

KAY Grounds  
Lansing Community College

1966-68



Information for  
prospective students

1966-1968



# LANSING COMMUNITY COLLEGE

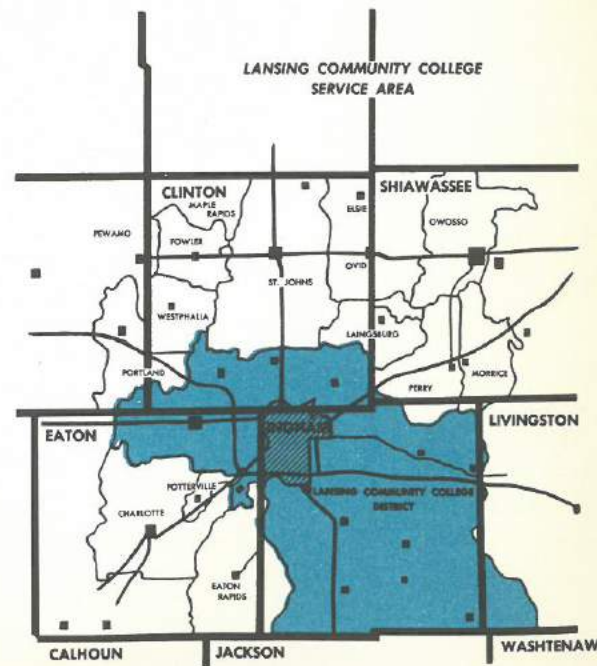
419 NORTH CAPITOL AVENUE

LANSING, MICHIGAN

TELEPHONE, 489-3751

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



*President Philip J. Gannon*

Dear Students:

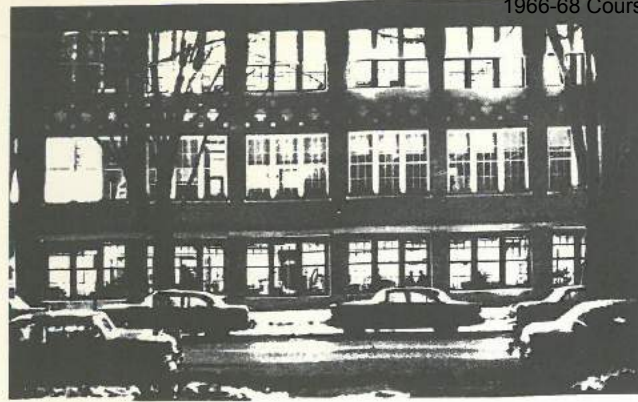
Lansing Community College is entering its tenth year of operation and is now a vital part of the metropolitan area. We are in the midst of building a new and beautiful campus. When you visit the campus, you will see "Old Central" undergoing many changes and will note the development of new office facilities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

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

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

Sincerely,

*Philip J. Gannon*



## LANSING COMMUNITY COLLEGE PURPOSES, FUNCTIONS AND OBJECTIVES

The purposes, functions, and objectives of Lansing Community have quite clearly been 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 science, business, and technology which are not being offered at Michigan State University. It provides a variety of adult and community service programs as well as personnel and counseling services for the students of the community and it offers college parallel programs for students planning to transfer to four year institutions.

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

### PURPOSES

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

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

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

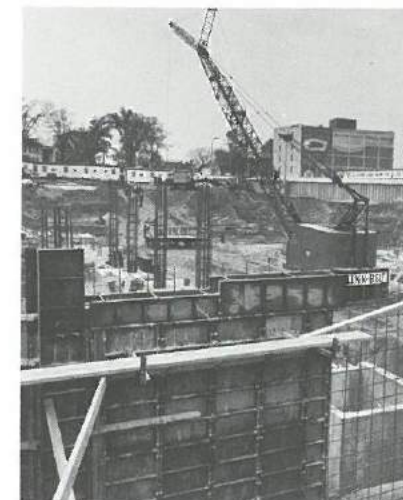
Shakespeare

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

### FUNCTIONS

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

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



### OBJECTIVES

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

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

Lansing Community College Calendar 1966-1968

	September 1966							October 1966							November 1966							December 1966						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1966	4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
	25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31

	January 1967							February 1967							March 1967							April 1967						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1967	8	9	10	11	12	13	14	5	6	7	8	9	10	11	5	6	7	8	9	10	11	2	3	4	5	6	7	8
	15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18	9	10	11	12	13	14	15
	22	23	24	25	26	27	28	19	20	21	22	23	24	25	19	20	21	22	23	24	25	16	17	18	19	20	21	22
	29	30	31					26	27	28					26	27	28	29	30	31	23	24	25	26	27	28	29	

	May 1967							June 1967							July 1967							August 1967						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1967	7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
	14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
	21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
	28	29	30	31				25	26	27	28	29	30	30	31						27	28	29	30	31			

	September 1967							October 1967							November 1967							December 1967						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1967	3	4	5	6	7	8	9	1	2	3	4	5	6	7	5	6	7	8	9	10	11	3	4	5	6	7	8	9
	10	11	12	13	14	15	16	8	9	10	11	12	13	14	12	13	14	15	16	17	18	10	11	12	13	14	15	16
	17	18	19	20	21	22	23	15	16	17	18	19	20	21	12	13	14	15	16	17	18	17	18	19	20	21	22	23
	24	25	26	27	28	29	30	22	23	24	25	26	27	28	19	20	21	22	23	24	25	24	25	26	27	28	29	30

	January 1968							February 1968							March 1968							April 1968						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1968	7	8	9	10	11	12	13	4	5	6	7	8	9	10	3	4	5	6	7	8	9	7	8	9	10	11	12	13
	14	15	16	17	18	19	20	11	12	13	14	15	16	17	10	11	12	13	14	15	16	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	18	19	20	21	22	23	24	17	18	19	20	21	22	23	21	22	23	24	25	26	27
	28	29	30	31				25	26	27	28	29			24	25	26	27	28	29	30	28	29	30				

	May 1968							June 1968							July 1968							August 1968						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1968	5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
	12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
	19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
	26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30	31

- Fall Term 1966
- September 19-23  
Faculty and Committee Meetings
- September 26-27  
Fall Term Registration
- September 28  
Classes Begin
- November 24-26  
Thanksgiving Holiday
- December 12-16  
Examinations
- December 17  
Term Closes

- Winter Term 1967
- January 3-6  
Faculty and Committee Meetings
- January 4-5  
Winter Term Registration
- January 9  
Classes Begin
- March 20-24  
Examinations
- March 25  
Term Closes

- Spring Term 1967
- March 30-31  
Registration
- April 3  
Faculty Day
- April 4  
Classes Begin
- May 30  
Memorial Day
- June 11  
Graduation
- June 14-17  
Examinations
- June 17  
Term Closes
- June 19  
Grades Due

- Summer Term 1967
- June 26  
Summer Term Registration
- June 27  
Classes Begin
- July 4  
Independence Day
- August 22, September 6  
Term Closes

- Fall Term 1967
- September 18-22  
Faculty and Committee Meetings
- September 25-26  
Fall Term Registration
- September 27  
Classes Begin
- November 23-25  
Thanksgiving Holiday
- December 11-15  
Examinations
- December 16  
Term Closes

- Winter Term 1968
- January 2-5  
Faculty and Committee Meetings
- January 3-4  
Winter Term Registration
- January 8  
Classes Begin
- March 18-22  
Examinations
- March 23  
Term Closes

- Spring Term 1968\*
- April 1-5  
Faculty and Committee Meetings
- April 3-4  
Spring Term Registration
- April 8  
Classes Begin
- May 30  
Memorial Day
- June 18-24  
Examinations
- June 16  
Commencement
- June 24  
Term Closes

- Summer Term 1968
- June 26  
Summer Term Registration
- June 27  
Classes Begin
- July 4  
Independence Day
- August 24, September 5  
Term Closes

\*Date changes under consideration

## Division of Student Services



*Kenneth Sproull,  
Dean of Student  
Services*



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

### Student Services

### Student Services

#### Application for New Students

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

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

#### Application for Transfer Students

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

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

#### Special and Guest Applications

Special and guest students will fill out pages one and two of the regular application for admission. Transcripts need not be submitted for admission. The student will submit a non-refundable application fee of \$5. Students applying for admission as guest students must submit the guest application supplied by the Registrar's Office from the college they are attending.

#### Admissions

To be admitted all new students must report for placement testing at the time requested by the Admissions Office.

#### Registration Procedures

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

#### Late Registration

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

Registrar Raymond Anderson



Registration



### Drops and Adds

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

### Auditing

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

### Withdrawal from College

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

### Credits

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

### Credit by Examination

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

### Transfer of Credits

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

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

### Student Credit Load and Limitations

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



**Student Services** System of Grades

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

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

**Honor Points**

Grade point averages are determined on the following basis:

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

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

**Probation**

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

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

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

**Term Grade Reports**

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

**Examinations**

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

**Attendance**

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

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

**Graduation Requirements**

To graduate from Lansing Community College a student must:

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

**Degrees**

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

**High School Articulation**

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

**Student Services** **Academic Advising**

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

**Educational-Vocational Information**

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

**Student Personnel Services****Counseling Services**

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



Dr. Beverly Hunt  
Director of Counseling

**Orientation**

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

**Testing Services**

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

**College Transfer Articulation**

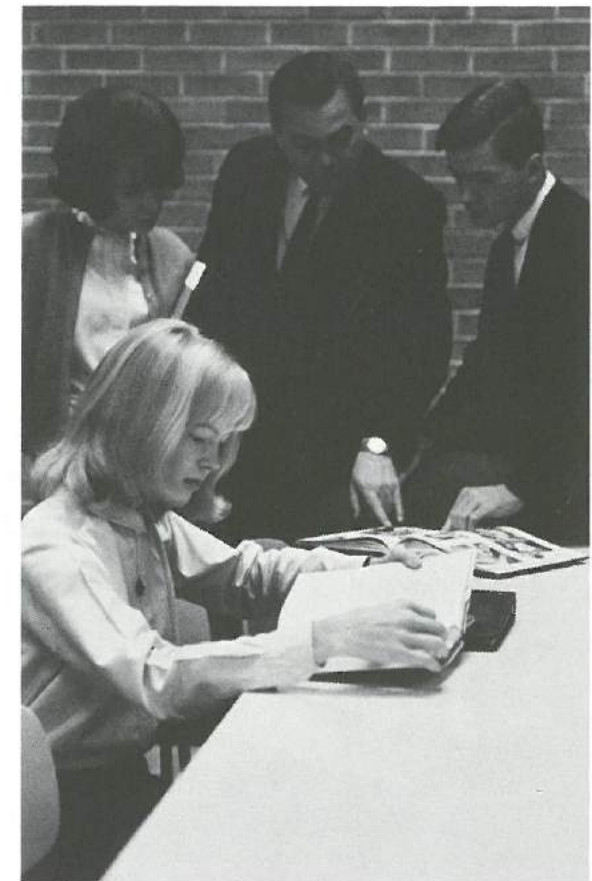
Student Personnel Services maintains close contact with colleges and universities to which many of our students anticipate transfer. Curricular guides are prepared for students indicating transfer requirements in their chosen curriculums. Arrangements are made for visits to the College by representatives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

**College Activities**

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

18 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. The Fine Arts Program offers to students and faculty a varied calendar of Fine Arts cultural activities in the community, cooperating with the Lansing Civic Players, the Lansing Symphony, the Town Hall Speakers Series, the Community Circle Players and the Lansing Art Gallery. The Fine Arts program, cooperating with the Student Government, also sponsors a Fine Arts Film Series, the annual Creative Arts Contests and a Miss Lansing Community College Pageant.

**Student Services**

## Student Services Grants

### Grants for Students Attending Lansing Community College

#### Scholarships

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

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

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

#### Alvin M. Bentley Foundation Junior College Scholarships

The foundation established by Mr. Alvin M. Bentley makes available a \$735.00 scholarship to one outstanding graduating senior who is admissible to the College and who has financial need.

#### The State of Michigan Competitive Scholarship

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

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

#### Student Government Scholarships

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

#### Marketing Scholarship

Mr. Ronald Garlock provides a \$100 scholarship for a capable student enrolled in the Marketing curriculum who is in need of financial assistance.

#### Michigan Restaurant Association, Greater Lansing Chapter

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

#### Administrative Management Scholarship

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

#### Practical Nursing

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

## Student Services

## Grants

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

The law requires that the borrower:

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

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

#### The Dwight and Eleanor Rich Loan Fund

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

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

#### Michigan Higher Education Assistance Authority Loan

The state of Michigan administers a loan fund through local banks which allows freshman students to borrow up to \$500 a year and sophomores a maximum of \$650. Borrowers must be residents of Michigan and full-time students, must demonstrate the ability to complete college and show financial need. Information and applications may be requested from the Chairman of Financial Aids, Counseling Services at Lansing Community College.

#### Student Government Loan Fund

The Student Government of Lansing Community College provides short term loans in amounts up to \$75 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 \$75.

#### Educational Opportunity Grants

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

#### Additional Scholarships and Loans

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

**Student Services***Grants***College Work-Study Program**

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

**Scholarships for Lansing Community College Graduates**

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

**Fine Arts Cultural Program**

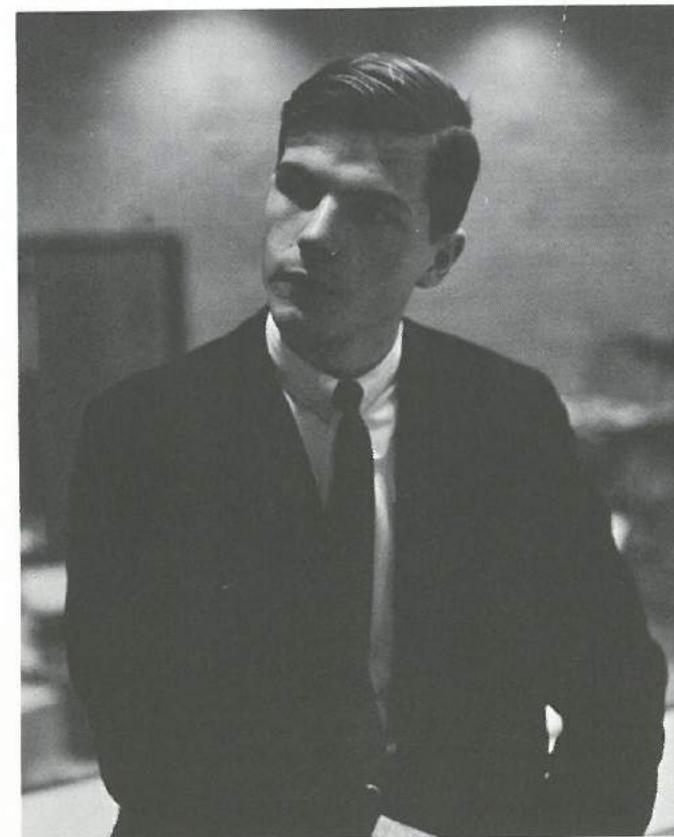
Lansing Community College offers to its students a Fine Arts Program whereby students are encouraged to attend and participate in the productions of the various fine arts groups in the community. This program, cooperating with two of the community theaters, has encouraged many students and faculty members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

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

**Student Government and Organizations**

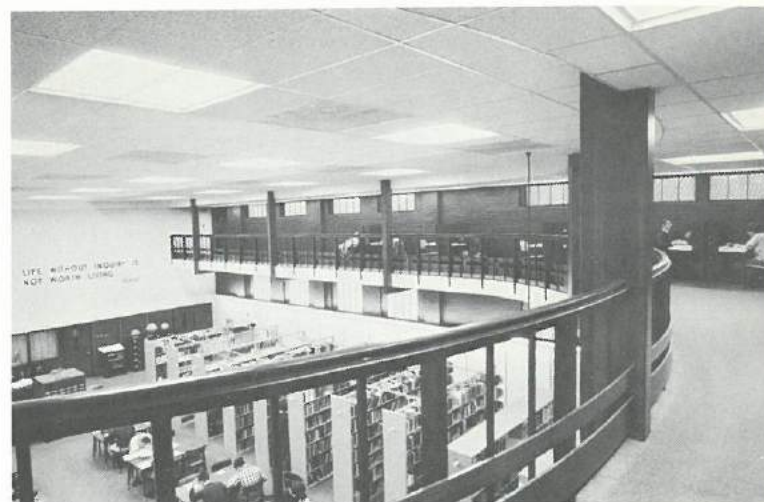
The Preamble to the Constitution of the Student Government Constitution states: "We, the students of Lansing Community College, in order to form a more perfect student, to provide for full student representation in all matters pertinent to student affairs, and to assist in the integration and coordination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



*A boy's will is the  
wind's will,  
And the thoughts of youth  
are long, long thoughts.*

Longfellow



### Student Services The Library

#### *Dwight Rich Learning Resources Center*

The Dwight Rich Learning Resources Center provides the printed and recorded resources for the entire program of instruction at Lansing Community College. This modern facility has a broad, up-to-date collection of materials representing the heritage of the world's civilizations and the most recent advances in scholarship in fields of arts, sciences and technology.

The Learning Resources Center is located at the northwest corner of the main classroom building. The Center is open both day and evening during all four quarters of the school year. The Center, which includes a second floor study annex, can accommodate 200 students.

More than 28,000 volumes, selected by the faculty and library staff, present diverse points of view on subject matter, the latest information in any given discipline and material to challenge the intellect. In addition to the book collection, the Center subscribes to more than 285 general periodicals, academic journals and newspapers; has collections of audio-visual materials which include phonograph records, audio and video tapes and microfilm, and maintains files of current reprints, monographs and pamphlets.

