metal is also presented. 10.00 Laboratory fee. Lecture and Laboratory. Two three-hour sessions per week.

Four credits

172 General Welding III (all terms)
Formerly VT 107
Vertical and overhead butt, multiple pass filler and groove welds in butt, lap and corner type joints. Use and interpretation of filler and groove welding symbols relative to butt, lap, tee and corner type joint designs. 10.00 Laboratory fee. Prerequisite: Industrial Trades 170. Two three-hour sessions per week.

Four credits

173 Advanced Welding I (Spring)
Formerly VT 112
Specialization in arc welding of structural steel, sheet metal, steel pipe, tool steel and aluminum. Introduction to Helium welding. 10.00 Laboratory fee. Prerequisite: Industrial Trades 170. Lecture and Laboratory. Two three-hour sessions per week.

Four credits

174 Advanced Welding II (Fall)
Formerly VT 113
Specialization in arc welding of structural steel, sheet metal, steel pipe, tool steel and aluminum. Introduction to Helium welding. 10.00 Laboratory fee. Prerequisite: Industrial Trades 173. Lecture and Laboratory. Two three-hour sessions per week.

Four credits

175 Advanced Welding III (Winter)
Formerly VT 114
Specialization in arc welding of structural steel, sheet metal, steel pipe, tool steel and aluminum. Introduction to Helium welding. 10.00 Laboratory fee. Prerequisite: General Welding I and II. Lecture and Laboratory. Two three-hour sessions per week.

Four credits

180 Welding for Pipeliners I
Formerly BYT 102
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. Weld and test 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.

Four credits

181 Welding for Pipeliners II
Formerly BYT 103
Continuation of 180. Prerequisite 180. 10.00 Laboratory fee. Lecture and Laboratory. Two three-hour periods per week.

Four credits
Applied Technology

Industrial Trades

198 Welding for Tig welders III
 formerly HTR 197
 A continuation of 197. Prerequisite 197. $12.00 laboratory fee. Lecture and Laboratory. Two three-hour periods per week.

200 Metallurgical Testing of Welds I (on demand)
 formerly VT 250
 Welding of low carbon steels in various ways, and testing of all welds to determine quality and relativity characteristics of weld metal. Study of internal strain, cracking, shrinkage and warpage. $15.00 Laboratory fee. Prerequisite Mechanical Technology 204. Industrial Trades 117. Lecture and Laboratory. Two three-hour sessions per week.

201 Metallurgical Testing of Welds II (on demand)
 formerly VT 250
 Oxygen acetylene welding and brazing of various metals and testing of all welds for quality and reliability. Welds are etched and examined under metallurgical microscope. Nondestructive (porosity, slag inclusions and lack of fusion, etc.) tests are explored. $15.00 Laboratory fee. Prerequisite Mechanical Technology 204. Industrial Trades 117. Lecture and Laboratory. Two three-hour sessions per week.

202 Metallurgical Testing of Welds III (on demand)
 formerly VT 250
 Shielded metal arc welding of carbon steel, groove type welds, face, root and sides bead tested for quality and relativity. Reasons for weld defects (cracks, porosity, lack of fusion, slag inclusions, undercut and overcut, 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)
 formerly VT 340
 Designed to give student intensifyed 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 201. Lecture and Laboratory. Two three-hour sessions per week.

206 Welding for Certification II (on demand)
 formerly VT 242
 Continuation of Industrial Trades 205. Course covers oxyacetylene welding and brazing. $15.00 Laboratory fee. Prerequisite Industrial Trades 201. Lecture and Laboratory. Two three-hour sessions per week.

207 Welding for Certification III (on demand)
 formerly VT 242
 Designed to give the student intensified practice in Helzwe welding of stainless steel, aluminum and magnesium, in preparation for AWS-ASME certification requirements. $15.00 Laboratory fee. Prerequisite Industrial Trades 201. Lecture and Laboratory. Two three-hour sessions per week.

210 Body Design I (Fall)
 body design 1
 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. The positions of welds and their relativity are critical because of the predominance of curved lines and surfaces. Prerequisite: Drafting Technology 105. Lecture and Laboratory. Two three-hour periods per week.

210 Body Design II (Winter)
 formerly VT 110
 Three credits
 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 105. Lecture and Laboratory. Two three-hour periods per week.