Special features are the conference rooms for group study; individual carrels for private study; the audio-visual center for listening and viewing of material which is pertinent to the curricula, and the instructional resources production center. The arrangement of the shelving promotes easy accessibility to titles in the collection. The Center is also convenient to both classroom and cafeteria.

Individual guidance is provided to the student by the library staff, and libraries of the Lansing metropolitan area are also available for additional research.



*Mrs. Dwight Rich*

#### *Dwight Rich Learning Resources Center Dedication*



*Robert Johnston, Sculptor*

**Student Services** *Evening Classes*

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

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

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

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

*Tuition and Fees*

Tuition, Resident Students	
Per credit hour .....	\$5.00
Limit on hours charged .....	15
Maximum per term .....	\$75.00
Tuition, Non-Resident	
Per credit hour .....	\$7.00
Limit on hours charged .....	15
Maximum per term .....	\$105.00
Tuition for apprenticeship students varies according to the program of study.	
Fees, all students	
Application fee (new students) .....	\$10.00
Registration fee (guest, special and readmitted students) .....	\$5.00
Late registration fee	
1-7 credit hours .....	\$2.00
8 or more credit hours .....	\$5.00
College activities fee (each term)	
1-6 credit hours .....	\$1.00
7-11 credit hours .....	\$3.00
12 or more credit hours .....	\$5.00
Summer term (all students) .....	\$1.00
Locker fee .....	\$1.00
Laboratory fees vary according to the course of study.	

**Tuition Refund Policy**

FALL, WINTER AND SPRING TERMS

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

SUMMER TERM

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

*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.

*Course and Department Codes*

ANT	Anatomy	HMR	Hotel-Motel Technology
ART	Art	HUM	Humanities
AST	Astronomy	LE	Law Enforcement
BIO	Biology	LT	Library Technician
BUS	Business	MKT	Marketing
CEM	Chemistry	MT	Mechanical Technology
CT	Civil Technology	MTH	Mathematics
DPT	Data Processing Technology	MIC	Microbiology
DT	Drafting Technology	MUS	Music
EC	Economics	NS	Natural Science
ENG	English	PE	Physical Education
ET	Electronics Technology	PHL	Philosophy
FBS	Foundations Biological Science	PHY	Physics
FPS	Foundations Physical Science	PSY	Psychology
FRN	French	SPH	Speech
FST	Food Service Technology	SPN	Spanish
GEO	Geography	SS	Social Science
HST	History		

*Course Descriptions*

**Course Numbers**

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

*Basic Courses*

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

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

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

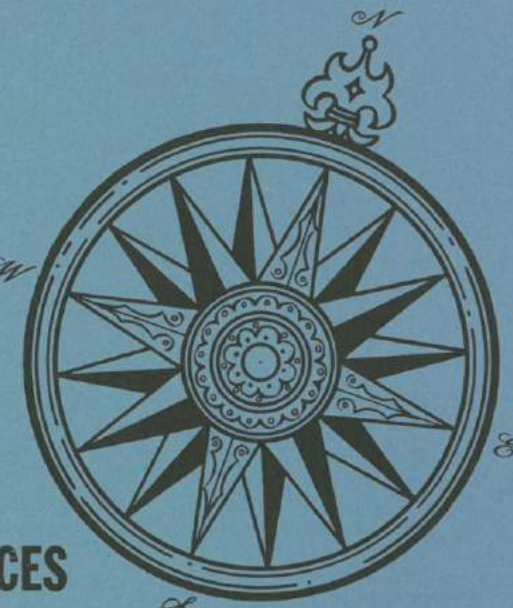


*Life lies open to me — rich, full, abundant. My thought  
which is my key to life, opens all doors for me.*

*Ernest Holmes*

## COLLEGE OF ARTS AND SCIENCES

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



**Arts and Sciences** *College of Arts and Sciences**Associate Dean: PAUL KREIDER*

The College of Arts and Sciences attempts to confront the student with the full scope of man's knowledge about himself and his world. The curriculum is designed to stimulate knowledge and understanding of past and present cultural and social forces, and to acquaint the student with the ways in which these forces have been interpreted, thus providing educational resources whereby a student may better equip himself to make important cultural, social, and economic contributions to society. Emphasis is given to individual growth and human development and a desire to make available to all students intellectual training and knowledge that will add meaning, breadth, motivation, and interest to their lives regardless of vocational aspirations.

The curriculums of the College of Arts and Sciences are flexible, as well as carefully designed to meet student needs.

General education is provided for all students regardless of curriculum. Associate in Arts and Sciences Degrees are offered for two years of study, and pre-professional courses are offered leading to an Associate Degree which will enable transfer to four-year colleges and universities. Many students take Liberal Arts and Sciences courses for personal improvement and satisfaction. The College attempts to provide the student with adequate resources which represent the latest instructional methods and materials.

The faculty, representing diversity of backgrounds and interests, is dedicated to teaching as a profession and to full participation by the student in the learning process.



*Academic Dean, R. Stephen Nicholson and Paul Kreider, Associate Dean, College of Arts and Sciences.*

**Community Leadership**

This curriculum is built by selecting from the offerings of the College those which are of importance or particular interest to specific students. Many who have already completed their formal education and entered a vocation find this meets their needs as they advance in their profession. Adult members of the community are afforded an opportunity to acquire the information they need to continue to exercise leadership.

The pace of this program is individually determined. Some students will enroll for only one course each term. Others will enroll less often. Executives, engineers, retired persons, homemakers, people from every segment of the community are enrolled in classes in art, speech, science or in Associate Degree programs. Through this community college approach anyone can make education a lifelong adventure.

*Executive Skills.* In a field as diverse as our social and business life, new techniques and discoveries are constantly changing the established patterns. For those who desire to effectively integrate these changes into their daily activities the College offers opportunity to choose the desired skills and acquire competence in their utilization. New executives often find need for broader knowledge than experience has provided to date. This curriculum affords the opportunity for supplementing past educational experiences with current courses to qualify the young executive for higher levels of performance, whatever area of study he may select.

*Business and Industry Seminars.* These short, concentrated programs incorporate the available information in specific fields or problem areas for those who have highly specialized interests and less available time for formal classroom offerings.

*Personal Development.* Every person is afforded an opportunity to attend college through this program. Afternoon sessions are most convenient for some students. Women may gain credits toward a degree in teaching and a full time career. Older members of the community find time in retirement to pursue interests for which they found no time during their employment years. Whatever the interest, the College can provide the answer through concern for individual need.

*Cultural Programs.* These are integrated with community cultural affairs, thus combining the formal and informal aspects of education into meaningful wholes. Art and music, the performing arts and a growing variety of programs through the College now enroll students of all ages and vocations.

**High School Honors Institute**

Each summer Lansing Community College offers an opportunity for advanced study in the languages, sciences and mathematics to outstanding high school juniors and seniors of the Lansing area. For further information students interested in this program should contact the College admissions officer or the high school principal. Biology, chemistry, physics, mathematics, languages and humanities are included in this program.

**Advanced Placement**

Younger students who have demonstrated academic ability may, upon recommendation of the high school principal, be admitted during the junior year to the advance placement program of the College. Students are accepted prior to graduation from high school and may earn a number of hours of credit toward their pre-professional or associate college degree while they complete their high school program. Students usually attend afternoon or evening classes. They enroll in regular sections of the courses for which they are registered and their credits are fully transferable to other colleges and universities.





**Arts and Sciences Associate Degree Programs**

The Associate Degree is traditionally earned by graduates of a two year college program. Students interested in general education, those who desire to continue toward the baccalaureate degree in a four year college or university, and students interested in achieving vocational competence are all able to earn associate degrees.

The college confers both the Associate in Arts and the Associate in Science degrees. Within the College of Arts and Sciences there are a variety of combinations which meet the degree requirements. Major concentrations enable the student to follow his individual interest in cases where he has chosen the skills he most desires.

The student who seeks an Associate Degree without a major may elect the following program. The electives should be selected in consultation with the student's counselor prior to registration.

**Associate in Arts Degree**

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
NS	Natural Science	4		Electives	11
SS 101	Sociology	4			15
PSY 101	Orientation	1			
PE 101	Physical Education	1			
		16-17			
<b>Winter Term</b>					
ENG 102	Composition	3	HUM 202	Western Civilization	4
NS	Natural Science	4		Electives	11
SS 102	Economics	4			15
PE 102	Physical Education	1			
		15-16			
<b>Spring Term</b>					
ENG 103	Composition	3	HUM 203	Western Civilization	4
NS	Natural Science	4		Electives	11
SS 103	Political Science	4			15
PE 103	Physical Education	1			
		15-16			

The Associate in Arts Degree candidate is urged to consult his advisor for completion of his sophomore program. It is recommended that he elect a sequence of sophomore level courses in the Liberal Arts and complete the second year of a foreign language.

**Associate in Arts — English Major**

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	ENG 201	Intro. to Literature	3
NS	Natural Science	4	ENG 210	or 211	3
SS 101	Sociology	4	HUM 201	Western Civilization	4
PSY 101	Orientation	1		Foreign Language	3
PE 101	Physical Education	1		Electives: Eng. 230, PL. S.	
	Foreign Language	4		250, S.S. 270, Hst. 111, or	
		17		Phil. 201	3
					16
<b>Winter Term</b>					
ENG 102	Composition	3	ENG 202	Intro. to Literature	3
NS	Natural Science	4	SPH 104	Speech	3
SS 102	Economics	4	HUM 202	Western Civilization	4
PE 102	Physical Education	1		Foreign Language	3
	Foreign Language	4		Electives: Eng. 231, PL.S.	
		16		260, Pl.S. 271, Hst. 112, or	
				Phil. 203	3
					16
<b>Spring Term</b>					
ENG 103	Composition	3	ENG 203	Intro. to Literature	3
NS	Natural Science	4	ENG 290	or 211 or 212	3
SS 103	Political Science	4	HUM 203	Western Civilization	4
PE 103	Physical Education	1		Foreign Language	3
	Foreign Language	4		Electives: Speech 201, Hst.	
		16		113, or Phil. 203	3
					16

**Arts and Sciences**

**Associate in Arts — Humanities Major**

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	SS 101	Sociology	4
NS	Natural Science	4	PHIL 201	Philosophy	3
HUM 201	Western Civilization	4	HST 111	American History	3
	Foreign Language	4	ENG 201	Introduction to Lit.	3
PE 101	Physical Education	1		Music or Art Electives	3
PSY 101	Orientation	1			
		17			14-16
<b>Winter Term</b>					
ENG 102	Composition	3	SS 102	Economics	4
NS	Natural Science	4	PHIL 202	Philosophy	3
HUM 202	Western Civilization	4	HST 112	American History	3
	Foreign Language	4	ENG 202	Introduction to Lit.	3
PE 102	Physical Education	1		Music or Art Electives	1-3
		16			14-16
<b>Spring Term</b>					
ENG 103	Composition	3	SS 103	Political Science	4
NS	Natural Science	4	PHIL 203	Philosophy	3
HUM 203	Western Civilization	4	HST 113	American History	3
	Foreign Language	4	ENG 203	Introduction to Lit.	3
PE 103	Physical Education	1		Music or Art Electives	1-3
		16			14-16

Arts and Sciences

Associate in Arts — Social Science Major

The prospective Social Science major is encouraged to consult with the faculty members specializing within his intended major area as well as the counseling staff. During the initial two years the prospective social science major is urged to cultivate social interests and perceptions by taking advantage of the many symposia, lectures as well as the applied areas both within the college and the larger community.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HST 111	American History	3
SS 101	Sociology	4	HUM 201	Western Civilization	4
NS	Natural Science	4		Electives	8
PSY 101	Orientation	1			
PE 101	Physical Education	1			
	Elective	3			
		16			
Winter Term					
			HST 112	American History	3
ENG 102	Composition	3	HUM 202	Western Civilization	4
SS 102	Economics	4	PLS 250	American Government	4
NS	Natural Science	4		Electives	4
PE 102	Physical Education	1			
	Elective	3			
		15			
Spring Term					
ENG 103	Composition	3	HST 113	American History	3
SS 103	Political Science	4	HUM 203	Western Civilization	4
NS	Natural Science	4		Electives	8
PE 103	Physical Education	1			
	Elective	3			
		15			

If majoring in education, these electives should be selected.

PSY 201	Intro. to Psycho.	4	MTH 160	Statistics	5
PSY 204	Educational Psycho.	3	GEO 201	World Regional Geog.	3

At least 6 hours must be elected in English, from the following; with preference given to the ENG 210, ENG 212 combination:

ENG 210	19th Cent. American Novel	3	ENG 212	The European Novel	3
ENG 211	20th Cent. American Novel	3			

Remaining courses to be elected from the following:

SS 270	Anthropology	3	SS 220	Juvenile Delinquency	3
PLS 260	Comparative Government	3	PSY 203	Social Psychology	3
PLS 271	International Relations	3			



Psychology Majors

Student desiring to major in psychology should follow the Social Science major with several exceptions. The student should take Psychology 202, Personality, in addition to all Psychology courses listed in the Social Science curriculum. During the sophomore year the student should gravitate into the biological sciences, with physiology being highly recommended. However, consultation in these matters with psychology instructors and counselors is imperative.

Arts and Sciences

Associate in Arts — Speech Major

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	ENG 230	Intro. to Eng. Linguistics	3
SS 101	Sociology	4	HUM 201	Western Civilization	4
PSY 101	Orientation	1	SPH 201, 202, or 220		3
SPH 104	Fundamentals of Speech	3	ENG 201	Intro. to Literature	3
PE 101	Physical Education	1		Electives	3
NS	Natural Science	4			
		16			
Winter Term					
ENG 102	Composition	3	ENG 290	Shakespeare	3
SS 102	Economics	4	HUM 202	Western Civilization	4
SPH 105 or 202		3	SPH 201, 202 or 220		3
NS	Natural Science	4	ENG 202	Intro. to Literature	3
PE 102	Physical Education	1		Electives	3
		15			
Spring Term					
ENG 103	Composition	3	HST 113	American History	4
SPH 105, 201, or 220		3	HUM 203	Western Civilization	4
SS 103	Political Science	4	SPH 105, 201 or 220		3
NS	Natural Science	4	ENG 203	Intro. to Literature	3
PE 103	Physical Education	1		Electives	3
		15			

Electives 3-4 credits from the following area. Philosophy, Language or three courses at 200 level—Psychology, Political Science, or Social Science.

Associate in Science Degree

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
MTH 164	College Algebra & Trig. I	5	SS 101	Sociology	4
	Science Electives	4-5		Science or Math. Elective	8
PSY 101	Orientation	1			
PE 101	Physical Education	1			
		14-15			
Winter Term					
ENG 102	Composition	3	HUM 202	Western Civilization	4
MTH 165	College Algebra & Trig. II	5	SS 102	Economics	4
	Science Elective	4-5		Science or Math Elective	8
PE 102	Physical Education	1			
	Elective	3			
		16-17			
Spring Term					
ENG 103	Composition	3	HUM 203	Western Civilization	4
MTH 201	College Algebra	5	SS 103	Political Science	4
	Science Mathematics	4-5		Science or Math Elective	8
PE 103	Physical Education	1			
	Elective	3			
		16-17			

Arts and Sciences

Associate in Science — Biology Major

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
MTH 164	College Algebra & Trig. I	5	SS 101	Sociology	4
BIO 107	General Biology I	4	CEM 111	General Chemistry	5
PSY 101	Orientation	1		Elective	4
PE 101	Physical Education	1			17
		14			
Winter Term			Winter Term		
ENG 102	Composition	3	HUM 202	Western Civilization	4
MTH 165	College Algebra & Trig. II	5	SS 102	Economics	4
BIO 108	General Biology II	4	CEM 112	General Chemistry	5
PE 102	Physical Education	1		Elective	4
	Elective	3			17
		16			
Spring Term			Spring Term		
ENG 103	Composition	3	HUM 203	Western Civilization	4
BIO 109	General Biology III	4	SS 103	Political Science	4
PE 103	Physical Education	1	CEM 113	Qualitative Analysis	5
	Math or Science Elective	5		Elective	4
		13			17

Recommended Electives

MTH 213	Analytic Geometry & Cal. I	5	PHY 201	Physics*	4
MTH 214	Analytic Geometry & Cal. II	5	PHY 202	Physics	4
BIO 201	Zoology I	4	PHY 203	Physics	4
BIO 202	Zoology II	4	PHY 211	Physics**	4
BIO 203	Botany	4	PHY 212	Physics	4
			PHY 213	Physics	4

\* Prerequisite Trigonometry or approval of the department.

\*\* Prerequisite MTH 213 or approval of the department.

Associate in Science — Chemistry Major

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
MTH 164	College Algebra & Trig. I	5	SS 101	Sociology	4
CEM 111	General Chemistry	5	CEM 202	Organic Chem.	5
PSY 101	Orientation	1		Elective	4
PE 101	Physical Education	1			17
		15			
Winter Term			Winter Term		
ENG 102	Composition	3	HUM 202	Western Civilization	4
MTH 165	College Algebra & Trig. II	5	SS 102	Economics	4
CEM 112	Gen. Chem.	5	CEM 201	Organic Chem.	5
PE 102	Physical Education	1		Elective	4
		14			17
Spring Term			Spring Term		
ENG 103	Composition	3	HUM 203	Western Civilization	4
CEM 111	General Chemistry	5	SS 103	Political Science	4
PE 103	Physical Education	1	CEM 201	Organic Chem.	5
	Math or Science Electives	5		Elective	4
		14			17



Associate in Science — Mathematics Major

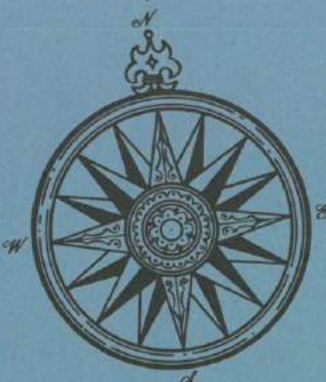
Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 202	Western Civilization	4
MTH 180	College Algebra and Trig.	5	MTH 215	Anal. Geom. & Calculus III	5
SS 101	Sociology	4	NS	Natural Science	4
PSY 101	Orientation	1		Elective	3
PE 101	Physical Education	1			16
		14			
Winter Term			Winter Term		
ENG 102	Composition	3	HUM 201	Western Civilization	4
MTH 213	Anal. Geom. & Calculus I	5	MTH 216	Anal. Geom. & Calculus IV	5
SS 102	Economics	4	NS	Natural Science	4
PE 102	Physical Education	1		Elective	3
	Elective	3			16
		16			
Spring Term			Spring Term		
ENG 103	Composition	3	HUM 202	Western Civilization	4
SS 103	Political Science	4	MTH 219	Differential Equations	4
PE 103	Physical Education	1	NS	Natural Science	4
MTH 214	Anal. Geom. & Calculus II	5		Elective	3
	Elective	3			15
		16			

Arts and Sciences

Arts and Sciences

Associate in Science — Physics Major

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
MTH 180	College Algebra and Trig.	5	SS 101	Sociology	4
CEM 111	General Chemistry	5	PHY 211	Physics	4
PSY 101	Orientation	1	MTH 215	Anal. Geom. & Calculus III	5
PE 101	Physical Education	1			17
		15			
Winter Term			Winter Term		
ENG 102	Composition	3	HUM 202	Western Civilization	4
MTH 213	Anal. Geom. & Calculus I	5	SS 102	Economics	4
CEM 112	General Chemistry	5	PHY 212	Physics	4
PE 102	Physical Education	1	MTH 216	Anal. Geom. & Calculus IV	5
	Elective	3			17
		17			
Spring Term			Spring Term		
ENG 103	Composition	3	HUM 203	Western Civilization	4
MTH 214	Anal. Geom. & Calculus II	5	SS 103	Political Science	4
CEM 113	General Chemistry	5	PHY 213	Physics	4
PE 103	Physical Education	1	MTH 219	Differential Equations	4
	Elective	3			16
		17			



Pre-Professional Program

The pre-professional curriculums offered by the College of Arts and Sciences parallel in content those offered by four-year institutions within the State of Michigan. They are planned to satisfy both general education requirements and the entrance requirements of the professional schools. A student who does not find a suggested program in the field of his choice should consult a counselor in the Student Personnel Services Office for assistance in choosing a proper sequence of courses.

Admissions requirements to professional programs vary among the schools, colleges and universities. Therefore, it is imperative that the student make an early decision on the institution to which he wishes to transfer and then elect the courses which will allow him to meet the requirements of that institution.

Pre-Chiropractic

It is recommended that students who intend to matriculate in nationally accredited chiropractic colleges complete two full academic years of pre-professional college work before enrollment since most accredited colleges now have this requirement. This is becoming increasingly desirable as more states adopt the two-year pre-professional requirement, in addition to four academic years of professional education as a requisite for licensure.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	CEM 201	Organic Chemistry	5
MTH 164	College Algebra & Trig. I	5	SS 101	Sociology	4
CEM 111	Inorganic Chemistry	5	HUM 201	Western Civilization	4
BIO 107	General Biology I	4		Elective	3 or 4
		17			16-17
Winter Term			Winter Term		
ENG 102	Composition	3	CEM 202	Organic Chemistry	5
MTH 165	College Algebra & Trig. II	5	SS 102	Economics	4
CEM 112	Inorganic Chemistry	5	HUM 202	Western Civilization	4
BIO 108	General Biology II	4		Elective	3 or 4
		17			16-17
Spring Term			Spring Term		
ENG 103	Composition	3	CEM 203	Organic Chemistry	5
CEM 113	Inorganic Chemistry	5	SS 103	Political Science	4
BIO 109	General Biology III	4	HUM 203	Western Civilization	4
PSY 201	Intro. to Psychology	4		Elective	3 or 4
		16			16-17

Recommended Electives

Anatomy 201 Anatomy and Physiology  
 Biology 201 Zoology  
 Psychology 202 Psychology of Personality

Psychology 203 Social Psychology  
 Physics 201, 202, 203  
 Speech 104 Fundamentals of Speech

Arts and Sciences

Arts and Sciences

Pre-Dentistry

Freshman Year	Fall Term	Credit Hours
PSY 101	Orientation	1
ENG 101	Composition	3
BIO 201	Zoology	4
SS 101	Sociology	4
CEM 111	Inorganic Chemistry	5
PE 101	Physical Education	1
		18
Winter Term		
ENG 102	Composition	3
BIO 202	Zoology	4
SS 102	Economics	4
CEM 112	Inorganic Chemistry	5
PE 102	Physical Education	1
		17
Spring Term		
ENG 103	Composition	3
BIO 203	Botany	4
SS 103	Political Science	4
CEM 113	Qualitative Analysis	5
PE 103	Physical Education	1
		17

Sophomore Year	Fall Term	Credit Hours
HUM 201	Western Civilization	4
CEM 201	Organic Chemistry	5
PHY 201	Physics	4
		3
		16
Winter Term		
HUM 202	Western Civilization	4
CEM 202	Organic Chemistry	5
PHY 202	Physics	4
		3
		16
Spring Term		
HUM 203	Western Civilization	4
CEM 221	Quantitative Analysis	5
PHY 203	Physics	4
		3
		16

Pre-Law

Freshman Year	Fall Term	Credit Hours
ENG 101	Composition	3
HST 111	American History	3
SS 101	Sociology	4
		4
PSY 101	Orientation	1
PE 101	Physical Education	1
		16
Winter Term		
ENG 102	Composition	3
HST 112	American History	3
SS 102	Economics	4
		4
PE 102	Physical Education	1
		15
Spring Term		
ENG 103	Composition	3
HST 113	American History	3
SS 103	Political Science	4
		4
PE 103	Physical Education	1
		15

Sophomore Year	Fall Term	Credit Hours
PHL 201	Philosophy	3
EC 201	Economics	3
HUM 201	Western Civilization	4
		4
NS	Natural Science	4
		3
		17
Winter Term		
PHL 202	Philosophy	3
EC 202	Economics	3
HUM 202	Western Civilization	4
		4
NS	Natural Science	4
		3
		17
Spring Term		
PHL 203	Philosophy	3
EC 203	Economics	3
HUM 203	Western Civilization	4
		4
NS	Natural Science	4
		3
		17

Recommended Electives:  
 Literature                      Psychology  
 Language                        Speech  
 Accounting                      Geography

Pre-Medical

Medical school applicants must present at least 90 semester hours of credit. Two-thirds of these, or 90 term hours, may be taken at Lansing Community College. Pre-medical students should be familiar with the requirements of the medical school of their choice and adjust their programs of study accordingly - in consultation with their advisers. The University of Michigan School of Medicine, for example, requires facility with a foreign language.

Freshman Year	Fall Term	Credit Hours
PSY 101	Orientation	1
ENG 101	Composition	3
SS 101	Sociology	4
BIO 201	Zoology	4
CEM 111	General Chemistry	5
PE 101	Physical Education	1
		18
Winter Term		
ENG 102	Composition	3
SS 102	Economics	4
BIO 202	Zoology	4
CEM 112	General Chemistry	5
PE 102	Physical Education	1
		17
Spring Term		
ENG 103	Composition	3
SS 103	Political Science	4
BIO 203	Botany	4
CEM 113	Qualitative Analysis	5
PE 103	Physical Education	1
		17

Sophomore Year	Fall Term	Credit Hours
PHY 201	Physics	4
CEM 201	Organic Chemistry	5
HUM 201	Western Civilization	4
		4-5
		17-18
Winter Term		
PHY 202	Physics	4
CEM 202	Organic Chemistry	5
HUM 202	Western Civilization	4
		4-5
		17-18
Spring Term		
PHY 203	Physics	4
CEM 221	Quantitative Analysis	5
HUM 203	Western Civilization	4
		4-5
		17-18

Pre-Mortuary Science

The Michigan State Board of Mortuary Science requires that a licensed mortician:

1. Complete 90 term hours of instruction at a recognized community college, four-year college or university.
2. Graduate from a nine-month course at an approved college of mortuary science.
3. Complete one year of resident training under the supervision of a licensed mortician.
4. Be 21 years of age, a resident of Michigan, a citizen of the United States, and of good moral character.

Freshman Year	Fall Term	Credit Hours
PSY 101	Orientation	1
SS 101	Sociology	4
CEM 101	Introduction to Chemistry	3
ENG 101	Composition	3
PE 101	Physical Education	1
		3
		15
Winter Term		
ENG 102	Composition	3
SS 102	Economics	4
CEM 102	Introduction to Chemistry	3
MTH 102	Intermediate Algebra	5
PE 102	Physical Education	1
		16
Spring Term		
ENG 103	Composition	3
SS 103	Political Science	4
CEM 103	Introduction to Chemistry	3
PE 103	Physical Education	1
		4
		15

Sophomore Year	Fall Term	Credit Hours
PSY 201	Psychology	4
BIO 201	Zoology	4
		8
		16
Winter Term		
PSY 202	Psychology of Personality	3
BIO 202	Zoology	4
		8-8
		15
Spring Term		
ENG 104	Speech	3
PSY 203	Social Psychology	3
		8
		14

Recommended Electives:  
 Accounting  
 Humanities  
 Social Sciences  
 Science  
 Mathematics

Arts and Sciences

Arts and Sciences

Pre-Nursing

For Students Planning to Transfer to Wayne State University

Students at Lansing Community College who wish to enter the College of Nursing, Wayne State University, may transfer the following courses. All students should contact a counselor at Wayne State University College of Nursing as early as possible, and must do so before completing a year of study.

Freshman Year	Fall Term	Credit Hours	Freshman Year	Winter Term	Credit Hours
ENG	101 Composition	3	ENG	102 Composition	3
CEM	111 Inorganic Chemistry	5	CEM	112 Inorganic Chemistry	5
SS	101 Sociology	4	SS	102 Economics	4
PSY	201 Intro. to Psychology	4		Social Science Elective	4
PSY	101 Orientation	1	PE	102 Physical Education	1
PE	101 Physical Education	1			17
		18			

Freshman Year	Spring Term	Credit Hours
ENG	103 Composition	3
CEM	113 Qualitative Analysis	5
SS	103 Political Science	4
	Electives	4
PE	103 Physical Education	1
		17

Pre-Nursing

For Students Planning to Transfer to Michigan State University

Students at Lansing Community College intending to enter the Michigan State University School of Nursing should consult a counselor there during the freshman year.

Freshman Year	Fall Term	Credit Hours	Freshman Year	Winter Term	Credit Hours
ENG	101 Composition	3	ENG	102 Composition	3
CEM	111 Inorganic Chemistry	5	CEM	112 Inorganic Chemistry	5
SS	101 Sociology	4	SS	102 Economics	4
NS	Natural Science	4	NS	Natural Science	4
PSY	101 Orientation	1	PE	102 Physical Education	1
PE	101 Physical Education	1			17
		18			

Freshman Year	Spring Term	Credit Hours
ENG	103 Composition	3
CEM	113 Qualitative Analysis	5
SS	103 Political Science	4
NS	Natural Science	4
PE	103 Physical Education	1
		17

Arts and Sciences

Pre-Nursing

For Students Planning to Transfer to the University of Michigan

Nursing students enrolled in clinical courses in the University Hospital during the third and fourth years receive a stipend of \$100.00 at the end of each month in recognition of the contribution of nursing students to the care of patients in the University Hospital. This arrangement begins with the second summer session and is exclusive of planned vacation periods and experience away from the medical center.

A student may be admitted to The University of Michigan School of Nursing upon successful completion of three terms of study, 45 term hours of credit, and will enter the University at the beginning of the first summer session.

Freshman Year	Fall Term	Credit Hours	Freshman Year	Winter Term	Credit Hours
PSY	101 Orientation	1	ENG	102 Composition	3
ENG	101 Composition	3	CEM	112 Inorganic Chemistry	5
CEM	111 Inorganic Chemistry	5	SS	102 Economics	4
SS	101 Sociology	4	PSY	202 Psychology of Personality	3
PSY	201 Psychology	4	PE	102 Physical Education	1
PE	101 Physical Education	1			16
		18			

Freshman Year	Spring Term	Credit Hours
ENG	103 Composition	3
CEM	113 Qualitative Analysis	5
SS	103 Political Science	4
PSY	203 Social Psychology	3
PE	103 Physical Education	1
		16

Pre-Optometry

A degree in optometry now requires five years of study. Some colleges require one year of general education and four years of specialized training. Others require two years of general education and three years of specialized training.

Students may take either the one or two years of general education at Lansing Community College. The curriculum selected here will depend upon the requirements of the college from which the student expects to earn his degree in Optometry.

Pre-Pharmacy

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG	101 Composition	3	CEM	201 Organic Chemistry	5
CEM	111 Inorganic Chemistry	5	PHY	201 Physics	4
PE	101 Physical Education	1	EC	201 Economics	3
PSY	101 Orientation	1	BIO	201 Zoology	4
MTH	164 College Algebra & Trig. I	5			16
		15			

Winter Term					
ENG	102 Composition	3	CEM	202 Organic Chemistry	5
CEM	112 Inorganic Chemistry	5	PHY	202 Physics	4
PE	102 Physical Education	1	EC	202 Economics	3
SS	101 Sociology	4	BIO	202 Zoology	4
MTH	165 College Algebra & Trig. II	5			16
		18			

Spring Term					
ENG	103 Composition	3	CEM	203 Organic Chemistry	5
CEM	113 Qualitative Analysis	5	PHY	203 Physics	4
PE	103 Physical Education	1	EC	203 Economics	3
	Elective	3	SS	103 Political Science	4
		12	BIO	203 Botany	4
					20

**Arts and Sciences**

**Pre-Physical Therapy**

This curriculum is designed for the student who wishes to transfer to the College of Literature, Science and Arts at the University of Michigan. Requirements are quite detailed and the student should consult the catalog of the Literary College for further information.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	SS 101	Sociology	4
CEM 111	Inorganic Chemistry	5	CEM 201	Organic Chemistry	5
MTH 164	College Algebra & Trig. I	5	PSY 201	Intro. to Psychology	4
	Foreign Language	4	BIO 201	Zoology	4
PE 101	Physical Education	1			17
PSY 101	Orientation	1			
		19			
	<b>Winter Term</b>				
ENG 102	Composition	3	SS 102	Economics	4
CEM 112	Inorganic Chemistry	5	CEM 202	Organic Chemistry	5
MTH 165	College Algebra & Trig. II	5	BIO 202	Zoology	4
	Foreign Language	4		Elective	3
PE 102	Physical Education	1			16
		18			
	<b>Spring Term</b>				
ENG 103	Composition	3	SS 103	Political Science	4
CEM 113	Qualitative Analysis	5	CEM 203	Quantitative Analysis Organic Chem.	5
	Foreign Language	4	PSY 203	Social Psychology	3
PE 103	Physical Education	1	BIO 203	Botany	4
		13		Elective	3
					19

**Social Work Curriculum**

The growing complexity of community problems which are distinctly social in nature has created a need for more well informed citizens who are able to cope with these difficulties. The need for professional and non-professional leaders who understand the problem areas of youth, labor and management, domestic relations, less privileged groups, and racial tension is apparent in almost every community.

Professional career opportunities in both government and private social welfare are increasing in number. Openings in most areas far exceed the supply of trained workers in the field. The suggested curriculum for social work follows, but the student should check the specific requirements of the school of social work he intends to enter and adjust the curriculum to meet his transfer requirements.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
PSY 101	Orientation	1	HUM 201	Western Civilization I	4
ENG 101	Composition	3	NS 101	Botany-Zoology	4
SS 101	Sociology	4	MTH 160	Statistics	5
	Foreign Language	4		Elective	3
	Elective	3			16
		15			
	<b>Winter Term</b>				
ENG 102	Composition	3	HUM 202	Western Civilization II	4
SS 102	Economics	4	NS 102	Chemistry-Physics	4
PSY 201	Introduction to Psychology	4		Electives	6
	Foreign Language	4			14
		15			
	<b>Spring Term</b>				
ENG 103	Composition	3	HUM 203	Western Civilization III	4
SS 103	Political Science	4	NS 103	Astronomy-Geology	4
PSY 202	Psychology of Personality	4		Electives	7
	Foreign Language	4			15
	Elective	3			
		18			

**Recommended Electives**

(Humanities)	(Social Science)	(Natural Science)	(Other)
ENG 201, 202, 203	PSY 203	BIO 107, 108, 109	BUS 101, 104, 118
ART 130	SS 270	BIO 201, 202, 203	SPH 104, 105
HST 111, 112, 113	GEO 201, 203	ANT 201, 202	*2nd year foreign language
Philosophy	EC 201, 202, 203	MTH 164, 165	
MUS 250	Political Science		

\*OPTION: 1. Completion of two years of a foreign language or  
2. Completion of one year of a foreign language and a minimum of nine credits in courses dealing with one foreign area.