Service Trades

101 Automotive Service I (Fall)
 formerly VT 250
 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.

102 Automotive Service II (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

103 Automotive Service III (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

104 Automotive Service IV (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

105 Automotive Service V (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

106 Automotive Service VI (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

107 Automotive Service VII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

108 Automotive Service VIII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

109 Automotive Service IX (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

110 Automotive Service X (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

111 Automotive Service XI (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

112 Automotive Service XII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

113 Automotive Service XIII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

114 Automotive Service XIV (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

115 Automotive Service XV (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

116 Automotive Service XVI (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

117 Automotive Service XVII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

118 Automotive Service XVIII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

119 Automotive Service XIX (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

120 Automotive Service XX (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

121 Automotive Service XXI (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

122 Automotive Service XXII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

123 Automotive Service XXIII (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

124 Automotive Service XXIV (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

125 Automotive Service XXV (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.

126 Automotive Service XXVI (Fall)
 formerly VT 250
 Four credits
 Teaches advanced service procedures. Includes advanced automotive service work on internal combustion engines. Lecture and Laboratory. Six hours per week.
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. $8.00 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 include 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 servicers, stokers, 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 SYW 125, including work on various types of oil burners other than high-pressure burners; gas burners; 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
Teach competence in talking to and performing work for customer. 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, F.M. and A.M. principles, stereo and multiplex systems. The student will build a vacuum tube voltmeter, 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.

180. 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.
Lansing Community College Board of Trustees

At a special election held December 15, 1944, 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, 1945, 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, 1945, 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 the first Board of Trustees, the planning has been completed for the 93-acre downtown campus; construction is underway for the new Health Careers-Liberal Arts and Sciences unit; the construction of Old Central is nearing completion, and student enrollment totaled 4,147 students in the fall of 1968.
Faculty Directory

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

ANTICO, John B.A., Wayne State University; M.A., Wayne State University. Graduate Study, Michigan State University.


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

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

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

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

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

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

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

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

BOROFF, George B.S., Central Michigan University; M.A., Michigan State University. Apprenticeship Coordinator, Applied Technology

BOUCK, Robert J. Associate in Arts, Lansing Community College; B.A., Michigan State University. Graduate Study, Michigan State University. Instructor, Management and Marketing

BOUTERSE, Gloria R.N., Edward W. Sparrow Hospital; B.A., Michigan State University. Graduate Study, Michigan State University. Chairman, Health Careers Department

BOX, Richard C. B.S., Central Michigan University; M.A., Michigan State University. Associate Professor, Engineering Technology

BROUSE, David B.S., Michigan State University; M.A., Michigan State University. Graduation Study, Michigan State University. Associate Professor, Science

BUCKLIN, William B.S., Montana State University; M.S., Michigan State University. Assistant Professor, Social Science

BURGESS, Allan B.A., Central Michigan University; M.A., Central Michigan University. Graduate Study, Michigan State University. Instructor, Language Arts

BYRNE, Michael B.A., University of Notre Dame; M.A., Michigan State University. Graduate Study, Michigan State University. Instructor, Language Arts

CHURCH, Marvin P. B.S.C.E., Tri-State College; M.S.E. Civil. University of Michigan. Graduate Study, University of Michigan and Wayne State University. Associate Professor, Engineering Technology

CLARK, James B.S., Ohio State University; M.A., Harvard University. Graduate Study, Michigan State University, University of Michigan. Assistant Professor, Humanities

CRANSON, Rodney K. B.A., Michigan State University; M.A.T., Michigan State University. Instructor, Science

DANIELS, Robert A.B., Indiana University; M.S., Purdue University. National Teaching Fellowship

DAVIS, Marguerite B.A., Wheaton College; B.Mus., Wheaton College; M.A., State University of Iowa. Graduate Study, Western Michigan University, Michigan State University. Instructor, Language Arts

DEAN, Harry D. B.S., University of Michigan. Mergership School, Ford Motor Company. Assistant Professor, Management and Marketing

DOUGLAS, Phillip B.S., Michigan State University; M.A.T., Michigan State University; M.S., Michigan State University. Assistant Professor, Mathematics

DUNHAM, Dale B.S., Ferris State College; M.A., Michigan State University. Instructional Aids, Learning Resources Center

EDMUNDS, Peter B.A., University of Richmond; M.A., University of Richmond. Graduate Study, Michigan State University. Instructor, Language Arts

EDWARDS, Ronald K. B.S., Ferris Institute; M.S., University of Tennessee. Graduate Study, Michigan State University. Chairman, Accounting and Office Programs

ENGEL, Elfredo B.A., Michigan State University; M.A., University of Chicago. Instructor, Humanities

ERTING, Dorothy B.A., Central Michigan University. National Teaching Fellowship
FLURY, Frank C.  B.S., Eastern Michigan University; M.S., University of Michigan; Graduate Study, Michigan State University.