**Arts and Sciences**

**Pre-Teaching**

*Elementary*

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
SS 101	Sociology	4	PSY 201	Intro. to Psychology	4
NS	Natural Science	4	ENG 201	Intro. to Literature	3
GEO 201	World Reg. Geo.	3	ENG 230	Intro. to Eng. Linguist.	3
PSY 101	Orientation	1		Elective	3
PE 101	Physical Education	1			17
		16			
	<b>Winter Term</b>				
ENG 102	Composition	3	HUM 202	Western Civilization	4
SS 102	Economics	4	PSY 204	Educational Psychology	3
NS	Natural Science	4	ENG 250	Masterpieces of Amer. Lit.	3
SPH 104	Fund. of Speech	3	FPS 212	Foundation of Physical Science	4
PE 102	Physical Education	1			14
		15			
	<b>Spring Term</b>				
ENG 103	Composition	3	HUM 203	Western Civilization	4
SS 103	Political Science	4	FBS 211	Foundations of Bio. Science	4
NS	Natural Science	4		Electives	6
MTH 200A	Arith. Foundations	4			14
PE 103	Physical Education	1			
		16			

**Recommended Electives**

Electives should be determined by one's major and minors (2) and may be selected from the following disciplines:

- |                        |                 |
|------------------------|-----------------|
| Biological Sciences    | Social Sciences |
| Physical Sciences      | Humanities      |
| Mathematics 200B, 200C | Language Arts   |

**Pre-Teaching**

*Secondary*

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
SS 101	Sociology	4	NS	Natural Science	4
PE 101	Physical Education	1	PSY 201	Introduction to Psychology	4
	Electives	8		Electives	4
		16			16
	<b>Winter Term</b>				
ENG 102	Composition	3	HUM 202	Western Civilization	4
SS 102	Economics	4	NS	Natural Science	4
PE 102	Physical Education	1	PSY 204	Educational Psychology	3
	Electives	8		Electives	5
		16			16
	<b>Spring Term</b>				
ENG 103	Composition	3	HUM 203	Western Civilization	4
SS 103	Political Science	4	NS	Natural Science	4
PE 103	Physical Education	1		Electives	8
	Electives	8			16
		16			

**Arts and Sciences**

**Electives**

Electives should be determined by the requirements of the department of the four-year college where the student expects to transfer. He should be aware that many colleges or universities require a full year of a foreign language for graduation.

The electives should be selected from the following disciplines:

Biology	Foreign Language	Music
Chemistry	Geography	Philosophy
Economics	Literature	Physics
English Language	Mathematics	Psychology

**Pre-Theological Curriculum**

To meet requirements for entrance into an accredited theological school, a student must complete a four-year program of study leading to the bachelor's degree. The American Association of Theological Schools recommends that the bachelor's program include work in each of these fields: English, philosophy, Bible and religion, history, natural sciences, social sciences, and foreign language.

A candidate for the ministry may appropriately major in one of several academic areas. A major and at least one minor in these areas is especially encouraged: English, history, philosophy, religion, sociology, psychology. Serious consideration should be given to starting the study of Greek language in college.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	HUM 201	Western Civilization	4
NS	Natural Science	4	PHL 201	Philosophy	3
SS 101	Social Science	4	SPH 104	Fundamentals of Speech	3
HST 111	American History	3	PSY 201	Introduction to Psychology	4
PSY 101	Orientation	1	REL 150	Comparative Religions	3
PE 101	Physical Education	1			17
		16			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 102	Composition	3	HUM 202	Western Civilization	4
NS	Natural Science	4	PHL 202	Philosophy	3
SS 102	Economics	4	SPH 105	Voice and Articulation	3
HST 112	American History	3	SS 220	Juvenile Delinquency	3
PE 102	Physical Education	1	PSY 202	Psychology of Personality	3
		15			16
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 103	Composition	3	HUM 203	Western Civilization	4
NS	Natural Science	4	PHL 203	Philosophy	3
SS 103	Political Science	4	SPH 201	Inter Reading	3
HST 113	American History	3	SS 270	Intro. to Anthro.	3
PE 103	Physical Education	1	PSY 203	Social Psychology	3
		15			16



**Pre-Veterinary Science**

Freshman Year	Fall Term	Credit Hours
ENG 103	Composition	3
SS 101	Sociology	4
CEM 111	Inorganic Chemistry	5
NS	Natural Science	4
PE 101	Physical Education	1
PSY 101	Orientation	1
		18
	<b>Winter Term</b>	
ENG 102	Composition	3
CEM 112	Inorganic Chemistry	5
NS	Natural Science	4
PE 102	Physical Education	1
MTH 180	College Algebra & Trig.	5
		18
	<b>Spring Term</b>	
ENG 103	Composition	3
CEM 113	Qualitative Analysis	5
NS	Natural Science	4
SS 102	Economics	4
PE 103	Physical Education	1
		17

Sophomore Year	Fall Term	Credit Hours
HUM 201	Western Civilization	4
CEM 201	Organic Chemistry	5
PHY 201	Physics	4
BIO 201	Zoology	4
		17
	<b>Winter Term</b>	
HUM 202	Western Civilization	4
CEM 202	Organic Chemistry	5
PHY 202	Physics	4
BIO 202	Zoology	4
		17
	<b>Spring Term</b>	
HUM 203	Western Civilization	4
PHY 203	Physics	4
SS 103	Political Science	4
Electives		3
		15

**Arts and Sciences**

**General Studies Program**

The General Studies Program is a one term course in which the student can adequately prepare himself for college level work. Future college placement will be dependent upon progress made in this program.

**General Studies Curriculum**

*Basic Program*

Course Number	Course Title	Credit Hours
ENG 009	General Studies English	4
ENG 019	General Studies Reading	4
*MTH 009	Basic Arithmetic	4
	OR	
*MTH 011	Beginning Algebra	5
	OR	
*MTH 012	Beginning Algebra Lab.	5
PSY 120	Individual Appraisal	1
PE 101	Physical Education	1
		14-15

\* Student will be placed in one mathematics class depending upon high school mathematics courses completed, grades received, and mathematics test scores.





Mrs. Bouterse

### Department of Health Sciences

Department Chairman: GLORIA BOUTERSE

#### Suggested programs of Study

These programs of study are intended to guide the student in his selection of courses at the College. Ample opportunity will be allowed for individualized programs to fit the specific requirements of the senior college or university of the student's choice when the course work involved requires study beyond that offered here. Every student planning to transfer to a four-year institution should be familiar with the requirements of the school to which he plans to transfer.

#### Health Sciences Associate Degree Nursing Program

This nursing program provides a means of correlating the philosophy and standards of nursing education with those of general education. The program is complete for its own purpose and is not equivalent to the first two years of a baccalaureate program.

Classes for men and women begin in September of each year and are offered on a full time basis.

Clinical experience is given at Ingham Medical Hospital, Edward W. Sparrow Hospital and St. Lawrence Hospital.

Students will meet the requirements of the college as well as the nursing division for admission, continuation, and graduation.



First Year		Credits
Fall Term		
Chemistry 101	3	
Anatomy/Physiology 201	4	
Psychology 201	4	
Nursing Education I	5	
		16

Spring Term		Credits
Chemistry 103	3	
Microbiology 203	4	
Psychology 203	3	
Nursing Education III	5	
		15

Second Year		Credits
Fall Term		
English 102	3	
Social Science 103	4	
Nursing Education V	10	
		17

Spring Term		Credits
Nursing Education VII	5	
Nursing Education VIII	10	
		15

Winter Term		Credits
Chemistry 102	3	
Anatomy/Physiology 202	4	
Psychology 202	3	
Nursing Education II	5	
		15

Summer Term		Credits
English 101	3	
Social Science 101	4	
Nursing Education IV	5	
		12

Winter Term		Credits
English 103	3	
Speech 104	3	
Nursing Education VI	10	
		16

General Education	51
Nursing Education	55
<b>Total Credits</b>	<b>106</b>

#### Dental Hygiene

Students interested in transfer to the University of Michigan in this curriculum must satisfy the distribution requirements of the College of Literature, Science and Arts before being admitted to the School of Dentistry. The applicant who has not completed one year of high school chemistry must take one year in college. Typing and bookkeeping are not required prior to acceptance, but it is suggested that all students acquire these skills either in high school or during the summer term. It is required that the candidate have some experience as an assistant before acceptance by most Schools of Dentistry. Course offered in Michigan at the University of Detroit and the University of Michigan.

Freshman Year		Credit Hours
Fall Term		
ENG 101 Composition	3	
BIO 201 Zoology	4	
Foreign Language	4	
SS 101 Sociology	4	
PSY 101 Orientation	1	
PE 101 Physical Education	1	
		17

Winter Term		Credit Hours
ENG 102 Composition	3	
BIO 202 Zoology	4	
Foreign Language	4	
SS 102 Economics	4	
PE 102 Physical Education	1	
		16

Spring Term		Credit Hours
ENG 103 Composition	3	
BIO 203 Botany	4	
SS 103 Political Science	4	
Foreign Language	4	
PE 103 Physical Education	1	
		16

Sophomore Year		Credit Hours
Fall Term		
PSY 201 Introduction to Psychology	4	
Foreign Language	3	
ENG 201 Literature	3	
CEM 111 Chemistry (Inorganic)	5	
		15

Winter Term		Credit Hours
ENG 202 Literature	3	
CEM 112 Chemistry (Inorganic)	5	
Foreign Language	3	
SPH 104 Speech Fundamentals	3	
Elective	3	
		17

Spring Term		Credit Hours
ENG 203 Literature	3	
CEM 113 Qualitative Analysis	5	
Foreign Language	3	
PSY 203 Human Relations	3	
		14



**Health Sciences Dental Assistant**

The one year curriculum for dental assistant combines business and science courses. It is designed to help the student develop skills necessary to assist the dentist in his office management and with chairside assistance.

After completing the three terms of course and laboratory work at Lansing Community College, and two years of employment in a dentist office, the student may apply for a Certified Dental Assistant rating. The student will receive the Certificate after passing the examination conducted by the Certifying Board of the American Dental Assistant Association.

**Course Requirements**

Prerequisite for Bus. 101 is one year of high school typing or Bus. 011.

Fall Term		Cr. Hrs.	Spring Term		Cr. Hrs.
ENG 101	Composition	3	BUS 101	Intern. Typing	3
BUS 110	Applied Acct. I	4	BUS 117	Bus. Mathematics	3
BUS 220	Office Mgt. I	3	BUS 204	Bus. Correspondence	3
DS 101	Dental Science I	5	SS 101	Sociology	4
		15	DS 103	Dental Science III	4
					17
Winter Term					
ENG 102	Composition	3			
MIC 100	Microbiology	3			
SPH 104	Fund. of Speech	3			
DS 102	Dental Science II	5			
		14			

**Occupational Therapy**

Students who plan to follow this curriculum should consult the catalogs of Eastern Michigan University, Wayne State University, or Western Michigan University for detailed information concerning course requirements. The specific nature of some of the course work in the second year makes it impossible for a student to complete all of his sophomore year at Lansing Community College.

Freshman Year	Fall Term	Credits	Freshman Year	Spring Term	Credits
ENG 101	Composition	3	ENG 103	Composition	3
BIO 201	Zoology	4	BIO 203	Botany	4
SS 101	Sociology	4	SS 103	Political Science	4
PSY 101	Orientation	1	NS 103	Astronomy-Geology	4
PE 101	Physical Education	1	PE 103	Physical Education	1
SPH 104	Speech Fundamentals	3			16
		16			
Freshman Year	Winter Term	Credits			
ENG 102	Composition	3			
BIO 202	Zoology	4			
SS 102	Economics	4			
PE 102	Physical Education	1			
NS 102	Chem-Physics	4			
		16			

**Practical Nursing**

Lansing Community College is one of twenty-seven schools in the state of Michigan, sanctioned by the Michigan Board of Nursing, to prepare men and women for careers in Practical Nursing.

This is a one-year program designed to give the student one term of classroom and laboratory instruction, followed by three terms of clinical work in affiliated hospitals.

New classes begin in April and September of each year, and are offered on a full time, daytime basis only.

Students must meet the requirements of the College as well as the Practical Nursing Department for admission, continuation, and graduation.

1st Term		Credit Hours	2nd Term		Credit Hours
PN 600	Nursing Theory	3	PN 612	Fundamentals of Nursing	6
PN 602	Anatomy and Physiology	4	PN 622	Nursing Skills II	6
PN 604	Human Growth and Development	4			
PN 606	Nutrition	2	3rd Term		
PN 608	Community Health	1	PN 616	Medical-Surgical Nursing	6
PN 610	Vocational Relations	1	PN 624	Nursing Skills III	6
PSY 101	Psychology	1			
PN 618	Nursing Skills I	3	4th Term		
			PN 614	Maternity-Child Nursing	6
			PN 626	Nursing Skills IV	6

Students receive graduate pins and Certificates of Achievement upon satisfactory completion of the program, and are eligible to write the State Board Examination for Practical Nurse licensure. For more complete and detailed information, write or telephone for the Practical Nursing brochure, Admissions Office, Lansing Community College, 419 N. Capitol, Lansing, Michigan 48914. Telephone, 489-3751, ext. 211.

**Professional Nursing**

**Affiliated Nursing Program**

Advances in medical and social sciences have so broadened the field of nursing that the graduate nurse now finds it necessary to include an increasing amount of general education courses in her pre-professional curriculum. The National League of Nursing recommends courses in the areas of English, social and natural sciences, and mathematics.

The nursing program at the Mercy School of Nursing requires attendance at the College for the following courses:

	Credit Hours		Credit Hours
English 101, 102, 103	9	Social Science	4
Anatomy 201, 202	8	Psychology 101	1
Microbiology 203	4		
Physiological Chemistry 106-107-108	9	Term Hours	35

**X-Ray Technician**

**Affiliated Program**

This 24-month course is given in cooperation with the Edward W. Sparrow Hospital. Students selected by the hospital may be enrolled at the College for appropriate class work.

The curriculum follows that recommended by the American Society of X-ray Technicians. Students who complete the program are eligible for examination by the American Registry of X-ray Technicians. Students wishing to enter the program must apply to Dr. W. D. Cheney, M.D., Radiologist at the Edward W. Sparrow Hospital, Lansing, Michigan.



Painting by Glennis Peterson

*Department of Humanities*  
 Department Chairman: DAVID ARGANIAN



David Arganian

**Art**

- 101 Drawing I** Three credits  
 A basic approach in the uses of the mind, eye, hand and drawing tool. Life drawing and still life using the charcoal medium.
- 102 Drawing II** Three credits  
 Continuation and expansion of Drawing I, according to individual student's requirement.
- 103 Drawing III** Three credits  
 Continuation of Drawing II.
- 201 Painting I** Three credits  
 Beginning exercises to attain good habits and a basis of approach to painting in oil and water color mediums. Students advance on an individual basis. Preliminary to the commercial or fine arts field.
- 202 Painting II** Three credits  
 Continuation of Painting I. Each student advances according to his individual requirements, and seeks to recognize his approach to painting by acquiring new skills.

- 203 Painting III** Three credits Humanities  
 An expansion of acquired information and skills found in Painting I and II.
- 220 Sculpture I** Three credits  
 Basic work in three dimension, including introduction to the various tools, techniques and methods of the sculptor. Original projects will be done in both modeling and carving, using several materials.
- 221 Sculpture II** Three credits  
 Continuation of Art 220 with individual projects which further explore sculpture possibilities. A major emphasis on the human figure and anatomy.
- 222 Sculpture III** Three credits  
 Advanced projects in special interests and in larger sculptures using professional techniques. May follow realistic or modern lines, and may include experimentation with new materials or advanced work with the human figure.
- 130 Art Appreciation** Three credits  
 Study of notable examples of art with emphasis on enjoyment and understanding of painting, sculpture, and architecture and increasing the student's visual perception of works of art. No prerequisite.
- 150 History of Art I** Three credits  
 Study of architecture, painting and sculpture in Egypt, the Middle East and Europe from ancient times until 1600. Slide lectures and museum excursions. Art 130 recommended.
- 151 History of Art II** Three credits  
 Study of architecture, painting and sculpture in Italy, the low countries, France, Germany, Spain, England and America during the Baroque and Rococo periods, and in the nineteenth and twentieth centuries. Slide lectures and museum excursions. Prerequisite: Art 150.
- 250 Advanced Sculpture—Credit arranged.**  
 Continuation of Art 222 for students with special skills who desire to continue work in advanced techniques. Enrollment by permission of instructor who will assign credit. Prerequisite: Art 222.
- 240 Advanced Painting—Credit arranged.**  
 Continuation of Art 203 for students with special skills desiring to continue work in advanced techniques. Enrollment by permission of the instructor who will assign credit. Prerequisite: Art 203.
- 275 Commercial Art and Design** Three credits  
 Introduction to commercial art and design, stressing color theory, with added assignments designed around individual needs.
- 300 Life Drawing** Three credits  
 Advanced work to develop skill in drawing, understanding, and interpreting the human figure in both two and three dimensional materials.

**Humanities History**

**104 Recent European History** **Three credits**  
 Study of contemporary European history in its world setting, stressing most recent political, military, and diplomatic events of international significance. Summer only.

**111 American History I** **Three credits**  
 First of series of three courses designed for the study of growth and development of the United States. Traces the extension of European civilization to America, severance of European ties and the beginning of American nationalism.

**112 American History II** **Three credits**  
 Continuation of History 111. Deals with strengthening of United States nationalism, slavery and Manifest Destiny, the preservation of the Union, and the rise of agrarian and urban conflicts. Prerequisite: History 111 or approval of department.

**113 American History III** **Three credits**  
 Continuation of History 112. The United States as a world power, the experiment with imperialism, the progressive era, world conflict, the growing regulation of domestic economy, and the global war. Prerequisite: History 111 and 112 or approval of department.

*X* **201 Western Civilization I** **Four credits**  
 First of a series of three courses designed for study of cultural foundations of Western man. Traces the political, economic, legal, religious, philosophic, and artistic patterns of the Mesopotamian, Egyptian, Hellenic, and Roman civilizations. Surveys the Christian foundations, Byzantine and Saracenic influences, and early feudal culture of medieval Europe.

*X* **202 Western Civilization II** **Four credits**  
 Continuation of History 201. History of Europe from the late medieval period, through the Renaissance and Reformation and Napoleonic era. Concerned primarily with development of ideas and ideals, commercial and intellectual revolutions of early modern times, effects of absolutism upon modern man, and the beginnings of modern forces in economics, philosophy, literature, and art. Prerequisite: History 201 or approval of department.

*X* **203 Western Civilization III** **Four credits**  
 Continuation of History 202, dealing specifically with modern and contemporary developments in the civilization of Western man; the effects of democracy, nationalism, and industrialism upon his culture; the World Wars; and the contemporary culture in relation to science, philosophy, literature, art, and music. Prerequisite: History 202 or approval of department.

**290 Seminar: Foreign Studies (Variable credit)**  
 To strengthen and deepen the student's cross-cultural experience. Program combines research and travel. Students study individually under guidance of faculty advisor. A library research project is combined with foreign travel and final report is prepared which incorporates these experiences.



Dr. Machtel

**Music**

**101, 102, 103, 201, 202, 203 Choir (The Lansingers)** **One credit**  
 A cappella choir

A class for men and women designed to interest those students who would enjoy the pleasure of singing the best in A capella literature, as well as music in the lighter vein with piano accompaniment. Ability to sing a familiar melody in tune with a pleasing tone is the only prerequisite for the course. The number in the ensemble is limited to a balance of 60 voices. Three class hours.

*X* **104, 105, 106, 204, 205, 206 Glee Club-Men** **One credit**  
 For those who love to sing. Designed for the study, expression, and performance of the finest in glee club music. No previous experience is necessary, as the course integrates the needed musical and vocal knowledge in its rehearsals. Class limited to 60 voices. Two class hours.

**114, 115, 116, 214, 215, 216 Glee Club-Women** **One credit**  
 Course description same as Glee Club-Men. Two class hours.

**Humanities**

**Humanities**

**120, 121, 122 Tudor Singers**

**One credit**

A select group of musically and vocally talented students interested in singing Madrigal Music of the 14th through the 18th centuries. Enrollment by invitation only. Members must also be enrolled in the Lansingers. Two class hours.

★ **130, 131, 132, 230, 231, 232 Class Voice**

**Two credits**

Class instruction for those singers and speakers interested in knowing the principles of voice production and technique as applied to solo singing and choral tone. No previous vocal training required. Soloists for major music programs given by the Music Department are selected from this class. The limit in this class is 20.

★ **140, 141, 142, 240, 241, 242 The LanSing "Steinmen"**

**One credit**

This group is limited to 12 members; membership is by invitation only. The course specializes in the performance of that light type of music sung by students when exams are over and spirits soar high. In their costumes they represent the Old Heidelberg University men as depicted in Romberg's "Student Prince." Bawdy ballads, drinking songs, college songs amid festive atmosphere and narration furnish the continuity for the appearances of this choice group of singers.

**150, 151, 152, 250, 251, 252 The LanSing TroubaDears  
(Girls' Barbershop Quartet)**

**One credit**

Membership in this girls' quartet is by invitation. Its members adhere to the qualities of the National Barbershop Organization of S.P.E.B.S.Q.S.A. The repertoire of the close harmony nature, requiring excellent hearing and rhythmic perception.

**160, 161, 162, 260, 261, 262 LanSymphonic Choir**

**One credit**

This civic choir is the official choir of the Lansing Symphony Orchestra, performing with it in at least two performances each season. It is sponsored by the Lansing Symphony Association and Lansing Community College.

Its purpose is to learn and perform the great choral works of the masters, which have been composed specifically for chorus and orchestra. Membership is limited to a balanced 80 mixed voices. Entrance to the choir is by audition and invitation. The course is run on a 3-term basis and offers one credit per term for those who qualify. There is a \$5.00 per year music fee to cover the cost of the music performed. Within the 80 voice chorus is a 40 voice chorus, chosen groups of singers who qualify as soloists and have the ability to pass a standard musical theory examination. The soloists for the various productions are chosen from this group.

**170, 171, 172, 270, 271, 272 The LanSing Lads  
(Mens' Barbershop Quartet)**

**One credit**

An invitational group of four men whose efforts are given to top flight barbershop harmonies. Also fostering the spirit of S.P.E.B.S.Q.S.A., they promote all that is good in this different type of song.

**250 Music Appreciation**

**Three credits**

For the non-professional who seeks to enjoy music perceptively as a fine art. Introduction to the elements of music followed by a study of representative instrumental and vocal works of past 300 years. Lectures, records, and demonstrations will be used to illustrate musical ideas and to assist in promoting good listening habits.

**Applied Music**

*All Music Lessons:* Students are registered for the entire semester. The student should arrange with the teacher for a conference before registering for lessons. Lessons consist of two half hour sessions per week, time to be agreed upon by student and teacher. Voice students who plan concentrated vocal study should be aware that some piano knowledge is necessary for all major Music School courses.

*Fees:* Students enrolling for courses under applied music will pay the regular course fee per credit hour, through the College Business Office. Applied music fees for music lessons, however, are paid directly to the instructor. The following fee schedule is applicable:

Dr. David Machtel: \$6.00 per one-half hour lesson, \$132.00 per term.  
Mrs. Wanda Richards: \$3.50 per one-half hour lesson, \$77.00 per term.

**Voice. Instructor: Dr. David Machtel**

*Elective:* Open to all students of Lansing Community College who wish to take vocal training to improve their singing or speaking voices. Student will be examined at the end of each semester. Instructor will outline the student's work according to his needs or aims.

*Secondary:* This classification will include student whose major interest is in another field of music and whose purpose in studying is to develop a better singing voice. Song repertoire studied will be in English and Italian.

*Major:* For voice students who show evidence of outstanding voice, good ear, musical intelligence and pleasing personality. Song literature in Italian, French and German, as well as English, will be studied. Definite standards of vocal proficiency are to be met. Appearance in recitals is a part of the course.

*Repertoire Requirements for all Voice Students:* In general, the amount of required repertoire for each semester will depend upon the number of credits. For two credits in Elective Voice, six new songs will be learned with musical accuracy, three to be sung from memory. For two credits in Secondary Voice, eight new songs will be learned with musical accuracy, four to be memorized, one of the four to be sung in Italian. For four credits in Major Voice, twelve new songs must be learned with musical accuracy, eight of these to be memorized. Memory songs will be two French, two Italian, two German and two English.

**Piano. Instructor: Mrs. Wanda Richards**

*Elective:* This course is open to all students, both beginners and those more advanced. Requirements are necessarily flexible, designed to meet the needs and aims of the student.

*Secondary:* Designed to give the student a greater proficiency in piano, this course covers major and minor scales, major and minor arpeggios, dominant and diminished sevenths, and selections from the classic, romantic and modern masters.

*Major:* For students who show talent for solo performance. Repertoire will include more advanced selections from the classic, romantic and modern masters. Technique will involve scales in rhythms, contrary motion, tenths, sixths and thirds.

**Humanities**



**Humanities Philosophy**

**201 Survey of Western Philosophy I** **Three credits**  
 First of series of three courses dealing with the philosophies of Western Man. Surveys major problems and historical periods in western philosophy. Designed around integrated readings in problem areas of philosophy and their relation to the historical contexts in which they occur. Emphasizes philosophies of Greece and Rome.

**202 Survey of Western Philosophy II** **Three credits**  
 Continuation of Philosophy 201. Devotes special attention to the philosophies of the Medieval, Renaissance, and Early Modern Periods. Prerequisite: Philosophy 201.

**203 Survey of Western Philosophy III** **Three credits**  
 Continuation of Philosophy 202. Devotes special attention to the philosophies of the eighteenth, nineteenth and twentieth centuries. Prerequisite: Philosophy 202.

**Religion**

**150 Comparative Religions** **Three credits**  
 Survey of the great religions of the world, with emphasis on understanding their role in the historical development of man and society and comparing their influence in contemporary culture.



*Department of Language Arts*

*Department Chairman: R. HUGH SCHRAM*

**Language Arts**

**ENGLISH**

An entrance examination in English for all entering students is required. Students who fail to make a satisfactory score on the examination will be expected to take English Review as a prerequisite to entrance into the standard freshman English course.

**009 General Studies English** **No credit**  
 For students whose previous academic performance makes admission to college credit courses inadvisable. Concerned with grammar, sentence structure, vocabulary building, and short writing assignments. Upon completion of this course, the student may take English 101 only on the recommendation of his instructor. Three hours lecture, one laboratory.

**011 English Review** **No credit**  
 Corrects basic weaknesses in grammar and composition. A review of grammar with concentration on sentence structure, vocabulary building, paragraph organization, short writing assignments and selected readings. Special attention given to problems of individual students. Upon completion of this course, the student may take English 101 only on the recommendation of his instructor. Three hours lecture, one laboratory.

**019 General Studies Reading** **No credit**  
 Companion course to English 009, for students whose previous academic performance makes admission to college credit courses inadvisable. A reading improvement course, with emphasis on reading rate and comprehension. Three hours lecture, one laboratory.

**021 Reading Improvement** **No credit**  
 For students who wish to improve their reading ability. Emphasis on reading rate and comprehension. Any student, except one who is in the General Studies Program, may take this course. The student who takes English 011 is advised to take English 021 at the same time. Three hours lecture, one laboratory.

**100 Communication** **Three credits**  
 Designed primarily for students entering the one year certificate programs in business. Purpose is to give student general knowledge and skill in aspects of communication deemed necessary for successful employment in business. Includes review of English fundamentals, writing short themes, and some experience in oral communication, with emphasis on writing for business.

**101 Composition** **Three credits**  
 For developing skill in reading, analyzing, and evaluating expository prose. Teaches student to organize ideas and communicate those ideas clearly and cogently in weekly papers. Student is introduced to the resources of the library through various reading and writing assignments. Prerequisite: satisfactory score on the English placement test.

**102 Composition** **Three credits**  
 Continuation of English 101. Special attention given to careful reading of works in prose fiction, especially the short story, upon which the writing of weekly essays is based. Writing of one student essay each week. Prerequisite: English 101.



*Hugh Schram*

## Language Arts

## 103 Composition

Three credits

Devoted to the research or term paper. Includes introduction to principles of argumentation and various research techniques: notes, use of library resources, and organization and documentation of argumentative paper of approximately 3,000 words. Prerequisite: English 101 and 102.

## 201 Introduction to Literature: Poetry

Three credits

Designed to help student understand and appreciate the form and content of narrative and lyric poetry. Includes discussion of nature, language, and content of poetry, with emphasis on learning to read this literary form intelligently. Prepares the student for advanced literary study by acquainting him with literary conventions, providing him with critical vocabulary, and introducing him to experience of writing analytical and critical papers. Required for English majors and minors, and recommended for most students in pre-teaching. Open to freshmen.

## 202 Introduction to Literature: Drama

Three credits

Introduction to the drama as a literary form. Acquaints the student with six to nine plays representative of major dramatists of the western world. Some attention given to principles and theories of drama, with primary emphasis on the appreciation of plays by such writers as Sophocles, Aristophanes, Terence, Marlowe, Shakespeare, Moliere, Racine, Congreve, Ibsen, Chekhov, Synge, Shaw, O'Neill, Williams. Student is expected to write analytical and critical papers and scheduled examinations. Required for English majors and minors. Prerequisite: English 101.

## 203 Introduction to Literature: Prose

Three credits

Designed to introduce student to the epic in prose translation, the romance, the novel, and satire. Student will read some of the most representative selections of literature of the western world, including such works as *The Odyssey*, *Don Quixote*, *Candide*, *Gulliver's Travels*, *Joseph Andrews*, *Billy Budd*, *Lord Jim*, and *Babbitt*. Student is expected to write analytical and critical papers and scheduled examinations. Required for English majors and minors. Prerequisite: English 101.

## 210 The Nineteenth Century American Novel

Three credits

Intensive study of some of the major 19th century American novels from James Fenimore Cooper to Theodore Dreiser and Jack London. General orientation is on historical development of the novel form in America and the novelists' responses to and interpretation of the American scene from colonial times to 1900. In addition to the reading of six to eight novels, critical and analytical papers are required. Prerequisite: English 101 and 102, or approval by the department.

## 211 The Twentieth Century American Novel

Three credits

Intensive study of some of the major American novels of this century and of the environments (general or specific) which influenced their writing. Student will read novels by such authors as Anderson, Faulkner, Hemingway, Salinger, and Steinbeck. In addition to the reading of six to eight novels, critical and analytical papers are required. Prerequisite: English 101 and 102, or approval by the department.

## 212 The European Novel

Three credits

Intensive study of some of the major 19th or 20th century European novels, with attention given to their reflection of and influence upon the European scene and their contribution to the development of the genre. Writings of such authors as Dostoevski, Flaubert, Stendahl, Conrad, Joyce, and Camus will be read. In addition to the reading of six to eight novels, critical and analytical papers are required. Prerequisite: English 101 and 102, or approval by the department.

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## 230 Introduction to English Linguistics

Three credits

Designed to introduce the student to various aspects of the English language: grammatical structure, significant sounds, historical change, borrowing, and meaning. Prerequisite: English 101, 102, and 103. Required for most students in pre-elementary teaching.

## 231 Introduction to English Linguistics

Three credits

Continuation of English 230. Study of problems in linguistic analysis and the historical development of the English language. Prerequisite: English 230.

## 250 Masterpieces of American Literature

Three credits

Designed to acquaint the student with some of the masterpieces of great American writers. Emphasis on essays of Emerson and Thoreau, poetry of Whitman, Sandburg, Dickinson and Frost, including works of Hawthorne, Melville, James, Steinbeck and Hemingway. The student is expected to write analytical and critical papers and scheduled examinations. Required for most students in pre-elementary teaching. Prerequisite: English 101.

## 271 Advanced Writing

Three credits

Designed to help the student learn the art and techniques of writing essays, narrative fiction, and poetry. Emphasis on reading of original student work in class to evoke constructive criticism from other students. Student is encouraged to write as much and as well as possible in whatever area he chooses. The class provides an interested and sympathetic audience for creative efforts. Organized to encourage self-criticism as well as criticism from other students and the instructor. No quizzes or examinations. Prerequisite: Approval of the department by submission of an original manuscript.

## 290 Shakespeare

Three credits

Introductory course in the dramatic works of William Shakespeare. Student will read six to nine plays representative of the author's comedies, histories, and tragedies and representative of his early, middle, and late periods. Some attention given to the social and literary background of the Elizabethan world, but primary emphasis is on the plays. Student is expected to write analytical and critical papers and scheduled examinations. Prerequisite: English 202 or approval of the department.

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**Language Arts FOREIGN LANGUAGES**

Students enrolling in a foreign language course must complete three terms of college work to receive credit.

Advanced placement may be arranged for those students who have satisfactorily completed two or more years of a language in high school. Proficiency tests will be given when there is a question concerning the student's level of accomplishment.

**101, 102, 103 Elementary French****Four credits**

Three-term sequence of elementary French designed to teach pronunciation, vocabulary, conversation, and reading from graded texts. Emphasis is given to the oral-aural approach, but the development of the skills of understanding, speaking, reading and writing has equal importance. Practice in mastery of the sound system, linguistic patterns, and grammatical structure of the language is afforded by a coordinated schedule of language laboratory sessions (using tapes of native speakers) and class recitations. Five one-hour class periods each week, plus additional work in the language laboratory. Prerequisite: for French 102, French 101; for French 103, French 102. Direct admission to 102 and 103 only under special conditions. Twelve hours needed for transfer.

**201, 202, 203 Intermediate French****Four credits**

Three-term sequence of intermediate French involving systematic review of syntactic patterns, conversation, and extensive reading of modern texts. Increasing emphasis is placed upon the oral and written use of the language, as well as the cultural background of the French land and people. Prerequisite: for French 101, 102, and 103; for French 202, French 201, etc. Completion of the elementary sequence and this sequence will fulfill the basic language requirements for liberal arts and associated curricula. Five hours lecture, one laboratory.

**101, 102, 103 Elementary Spanish****Four credits**

Three-term sequence of elementary Spanish based on audio-lingual techniques and emphasizing speech through pattern practice. Pronunciation problems will be handled by contrastive analysis and classroom work will be augmented by laboratory work with taped drills of native speakers. Classes meet one hour daily, but students should plan to spend an additional five hours a week in intensive laboratory work. Prerequisite: for Spanish 102, Spanish 101; for Spanish 103, Spanish 102. Twelve hours needed for transfer.

**201, 202, 203 Intermediate Spanish****Four credits**

Three-term sequence emphasizing oral-aural skills as well as reading and writing. Students are expected to converse in Spanish on assigned topics or informally and spontaneously. Laboratory work will be assigned as needed. Prerequisites: Students with a "C" average in the 101-102-103 sequence will be eligible; students with two years of high school Spanish and a grade of "B" from an accredited high school may be permitted to enter Spanish 201. Completion of the elementary and intermediate sequences will fulfill the basic language requirements for liberal arts and associated curricula.