FORREST, David  Associate Degree, Lansing Community College.

FRANKE, Dorothy  National Teaching Fellowship
B.S., Northern Illinois State College; M.S., State University of Iowa.

GANISON, Philip J.  President
B.A., Albion College, M.A., Michigan State University; Doctoral Candidate, Michigan State University.

GARGELL, Richard K.  Teaching Technician, Engineering Technology
A.S., Lansing Community College; Working on B.S., Michigan State University.

GARRISON, Mary Lou  Instructor, Student Personnel Services
B.S., Western Michigan University; M.A., Western Michigan University; Graduate Study, Western Michigan University.

GREENFIELD, Mary F.  Associate Professor, Accounting and Office Programs
B.A., Michigan State University; M.S., University of Michigan; Graduate Study, Michigan State University.

GRIFFITH, Raymond  Assistant Professor, Engineering Technology
B.A., Michigan State University; M.S., Michigan State University; Doctoral Candidate, Michigan State University.

HAMEL, John  Educational Specialist, Health Careers
B.N., Edward W. Sparrow Hospital.

HARTWIG, Jesse E.  Assistant Professor, Student Personnel Services
B.S., Michigan State University; M.A., Michigan State University.

HEATER, William  Assistant Professor, Social Sciences
B.A., Denison University; B.D., Union Theological Seminary; Ph.D., Michigan State University.

HOKE, Helen  National Teaching Fellowship
B.S., Central University; M.A., University of Michigan.

HOPKINS, George  Chairman, Business Division
B.S., Kent State University; M.A., Western Michigan University.

HORTON, William  Instructor, Science
B.S., University of Maryland; M.S., Michigan State University.

HOWELL, Grace  Assistant Professor, Health Careers
L.P.N., Lansing Community College; B.A., Michigan State University; B.N., Michigan State University; B.S., Michigan State University.

HURLBUTT, Fred D.  Manager, Data Processing

JACOBS, Annette  Instructor, Language Arts
B.A., University of Wisconsin; M.A., Michigan State University.

JENKINS, Edward  Range Instructor, Transportation Training

JOHNSON, Ralph R.  Assistant Professor, Engineering Technology
B.S.C.E., Michigan State University; Registered Professional Engineer.

JONES, Donald C.  Teaching Technician, Applied Technology
Lansing Community College.

JONES, J. Howard  Assistant Professor, Mathematics
B.S., Indiana State University; M.A.T., Michigan State University; M.S., Michigan State University.

JONES, Mary B.  Instructor, Language Arts
B.A., Oklahoma State University; M.A., Oklahoma State University; Doctoral Candidate, Indiana University.

KELL, Grace  Instructor, Social Science
M.A., University of North Carolina; B.A., Duke University.

KELLY, John  Associate Professor, Mathematics
B.A., Michigan State University; M.A., Michigan State University.

KENNEDY, Enrique M.  Chairman, Food Services Department
B.S., Michigan State University; Graduate Study, University of Michigan and Michigan State University.

KINTZER, Sam  Chairman, Social Science
B.A., Miami University; M.A., Teachers College, Columbia University; Graduate Study, University of Cincinnati.

KLASSKE, Rose Marie  Instructor, Language Arts
B.A., Pennsylvania A&M College (Oklahoma); Masters: Teaching, Central State College (Oklahoma).

LAFAYE, David C.  Admissions Counselor
B.S., Central Michigan University; M.S., Michigan State University.

LEWIS, David M.  Range Instructor, Transportation Training
Lansing Community College.

LIPPS, David K.  Assistant Professor, Management and Marketing
B.S., University of Oregon; Graduate Study, University of California, Michigan State University.

LIMING, Sarah  Educational Specialist, Health Careers
R.N., St. Lawrence Hospital.

LOO, Samson  Instructor, Social Science
B.A., University of Hawaii; M.A., University of Hawaii; Doctoral Candidate, Michigan State University.

LOOMIS, Tom  Professor, Science
B.S., New Mexico State University; B.D.A.G., Michigan State University.

LYNCH, William  Instructor, Language Arts
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SCHRAM, Hugh
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STECK, Douglas
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Academic Dean
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Dorothy Miller

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Mary Jane White

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Personnel
Janet A. Kramer

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Munnell J. Donley
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Margaret J. Hewer
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Donald Way