**305 Spanish Composition****Three credits**

For students who have completed their elementary and intermediate Spanish sequences before the end of their sophomore year. Emphasis is on writing themes, letters, reports in the Spanish language. Some reading, but not of literary works. The student will write at least 400 words each week. Prerequisite: Spanish 203.

Mr. Sabido instructs  
language lab.

**SPEECH****104 Principles of Speech****Three credits**

Introductory course in speech. Study and application of basic principles underlying effective oral communication. Student makes seven speeches during the term. Open to freshmen.

**105 Voice and Articulation****Three credits**

The theory and practice of effective voice production and precise diction. Emphasis on understanding the speech organs and their operation and on applying successful techniques to make the best use of the instruments of speech. Weekly sessions devoted to work in speech laboratory. Prerequisite: Speech 104.

**201 Interpretive Reading****Three credits**

Designed to introduce student to techniques of giving meaning to the oral presentation of literature and communication to an audience through the use of specific skills of voice and gesture. Primary attention is given to selection, preparation, and delivery of literary material. Required for speech majors. Open to freshmen.

**202 Conversation, Discussion, and Debate****Three credits**

Examines the dimensions of group speech situations. Range of activities from most informal, conversation, to most formal, debate. Of special concern are discussion leadership, kinds of topics, kinds of audiences, and kinds of discussion media. Also includes parliamentary procedure and listening skills. Prerequisite: Speech 104.

**220 Introduction to Theater Arts****Three credits**

Designed to introduce the student to the theater and the theoretical principles of its arts. Includes historical development from arena through proscenium, techniques of acting and directing, and principles of lighting, design, costuming and makeup. Open to freshmen.

**221 Play Production****Three credits**

Designed to acquaint the student with practical problems of producing a play for an audience. Class work is focused on script analysis, acting and directing, stagecraft, and producing the play. Students actually produce their own one-act play under the guidance of a student director, and each student prepares a complete promptbook for the play in which he participates. Prerequisite: Speech 220 or approval of the department.

NOTE: Students in Speech 220 and Speech 221 are encouraged to participate in productions of the Lansing Civic Players and the Community Circle Players.



**Mathematics** *Department of Mathematics**Department Chairman:* CLARENCE A. POWERS

The College will admit students who have deficiencies in mathematics. One year each of high school algebra and geometry are, however, essential for certain college courses. These deficiencies may be removed in college, but the time spent may require the student to attend an extra term, or more, to complete requirements for graduation. A satisfactory score on the placement test and/or at least average achievement in preparatory courses is prerequisite for all courses.

**009 Basic Arithmetic** No credit  
Review of fundamental processes with integers, common fractions, decimal fractions, and percentage. Includes work with word problems designed to promote good reasoning.

**011 Beginning Algebra** No credit  
Contemporary course in elementary algebra designed to provide necessary review and upgrading of previous preparation in mathematics. Emphasis on language, elementary set theory, the real number system, absolute values, algebraic and graphical solutions of linear and quadratic equations and inequalities. Prerequisite: proficiency in basic arithmetic and previous work in elementary algebra.

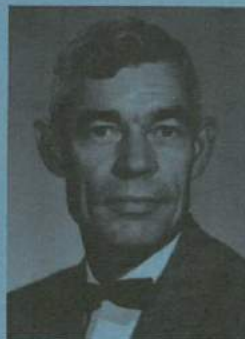
**012 Beginning Algebra Laboratory** No credit  
Elementary algebra using programmed materials and offering a choice of contemporary or traditional programs. Designed to meet college entrance requirements. Recommended for students with no previous work in algebra. Each student progresses at his own rate and completes course on an individual basis. May re-register for second term if needed. Prerequisite: proficiency in basic arithmetic. Five non-credit class hours.

**013 Geometry** No credit  
Elementary course in plane geometry with some of the concepts also related to three-dimensional figures. Included are nature of proof and mensuration principles and formulas. Prerequisite: one unit of high school algebra or Mathematics 011 or 012. Five non-credit class hours.

**102 Intermediate Algebra** Five credits  
Deals with topics normally considered in second year high school algebra. Includes the real number system, solution of equations, functions and graphs and the complex number system. Prerequisite: one entrance unit each in high school algebra and plane geometry or Mathematics 011 or 012 and Mathematics 013.

**151 Mathematics for Technicians I** Five credits  
Designed for technicians. Interweaves the applied aspects of algebraic and trigonometric fundamentals. Topics in algebra covered are: review of basics, linear systems of equations, determinants, fractions, factoring and quadratic equations. Topics in trigonometry include: definitions and right triangle properties in all quadrants, trigonometric equations, vectors, laws of sines, law of cosines and graphs of trigonometric functions. Use of the slide rule included as need occurs. Prerequisite: one year each of high school algebra and geometry or mathematics 011 or 012 and Mathematics 013. Concurrent with E.T. 101.

**152 Mathematics for Technicians II** Five credits  
Continues Mth 151 with topics on exponents, radicals,  $j$ -operator, logarithms, mixed systems of equations, logarithmic equations, theory of equations, inequali-



Clarence Powers

ties and absolute values, progressions and trigonometric identities, functions and equations. Use of slide rule for logarithms is included. Prerequisite: Mathematics 151. Concurrent with E.T. 102.

**153 Mathematics for Technicians III** Five credits  
Continues Mth 152 with selected topics in analytic geometry and calculus. Some of the topics are: rectangular, polar and parametric forms of the straight line, circle, parabola and ellipse; limits; slope, derivatives of selected functions; curve tracing, time, minimum and maximum problems, basic integration and computation of areas by approximations and integration. Prerequisite: Mathematics 152. Concurrent with E.T. 102.

**155 Data Processing Mathematics** Five credits  
The language of business has numerical bases. Provides the necessary foundation in numerical concepts for the introductory study of accounting and machine processes. The principles presented in this course will be applied, and therefore reinforced, in the Computer Programming and in the Statistics courses. Includes topics in logic, Boolean algebra, iterative processes, binary and other number systems, determinants and matrices, methods of numerical computation and classification of errors. Prerequisite: Mathematics 151 and 152, or Mathematics 102.

**160 Statistics** Five credits  
To acquaint the student with the theory of probability applications to statistical theory. Student will gain an understanding of the kinds of regularity that exist among random fluctuations. Experience in associating and using mathematical models to interpret physical phenomenon and predict, with reasonable certainty, the outcomes of experiments related to practical business problems. Practical experiences in the statistical solution to business problems through the use of computers. Methods of organizing and presenting data with intelligent interpretations of statistics are emphasized. Prerequisite: Mathematics 102 or 152.

**164 College Algebra and Trigonometry I** Five credits  
Appreciation of algebra as a logical subject. Topics include: the real number system, the function concept with trigonometric, logarithmic and algebraic functions, each considered in detail. Other topics are: polynomials, the complex numbers, matrices and determinants and mathematical induction. Prerequisite: Mathematics 102 or equivalent.

**165 College Algebra and Trigonometry II** Five credits  
Continuation of Mathematics 164. Prerequisite: Mathematics 164.

**180 College Algebra and Trigonometry** Five credits  
Replaces Mth 164 and Mth 165 for the student who needs only one term of preparation for the study of the Calculus. Topics include: sets and equations, matrices, vectors, inequalities, functions and relations, elementary theory of equations, trigonometric equations and identities, polar coordinates, mathematical induction, and straight line analytic geometry. Prerequisites: 2 years of high school algebra, 1 year of high school geometry, and  $\frac{1}{2}$  year of high school trigonometry.

**200A Arithmetical Foundations** Four credits  
Required for elementary pre-teachers. Course includes concepts of the "New Math" new being introduced in elementary grades including set theory, computation in bases other than ten, and some elementary work in number theory. Also includes review of all basic skills in arithmetic and emphasis on the meaning of the process used, and new format for some of the fundamental processes. Prerequisite: proficiency in basic arithmetic as evidenced by results of an arithmetic skill test. One year of algebra and one year of geometry in high school also desirable.



- Mathematics**
- 200B Algebra for Teachers** Five credits  
For elementary pre-teachers. Includes basic understanding of the properties of the real number system, elementary set theory, the fundamental processes with polynomials and algebraic fractions, solving linear and quadratic equations and systems of equations, also graphs of equations and inequalities. Emphasis on understanding of all concepts and processes. Prerequisite: Mathematics 200A.
- 200C Geometry for Teachers** Five credits  
For elementary pre-teachers. Includes the fundamental concepts of two and three dimensional geometric figures with emphasis on proof. Prerequisite: Mathematics 200B.
- 213 Analytic Geometry and Calculus I** Five credits  
A unified course in analytic geometry and calculus. Topics include equations and graphs, functions, limits, the derivative, and differentiation of algebraic functions with applications. Prerequisite: Mathematics 164 and 165, or Mathematics 180.
- 214 Analytic Geometry and Calculus II** Five credits  
Continuation of Mathematics 213 which introduces the definite integral with applications, parametric equations, vectors, and differentiation of transcendental functions. Prerequisite: Mathematics 213.
- 215 Analytic Geometry and Calculus III** Five credits  
Continuation of Mathematics 214. Includes such topics as application of integration techniques and solid analytic geometry. Prerequisite: Mathematics 214.
- 216 Analytic Geometry and Calculus IV** Five credits  
Continuation of Mathematics 215. Introduces functions of 2 and 3 variables, partial derivatives, multiple integrals, and infinite series. Prerequisite: Mathematics 215.
- 219 Differential Equations** Four credits  
Solution of ordinary differential equations; series solutions; Bessel and Legendre equations with applications. Prerequisite: Mathematics 216.

## Department of Science

Department Chairman: DAVID L. SHULL

### Biological Science

- 107 General Biology** Four credits  
First of a three-term sequence devoted to fundamental principles and processes in biology. Presents a general overview of the subject and serves as a background for advanced courses. The following topics are considered: basic chemistry of living matter, origin of life, study of cells, tissues, organs and organ systems, cell division and genetics, evolution and adaptation, metabolism and physiology, anatomy and locomotion, interaction between organisms and their environment, and the taxonomy of the plant and animal kingdoms. Lecture and laboratory.
- 108 General Biology** Four credits  
Continuation of Biology 107 with primary consideration of the animal kingdom. Lecture and laboratory.  
Prerequisite: Biology 107 or consent of department.
- 109 General Biology** Four credits  
Continuation of Biology 108 with primary consideration of the plant kingdom. Lecture and laboratory.  
Prerequisite: Biology 108 or consent of department.
- 201 Anatomy and Physiology I** Four credits  
Part I of a two-term course devoted to the study of the machinery of the human body. Meets the needs of students taking further work in biology or related applied fields such as nursing and mortuary science. Emphasis will be placed on the physiology of the skeletal, muscular, nervous, and sensory systems. Two hours lecture, four laboratory.
- 202 Anatomy and Physiology II** Four credits  
Continuation of Anatomy 201. Emphasis on the study of the circulatory, respiratory, digestive, excretory, endocrine, and reproductive systems. Lecture and laboratory. Prerequisite: Anatomy 201 or approval of department.
- 203 Microbiology** Four credits  
Introduction to medical bacteriology, with emphasis on the most important communicable disease agents. A study of yeasts, fungi, and protozoa of medical importance, and also of culture media, isolation of pure culture, staining methods, practical sterilization, and the collection and handling of specimens. Lecture and laboratory.
- 201 Zoology I** Four credits  
First of two courses designed to survey the field of zoology and serve as a foundation for advanced courses. Includes a study of the cell and protoplasm, unicellular organisms, and the animal groups in order of advancing complexity. Lecture and laboratory.
- 202 Zoology II** Four credits  
Continuation of Zoology 201. Deals principally with echinoderms and chordates with emphasis on vertebrate animals. Includes principles of anatomy, physiology, taxonomy, ecology and evolution. Lecture and laboratory.
- 203 Botany** Four credits  
A basic study of the plant kingdom. Deals with general structure and physiology of plants, from simplest to most advanced forms. Special attention is given to the seed plants, their ecology and value to man. Lecture and laboratory.



Dr. Shull



Natural Science Audio-Visual Tutorial Program



## Natural Science

## Science

The three-course sequence in Natural Science is designed to give the student a basic understanding of some of the scientific principles related to both animate and inanimate objects. The Audio-Visual-Tutorial presentation employs a variety of media as an aid to understanding both the empirical and conceptual aspects of Science. The courses are designed to foster initiative and self-reliance on the part of the student. *THE COURSES MAY BE TAKEN IN ANY ORDER.*

### 101 Natural Science (Botany-Zoology)

Four credits

The student acquires an understanding of living organisms and their interrelation with the non-living world. Form, function and principles are emphasized. In addition to the study of the plant and animal kingdoms, common aspects of each, such as the modern concept of the cell and the gene theory, are studied. Lecture and laboratory. *No prerequisite.*

### 102 Natural Science (Chemistry-Physics)

Four credits

Introduces the fundamental laws, theories, and principles of Chemistry and Physics. Includes such topics as kinetic, atomic and molecular theory, the periodic system, the laws of chemical combinations and the gas laws. Some modern applications of electronics, mechanics, heat, sound and light will be studied. Lecture and laboratory. *No prerequisite.*

### 103 Natural Science (Astronomy-Geology)

Four credits

Topics include rocks and minerals, geological processes, formations, earth history past and present, the solar system, and the universe. Lecture and laboratory. *No prerequisite.*

### 201 Astronomy

Four credits

Designed to acquaint the student with the physical universe in which he lives and of which he is a part, using the descriptive rather than the mathematical approach. A study of the solar system, stellar systems, comets, meteors and methods employed by astronomers in gathering information. Lecture and laboratory. Prerequisite: Natural Science 102 and 103 or permission of the instructor.

The three courses of the Integrated Science are designed for the Mercy School of Nursing, Lansing, Michigan, and are not given for transfer credit to another institution.

### 120 Integrated Science I

Four credits

Includes some inorganic and organic chemistry as an aid to an understanding of the structure and function of cells. The structure, function and microbial diseases of tissues, membranes, skeletal and muscular systems is also given. The microbiology is introduced with a study of the morphology and physiology of certain pathogenic organisms. Disease production and control are emphasized. Lecture and laboratory.

### 121 Integrated Science II

Four credits

Study of the structure and functions of the nervous, endocrine and circulatory systems with their microbial diseases. A study of the pathogenic organisms includes the morphology, physiology, disease production and control. The chemistry and the relationships of body functions are stressed. Lecture and laboratory.

Prerequisite: Science 120

### 122 Integrated Science III

Four credits

Study of the structure and functions of the digestive, excretory, respiratory and reproductive systems with their microbial diseases. Study of the pathogenic organisms includes morphology, physiology, disease production and control. The chemistry and the relationships of body functions are stressed. Lecture and laboratory.

Prerequisite: Science 121

**Science Chemistry**

The Chemistry 101 series is designed to meet the needs of many curriculums requiring an understanding of basic chemistry. The program is not designed for chemistry majors or for students wishing to pursue a curriculum requiring more than twelve term hours of chemistry. The series should serve to fulfill general education requirements for students following a Liberal Arts and Sciences curriculum.

**101 An Introduction to Inorganic Chemistry I** **Five credits**  
Presents basic inorganic chemical principles and theories. Deals with the nature of atoms, molecules, chemical change, stoichiometry and the solid, liquid, gaseous states of matter. Student applies the basic laws of inorganic chemistry to problem solving situations. Assumes no previous course in chemistry. A good understanding of algebra is necessary, and an understanding of geometry is desirable. Two hours lecture, six laboratory.

**102 An Introduction to Inorganic Chemistry II** **Five credits**  
Continuation of 101. Student is also introduced to chemical kinetics and chemical thermodynamics. Opportunity is provided for investigation of chemical phenomena after developing a more thorough understanding of inorganic chemical principles. Emphasis placed on chemical equilibrium, ionic equilibrium and electrochemistry. Prerequisite: Chemistry 101 or approval of department. Two hours lecture, six laboratory.

**103 Introduction to Organic Chemistry** **Five credits**  
Survey of basic organic principles. Develops student's understanding of homologous series and understanding of appropriate terminology. Relates basic organic concepts to the process of life and industry. Prerequisite: Chemistry 102 or approval of department. Two hours lecture, six laboratory.

**Physical Science**

**110 Industrial Chemistry (Inorganic)** **Four credits**  
A basic course in general chemistry designed for the technician as a prerequisite for Metallurgy MT 204. Topics include atomic and molecular theory, bonding, properties of the elements. Also discussed are oxidation-reduction reactions, kinetic-molecular theory, phase diagrams, solutions and electrochemistry. Open only to technology students.

**111 General Chemistry (Inorganic)** **Five credits**  
First of series of three courses designed to give comprehensive introduction to general college chemistry for those students who plan to enter the fields of engineering or the physical sciences. Covers atomic and molecular structure, the periodic classification of the elements, the kinds and states of matter, the laws of gases and solutions, the descriptive chemistry of Groups I, II, VI, VII of the elements, and the noble gases. Lecture and laboratory.

**112 General Chemistry (Inorganic)** **Five credits**  
Continuation of Chemistry 111. Includes study of oxidation-reduction, hydrolysis, chemical equilibrium, nuclear chemistry, the descriptive chemistry of Groups III, IV, V of the elements, and the two series of the Rare Earths. Lecture and laboratory. Prerequisite: Chemistry 111 or approval of the department.

**113 Qualitative Analysis** **Five credits**  
Continuation of the general principles of chemistry introduced in Chemistry 111 and 112, with emphasis on the systematic separation and identification of the

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principal cations and anions, the application of the principles of the ionization theory of mass action, and chemical equilibrium and the laws of solubility to qualitative analysis. Lecture and laboratory. Prerequisite: Chemistry 111 and 112 or approval of the department.

**200 An Introduction to Biochemistry** **Five credits**  
For the student who needs to understand organic principles as they apply to life processes. Deals with enzymes, amino acids, nucleic acids, blood and urine chemistry. Emphasizes other physiological and pathological applications. Prerequisite: Chemistry 103, 113 or approval of department. Two hours lecture, six laboratory.

**201 Organic Chemistry I** **Five credits**  
First of two courses that constitute an introduction to the chemistry of the carbon compounds and cover the fundamental principles and reactions of organic chemistry. Covers the aliphatic hydrocarbons and their derivatives, the simple alcohols, ethers, aldehydes, ketones, acids, esters, carbohydrates, and organic nitrogen compounds. Lecture and laboratory. Prerequisite: Chemistry 111 and 112 or approval of department.

**202 Organic Chemistry II** **Five credits**  
Continuation of Chemistry 201. Takes up the heterocyclic and aromatic hydrocarbons and their derivatives and the kinetics of organic chemical reactions. Lecture and laboratory. Prerequisite: Chemistry 201, or approval of department.

**203 Organic Chemistry III** **Five credits**  
Continuation of Chemistry 202. Lecture and laboratory.

**221 Quantitative Analysis** **Five credits**  
Laboratory course designed to give the student manipulative ability, a thorough knowledge of the chemical and stoichiometric principles involved in analytical procedures of volumetric and gravimetric analysis. Prerequisite: Chemistry 111 through 113.

**Foundation Courses**

**211 Foundations of Physical Science** **Four credits**  
Primarily for students seeking an elementary education certificate. The course will survey the theoretical as well as the practical aspects of physics, inorganic and organic chemistry, earth and space science. Lecture and laboratory. Prerequisite: Sophomore status and Natural Science 102 or equivalent college chemistry and physics.

**212 Foundations of Biological Science** **Four credits**  
Primarily for students seeking an elementary education certificate. Emphasis on modern biology. Student will study such fundamental processes as photosynthesis, energy transfer, nutrition, metabolism, and heredity. Laboratory activities involve the students directly with natural phenomena, their relationships, and application of principles studied. Lecture and laboratory. Prerequisite: Sophomore status and Natural Science 101 or equivalent college biology. Foundations of Physical Science recommended but not required.

**Physics**

**201 Physics (Mechanics and Heat)** **Four credits**  
First of series of three courses designed to give the student an understanding of the fundamental principles of physics. Considers the principles of mechanics (the laws of motion and equilibrium and their relation to work, energy and power), as

Science

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**Science** they are applied to solids and fluids. Also includes the principles of heat and thermodynamics and their relationship to the operation of engines. Lecture and laboratory. Prerequisite: Trigonometry or approval of department.

**202 Physics (Electricity, Magnetism and Wave Motion) Four credits**  
Designed to explain the electrical nature of matter and to investigate its electrostatic and electromagnetic properties. Considers also the properties of waves and their application to sound. Engineering applications are emphasized. Lecture and laboratory. Prerequisite: Physics 201 or approval of department.

**203 Physics (Optics and Modern Physics) Four credits**  
A course in modern physics designed to present such topics as optics, atomic structure, solid state and nuclear reactions. Lecture and laboratory. Prerequisite: Physics 202 or approval of department.

**211 Physics (Mechanics and Heat) Four credits**  
Designed to teach the static and dynamic behavior of solids and fluids, using calculus to derive relationships. The first of a series of three courses designed for science and engineering majors. Lecture and laboratory. Prerequisite: Calculus I or its equivalent, or approval of department.

**212 Physics (Electricity, Magnetism, and Sound) Four credits**  
Designed to teach the basic principles of electricity and sound. Similar to 202 but uses Calculus extensively. Lecture and laboratory. Prerequisite: Physics 211, or approval of department.

**213 Physics (Optics and Modern Physics) Four credits**  
Principles of geometric and physical optics as well as recent developments in modern physics such as atomic and nuclear phenomena, relativity, solid state physics, and quantum physics phenomena. Lecture and laboratory. Prerequisite: Physics 212, or approval of department.

## Social Science *Department of Social Science*

*Department Chairman: DONALD VOSS*

### Basic Social Science

This three-term sequence of courses introduces the student to the social sciences and forms an integral part of the general education program. The structure and content require that the courses be taken in sequence.

**101 Sociology Four credits**  
Survey of major concepts and methods of sociology and anthropology. Emphasis is given to selective aspects of culture, socialization, social stratification, associations, primary groups, collective behavior, population-ecology, and cultural history.

**102 Economics Four credits**  
Deals with the economic institutions in their social context. The genesis and development of capitalism are covered, as well as comparisons with other major economic systems. Last portion of the course deals with the principle issues in economic development. Prerequisite: Social Science 101.

**103 Political Science Four credits**  
Deals with political behavior and institutions in their social context. Comparative approach is used to provide an understanding of modern political systems. Problems

of democracy are examined from several perspectives, with special attention given to the implications of political sociology. Prerequisite: Social Science 102.

**102, 103 Basic Social Science Honors Section Four credits**  
Schedule for winter and spring terms of each year will include one section of Basic Social Science to be conducted as an honors course. Material will be comparable to that of the standard sections but will be taught at an advanced level and in seminar fashion. Outstanding students will be enrolled by invitation and will be notified of their eligibility in advance of registration.

### Geography

**101 Elements of Geography Three credits**  
Specific geographic principles course which emphasizes the physical forces on a world wide basis. Offers an extensive study and analysis of the physical forces (biotic resources, landforms, maps, water resources, weather and climate, soils, minerals, natural resources, etc.) which affect human life on earth.

**201 World Regional Geography Three credits**  
Describes and analyzes human and natural resources of countries and cultures of the world with major emphasis on their distribution over the surface of the earth.

**202 Geography of North America Three credits**  
A study of the human and physical resources of North America, Central America, and the Panama Canal Zone. Focus on distinct characteristics of the various regions.

**203 Economic Geography Three credits**  
Study of geographic distribution and production of agricultural commodities, raw materials for industry, and the localization of industries throughout the world. Some emphasis placed on trade of raw materials and finished products among nations.

### Political Science

**250 American Government Four credits**  
An analysis of the American political system. Gives emphasis to the Federal and State systems, with special attention to the American democracy from local to national levels.

**260 Introduction to Comparative Government Three credits**  
Introduction to the political institutions of modern government, with emphasis given to the institutions of the United Kingdom, France, Germany, and the USSR. Dynamics of political behavior in these and other societies will be included. Also special problems of the newly emerging nations. Prerequisite: Social Science 103.

**271 International Relations Three credits**  
Course in contemporary relations, with emphasis upon politics. Concepts and theories, and rudimentary methods, are surveyed. Relationships between international politics, foreign policy, and domestic policy in the U.S. explored. Prerequisite: Social Science 103.

### Psychology

**150 Psychology of Human Relations Four credits**  
Introduction to psychology as applied to personal adjustment, home and civic responsibilities and working relationships with others on the job.  
Designed for students who wish a general introduction to the field of psychology



Dr. Voss

**Social Science** but do not intend to enroll for advanced work in the field. (Other students should enroll in Psychology 201.)

**201 Introduction to Psychology** **Four credits**  
 Designed to give the student a general understanding of the science of psychology. Intelligence, motivation, emotion, perception, learning and group processes are discussed.

**202 Psychology of Personality** **Three credits**  
 Introduction to the study of human behavior from the viewpoint of major theories of personality and their research applications. Genetic approaches to origins of human behavior stressed together with modern approaches to behavioral modification. Prerequisite: Psychology 150 or 201 (or equivalent) or approval of department.

**203 Introduction to Social Psychology** **Three credits**  
 Designed to give student an understanding of the influence of social interaction upon the development of personality. Interaction between the individual and society is stressed. Prerequisite: Psychology 201 or approval of department.

**204 Educational Psychology** **Three credits**  
 Investigates the contributions of psychology to the field of education. Concerned with the applications of psychology to learning situations as encountered by the teacher. Observations of practical teaching situations in the student's major field of interest are required. Prerequisite: Psychology 201.

**205 Human Growth and Development** **Three credits**  
 Study of human growth and development from birth to senescence. Individual's development from the prenatal stage through post-adolescence stressed. Biological, psychological and sociological factors in human development emphasized. Prerequisite: Psychology 201. (Psychology 202 recommended).

**Sociology and Anthropology**

**220 Juvenile Delinquency and Youth Behavior** **Three credits**  
 Early attention will be given to the problems of defining juvenile delinquency and a survey of its present status in major industrial nations. Major concentration on theories which attempt to account for juvenile delinquency and evidence supporting such theories. Concludes with brief consideration of control and correction. Prerequisite: Social Science 101.

**270 Introduction to Anthropology** **Three credits**  
 Fields, methods and findings of the science of man. Primary attention given to literature of culture with special emphasis on ethnology, cross-cultural studies. Historical development of anthropological theory and methodology will be surveyed. Prerequisite: Social Science 103.

**271 Seminar Special Subjects**  
 Asian Culture Area — An investigation of the culture areas of Asia and Southeast Asia with particular attention to the culture core and themes of each grouping. Readings are assigned and seminar sessions are devoted to comparative analysis of the significant difference between areas, as well as historical diffusion processes. Closing sessions devoted to establishing contemporary economic and political problems against these historical cultural backgrounds.



**Physical Education**

**Physical Education**

A knowledge of human physiology and psychology as it relates to exercise and relaxation is the basis of the Physical Education course. Physical fitness for adult members of society is acquired and maintained through conditioning. The program offers all students an opportunity to achieve and maintain an optimum level of physical fitness and to establish exercise habits that can be continued through life with limited equipment and facilities.

Instruction in several activities is offered as an elective feature of the course. Activities include gymnastics, weight training, fencing, golf, tennis, swimming, soccer, and other out-of-door sports.

Class participation in Physical Education 101, 102, 103, and 104 requires the scheduling of an hour of co-educational lecture and two additional activity sections on different days of each week.

Courses 201, 202, 203, and 204 are open to students who have completed the 100 series of courses. Students select topics for reading and reporting. Two activity periods on different days of each week are also scheduled.

Students not desiring credit but interested in the Physical Education activities offered, should register as auditors.



*Janos Nevai*

**MEN'S PHYSICAL EDUCATION**

**101 (Fall)** **One credit**  
 Lectures on the muscular and nervous system with emphasis on the effect of regular exercise. Review of the different types of training methods. *Individual Conditioning.*

**102 (Winter)** **One credit**  
 Lectures on the circulatory system, heart diseases, and heart research as they relate to health and physical education. Other topics include nutrition and metabolism with emphasis on weight control. *Individual Conditioning.*

**103 (Spring)** **One credit**  
 Continuation of P.E. 102. Reading assignments in health related areas. *Individual Conditioning.*

**104 (Summer)** **One credit**  
 This course can be substituted for 101, 102, or 103. Lectures and assignments appropriate to the course for which it is substituted. *Individual Conditioning.*

**201, 202, 203 and 204** **One credit**  
 Open for students who have completed three terms of the 100 series of courses. Limited reading of selected topics. Physical fitness instruction and two individual conditioning activities weekly.

**221, 222, 223, and 224** **One credit**  
 Special projects involving experiments or reading in selected area. Hours and projects arranged.

**Physical Education**    **WOMEN'S PHYSICAL EDUCATION**

**101 (Fall)**    **One credit**  
Lectures on the muscular and nervous system with emphasis on the effect of regular exercise. Review of the different types of training methods. *Individual Conditioning.*

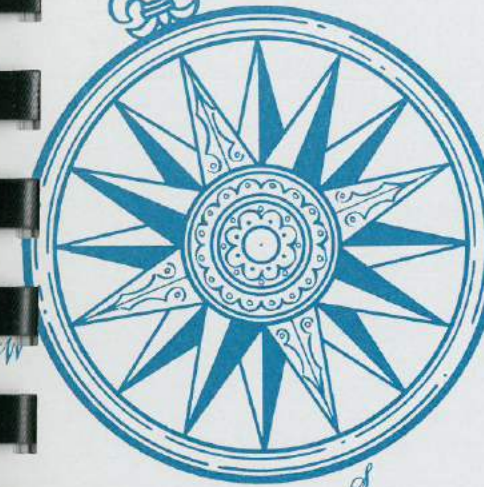
**102 (Winter)**    **One credit**  
Lectures on the circulatory system, heart diseases, and heart research as they relate to health and physical education. Nutrition and metabolism with emphasis on weight control. *Individual Conditioning.*

**103 (Spring)**    **One credit**  
Continuation of P.E. 102. Reading assignments in health related areas. *Individual Conditioning.*

**104 (Summer)**    **One credit**  
This course can be substituted for 101, 102, or 103. Lectures and assignments appropriate to the course for which it is substituted. *Individual Conditioning.*

**201, 202, 203, and 204**    **One credit**  
Open for students who have completed three terms of the 100 series of courses. Limited reading on selected topics. Physical fitness. Instruction and two individual conditioning activities weekly.

**221, 222, 223, and 224**    **One credit**  
Special projects involving experiments or reading in selected area. Hours and projects arranged.



**DIVISION OF BUSINESS**

**Department of Accounting  
and Office Programs**  
**Department of Management  
and Marketing**

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George Hopkins

Division of Business

Division Chairman: GEORGE HOPKINS

Foreword

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

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

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

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

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

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



**Business Division Community Services**

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

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

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

**Cooperative Internship**

**Lansing Community College**

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

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

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

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

**Placement**

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

**Department of Accounting and Office Programs**

Department Chairman: RONALD EDWARDS

**Accounting**

**One-Year Certificate Program**

The Accounting Curriculum is designed to serve students preparing for non-professional levels of employment from Account Clerk to Account Executives; General Sales Clerks to Retail Managers; Recordkeepers, Cashiers, General Bookkeepers and Accounting Technicians to Chief Clerks. The first two terms of course work covers the need for record keeping and other entrance occupations. The first year of course work covers the need for more complex record keeping occupations and achieves the entrance level for general bookkeepers.

1st Term			3rd Term		
Course Number	Course Title	Credit Hours	Course Number	Course Title	Credit Hours
ENG 100	Communications	3	PSY 150	Psychology of Human Relations	4
EC 101	Applied Economics	3	BUS 108	Business Machines	3
BUS 117	Business Mathematics	3	BUS 113	Business Law	3
BUS *110	Accounting I	4	BUS 112	Accounting III	4
PSY 101	Orientation	1	DPT 120	Survey of Data Processing	4
PE 101	Physical Education	1	OR		
		15	Elective		3
2nd Term					17
SS 101	Sociology	4			
BUS 107	Business Machines	3			
BUS 101	Intermediate Typewriting	3			
BUS 118	Introduction to Business	3			
BUS 111	Accounting II	4			
		17			

\*Student who has completed one or two years of high school bookkeeping with A or B standing should consult with an accounting instructor for placement.

**Business Division**

**Accounting and Office Programs**



Ronald Edwards

**Accounting and Office Programs**

**Accounting**

**Two-Year Associate Degree Program**

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

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

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
ENG *100	Communications	3	SS 101	Sociology	4
BUS 118	Introduction to Business	3	BUS 250	Intermediate Accounting	4
BUS 117	Business Math	3	BUS 215	Law in Society I	3
BUS 110	Accounting I	4	EC 201	Principles of Economics I	3
PSY 101	Orientation	1	BUS 240	Accounting Internship, or Elective	3
PE 101	Physical Education	1			
		15			17
Winter Term			Winter Term		
ENG 101	Composition	3	SS 102	Economics	4
BUS 107	Business Machines	3	BUS 253	Cost Accounting	4
BUS 130	Introduction to Marketing	3	BUS 216	Law in Society II	3
BUS 111	Accounting II	4	EC 202	Principles of Economics II	3
BUS 101	Typewriting II	3	BUS 241	Accounting Internship, or Elective	3
		16			17
Spring Term			Spring Term		
ENG 102	Composition	3	SS 103	Political Science	4
BUS 112	Accounting III	4	BUS 266	Accounting Systems	4
BUS 204	Business Correspondence	3	EC 203	Principle of Economics III	3
DP 120	Survey of Data Proc.	3	BUS	Elective	3
PSY 150	Psychology of Human Relations	4	BUS 242	Accounting Internship, or Elective	3
		17			17

\*English Sequence of 101, 102, 103 is recommended for those students with adequate grammatical ability.  
 Recommended Electives: DP 103 Introduction to Data Processing; BUS 220 Office Management; BUS 226 Personnel Management; BUS 108 Business Machines II.



**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.

General Clerical			General Clerical		
ENG 100	Communications	3	BUS 113	Business Law	3
BUS 118	Introduction to Business	3	BUS 119	Office Methods	3
BUS 110	Accounting I	4	BUS 108	Business Machines II	3
BUS 117	Business Math	3	BUS 102	Advanced Typewriting	3
BUS 011	Typewriting, or Elective	3	BUS 109	Secretarial Machines	2
		16			14
EC 101	Applied Economics	3			
BUS 111	Accounting II	4			
BUS 130	Introduction to Marketing	3			
BUS 107	Business Machines	3			
BUS 101	Intermediate Typing	3			
		16			

**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 the program are equipped to handle the clerical functions in most large offices, including stenographic pools where machine transcription is performed, and to efficiently run the one-girl office.

Basic Program					
Freshman Year		Fall Term	Credit Hours	Sophomore Year	
PSY 101	Orientation	1	ENG 101	Composition	3
ENG *100	Communication	3	SS 101	Sociology	4
BUS 118	Introduction to Business	3	BUS 109	Secretarial Machines	2
BUS 110	Accounting I	4	SPH 104	Fund. of Speech	3
BUS 117	Business Math	3	BUS 240	Internship or Elective	3
	Elective	3			15
		17			
Winter Term			Winter Term		
EC 101	Applied Economics	3	ENG 102	Composition	3
BUS 111	Accounting II	4	SS 102	Economics	4
BUS 120	Sales	3	BUS 220	Office Management I	3
BUS 107	Business Machines I	3	BUS 241	Internship	3
BUS 101	Typewriting II	3		Elective	3
		16			16
Spring Term			Spring Term		
BUS 113	Business Law	3	ENG 103	Composition	3
BUS 119	Office Methods	3	SS 103	Political Science	4
BUS 108	Business Machines II	3	BUS 204	Business Correspondence	3
BUS 102	Typewriting III	3	BUS 242	Internship	3
PSY 150	Psychology of Human Relations	4		Business Elective	3
		16			16

\*Two-year students should begin their Composition sequence in their first year with ENG 101.

**Accounting and Office Programs**

**Accounting and Office Programs**

**Legal Secretary**

**Two-Year Associate Degree Program**

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

Basic Program					
Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
ENG 101	Composition	3	BUS 201	Transcription	4
SS 101	Sociology	4	BUS 110	Accounting I	4
BUS *104	Beginning Shorthand	4	BUS 215	Law & Society I	3
BUS 117	Business Mathematics	3	PSY 150	Psychology of Human Relations	4
		14	OR		
			Office Internship		3
					14-15
Winter Term			Winter Term		
ENG 102	Composition	3	BUS 202	Shorthand Speed Building	4
SS 102	Economics	4	BUS 216	Law & Society II	3
BUS 101	Intermediate Typing	3	BUS 109	Secretarial Machines	2
BUS *105	Intermediate Shorthand	4	BUS 111	Accounting II	4
BUS 107	Business Machines I	3	EC 101	Applied Economics	3
		17	OR		
			Office Internship		3
					16
Spring Term			Spring Term		
ENG 103	Composition	3	BUS 203	Secretarial Training	3
SS 103	Political Science	4	BUS 205	Legal Shorthand	2
BUS 102	Advanced Typing	3	BUS 204	Business Correspondence	3
BUS *106	Advanced Shorthand III	4	SPH 104	Fundamentals of Speech Elective	3
BUS 108	Business Machines II	3	OR		
		17	Office Internship		3
					14

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



June Tyler  
Director of Purchasing

**Medical Secretary**

**Two-Year Associate Degree Program**

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

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
ENG 101	Composition	3	BUS 201	Transcription	4
NS 101	Botany-Zoology	4	BUS 215	Law & Society I	3
BUS *104	Beginning Shorthand	4	BUS 110	Accounting I	4
BUS 117	Business Mathematics	3	PSY 150	Psychology of Human Relations	4
PE 101	Physical Education	1	Elective		
		15	OR		
			Office Internship		3
					18
Winter Term			Winter Term		
ENG 102	Composition	3	BUS 202	Shorthand Speed Building	4
NS 102	Chemistry-Physics	4	BUS 216	Law & Society II	3
BUS 101	Intermediate Typing	3	BUS 109	Secretarial Machines	2
BUS *105	Intermediate Shorthand	4	BUS 101	Applied Economics	3
BUS 107	Business Machines I	3	Elective		
PE 102	Physical Education	1	OR		
		18	Office Internship		3
					15
Spring Term			Spring Term		
ENG 103	Composition	3	BUS 203	Secretarial Training	3
NS 103	Astronomy-Geology	4	BUS 204	Business Correspondence	3
BUS 102	Advanced Typing	3	BUS 207	Medical Shorthand	2
BUS *106	Advanced Shorthand	4	SPH 104	Fundamentals of Speech Elective	3
BUS 108	Business Machines II	3	OR		
PE 103	Physical Education	1	Office Internship		3
		18			14

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

**Accounting and Office Programs**



**Accounting and Office Programs**

**Secretarial Science**

**Two-Year Associate Degree Program**

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

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
PSY	101 Orientation	1	SS	101 Sociology	4
BUS	118 Intro. to Business	3	BUS	201 Transcription	4
BUS	117 Business Math	3	BUS	110 Accounting I	4
BUS	104 Beg. Shorthand	4	BUS	109 Secretarial Machines	2
ENG	100 Composition	3	BUS	240 Office Internship, or Elective	3
		14			17
Winter Term			Winter Term		
ENG	102 Composition	3	SS	102 Economics	4
BUS	105 Inter. Shorthand	4	BUS	202 Shorthand Speedbuilding	4
BUS	107 Business Machines	3	BUS	220 Office Management I	3
BUS	101 Typewriting II	3	BUS	203 Secretarial Training	3
EC	101 Applied Economics	3	BUS	241 Office Internship, or Elective	3
		16			17
Spring Term			Spring Term		
ENG	103 Composition	3	SS	103 Political Science	4
BUS	106 Advanced Shorthand	4	BUS	221 Office Management II	3
BUS	102 Typewriting III	3	BUS	204 Bus. Correspondence	3
BUS	113 Business Law	3	PSY	150 Psy. of Human Relations	4
SPH	104 Speech	3	BUS	242 Office Internship, or Elective	3
		16			17

Recommended Electives: DP 120 Survey of Data Processing; DP 103 Introduction to Data Processing; BUS 111, 112 Accounting II, and III; BUS 215, 216 Law and Society I, and II; BUS 108 Business Machines II.

**Stenographic**

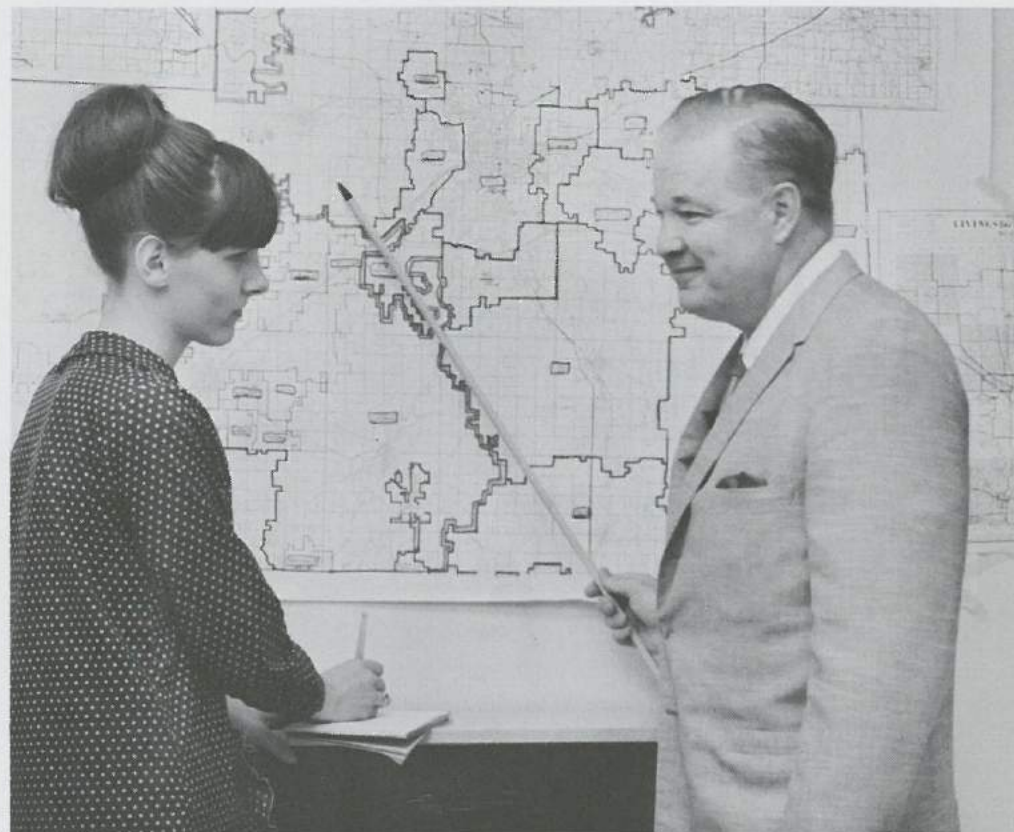
**One-Year Certificate Program**

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

Stenographic			Stenographic		
ENG	100 Communications	3	BUS	113 Business Law	3
PSY	101 Orientation	1	BUS	102 Advanced Typewriting	3
BUS	118 Intro. to Business	3	BUS	106 Shorthand III	4
BUS	117 Business Math	3	BUS	109 Secretarial Machines	2
BUS	104 Shorthand I	4	BUS	119 Office Methods	3
		14			15
BUS	110 Accounting I	4			
EC	101 Applied Economics	3			
BUS	101 Intermediate Typing	3			
BUS	105 Shorthand II	4			
BUS	107 Business Machines	3			
		17			

**Accounting and Office Programs**





Harris Dean



Management and Marketing

*Department of Management & Marketing*

Department Chairman: JAMES PERSON

**Management**

**One-Year Certificate Program**

A one-year curriculum in Management is designed primarily for qualified students desiring positions of the first or supervisory level of management. Businesses are encouraged to use management courses for employee upgrading or promotion programs. The student is advised to counsel with a staff member in the management area for guidance in the choice of electives leading to the desired goal. A *Certificate* is granted to students who successfully complete the curriculum.

First Term		Credit Hours	Third Term		Credit Hours
BUS	118 Introduction to Business	3	BUS	227 Personnel Management	3
BUS	117 Business Mathematics or equivalent	3	BUS	229 Public Relations	3
ENG	100 Business Communications	3	Electives (as counseled)		9
BUS	225 Principles of Management	3			
					Total 46
<b>Second Term</b>					
BUS	130 Marketing	4			
EC	101 Applied Economics or Principles of Economics	3			
PSY	150 Psychology of Human Relations	3			

**Recommended Electives (Determined by goal)**

- |                                       |                       |
|---------------------------------------|-----------------------|
| Office Management                     | Sales Management      |
| Accounting I (Principles or Applied)  | Advertising           |
| Accounting II (Principles or Applied) | Sales                 |
| Introduction to Data Processing       | Retailing             |
| Law and Society                       | Management Internship |
| Managerial Marketing                  |                       |

(Industrial Supervision electives may be offered as needed.)



James Person

**Management and Marketing**

**Management**

**Associate Degree Program**

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

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

Freshman Year	Fall Term	Credit Hours
ENG	101 Composition	3
BUS	118 Introduction to Business	3
SS	101 Sociology	4
SPH	104 Fundamentals of Speech	3
PSY	101 Orientation	1
PE	101 Physical Education	1
		15
Winter Term		
ENG	102 Composition	3
SS	102 Economics	4
BUS	229 Public Relations	3
BUS	130 Introduction to Marketing	3
EC	101 Applied Economics or elective	3
PE	102 Physical Education	1
		17
Spring Term		
ENG	103 Composition	3
SS	103 Political Science	4
BUS	135 Managerial Marketing	3
BUS	120 Sales	3
EC	Elective	3
PE	103 Physical Education	1
		17

**Recommended Elective or Substitutes**

DP	120 Survey of Data Processing
PSY	201 Introduction to Psychology
PSY	150 Psychology of Human Relations

**Marketing**

**One Year Certificate Program**

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

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

Sophomore Year	Fall Term	Credit Hours
BUS	210 Principles of Accounting	4
BUS	215 Law and Society I	3
BUS	225 Principles of Management	3
EC	201 Principles of Economics I	3
MKT	246 Internship or Elective	3
		16
Winter Term		
BUS	211 Principles of Accounting	4
BUS	216 Law and Society II	3
EC	202 Principles of Economics II	3
BUS	227 Management Training	3
MKT	247 Internship or Elective	3
		16
Spring Term		
BUS	212 Principles of Accounting III	4
BUS	226 Personnel Management	3
MKT	248 Internship or Elective	3
BUS	132 Sales Management	3
		13

EC	203 Principles of Economics III
BUS	131 Advertising
BUS	225 Office Management

**Basic Program**

Course Number	First Term	Credit Hours
BUS	118 Introduction to Business	3
BUS	117 Business Mathematics or equivalent	3
BUS	120 Sales	3
ENG	*100 Communications	3
SPH	104 Speech	3
		15
Second Term		
BUS	130 Introduction to Marketing	3
BUS	113 Applied Business Law	3
BUS	225 Principles of Management	3
BUS	**110 Applied Accounting I	4
BUS	121 Retailing	3
		16

\*ENG 101 Composition for students planning transfer  
 \*\*BUS 210 Principles of Accounting, if transfer is planned

**Marketing**

**Associate Degree Program**

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

Freshman Year	Fall Term	Credit Hours
ENG	101 Composition	3
BUS	118 Introduction to Business	3
SS	101 Sociology	4
BUS	117 Business Mathematics or equivalent	3
PSY	101 Orientation	1
PE	101 Physical Education	1
		15
Winter Term		
ENG	102 Composition	3
BUS	130 Introduction to Marketing	3
SS	102 Economics	4
BUS	120 Sales	3
PE	101 Physical Education	1
SPH	104 Fundamentals of Speech	3
		17
Spring Term		
ENG	103 Composition	3
SS	103 Political Science	4
BUS	131 Advertising	3
BUS	121 Retailing	3
PE	103 Physical Education	1
EC	Elective	3
		17

**Recommended Elective or Substitutes**

SP	120 Survey of Data Processing
BUS	220 Public Relations
EC	203 Principles of Economics III

Course Number	Third Term	Credit Hours
BUS	131 Advertising	3
BUS	111 Applied Accounting II	4
EC	101 Applied Economics	3
MKT	246 MKT Internship or Psychology of Human Relations	4
BUS	135 Managerial Marketing	3
		17

Sophomore Year	Fall Term	Credit Hours
EC	201 Principles of Economics	3
BUS	210 Principles of Accounting I	4
BUS	215 Law and Society I	3
BUS	225 Principles of Management	3
MKT	246 Internship or Elective	3
		16
Winter Term		
BUS	211 Principles of Accounting II	4
BUS	215 Law and Society II	3
EC	202 Principles of Economics	3
BUS	135 Managerial Marketing	3
MKT	247 Internship or Elective	3
		16
Spring Term		
BUS	212 Principles of Accounting III	4
BUS	226 Personnel Management	3
BUS	132 Sales Management	3
MKT	248 Internship or Elective	3
		13

PSY	201 Introduction to Psychology or
PSY	150 Psychology of Human Relations

**Management and Marketing**

**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.

	Fall	Credit Hours	Spring	Credit Hours	
ENG 101	Composition	3	BUS 210	Principles of Accounting I	4
MTH 102	Intermediate Algebra	5	DP 203	Comp. Prog. III	6
DP* 103	Introduction to Data Processing	5	DP 204	Prog. Systems	6
DP* 104	Comp. Prog. I	6			16
		19			
Winter		Credit Hours			
ENG 103	Composition	3			
MTH 155	Data Proc. Math	5			
BUS 118	Intro. to Business	3			
DP 105	Comp. Prog. II	6			
		17			

\*DP 103 and DP 104 must be taken concurrently



**Data Processing**

**Associate Degree Program**

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

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

	Fall Term	Credit Hours		Fall Term	Credit Hours
ENG 101	Composition	3	BUS 210	Principles of Accounting I	4
MTH 102	Intermediate Algebra	5	DP 203	Computer Programming III	6
BUS 118	Introduction to Business	3	MTH 160	Statistics	5
PSY 101	Orientation	1			15
DP 103	Introduction to Data Processing	5			
		17			
Winter Term		Credit Hours	Winter Term		Credit Hours
ENG 102	Composition	3	BUS 211	Principles of Accounting II	4
BUS 220	Office Management I	3	DP 204	Programming Systems	6
DP 104	Computer Programming	6	SS 250	American Government or	
MTH 155	Data Processing Math	5	SS *103	Political Science	4
		17		*Elective	3
Spring Term		Credit Hours			17
ENG 103	Composition	3	Spring Term		Credit Hours
BUS 221	Office Management II or	3	BUS 212	Principles of Accounting III	4
BUS 226	Personnel Management	3	DP 206	Systems Development and Design	3
DP 105	Computer Programming II	6		Electives	8
	Elective	3			15
		15	Recommended Electives:		
			BUS	120-121, 130-131, 240, 246	
			EC	201, 202, 203	
			MTH	164, 165, 213-216	
			ENG	201-203, 204	
			SS	101, 102	
			PSY	201-203	

92 \*SS 103 must be taken in sequence with SS 101 and SS 102, and is designed for transfer

**Hotel-Motel and Food Service Mid-Management Technology**

Lansing Community College offers a two year Associate Degree curriculum designed to prepare the student for mid-management positions as supervisory personnel in hotels, motels, restaurants, and institutions.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
SPH 104	Fundamentals of Speech	3	PSY **150	Psychology of Human Relations	4
BUS 117	Business Mathematics	3	BUS **110	Accounting	4
ENG 101	Composition	3	HMF 201	Food Service Operation	3
HMF 101	Introduction to the Hospitality Industry	4	HMF *Required Elective 202 or 203		4
PE 101	Physical Education	1			15
PSY 101	Orientation	1			
		15	Winter Term		Credit Hours
			HMF 212	Maintenance and Equipment	4
			BUS **111	Accounting	4
			HMF 213	Merchandising for the Hospitality Industry	3
			HMF 222	Food & Labor Cost Control	3
			HMF *Required Elective 214 or 215		3
					17
Spring Term		Credit Hours	Spring Term		Credit Hours
HMF 112	Basic Food Management and Production	5	HMF 221	Hospitality Management	3
BUS 118	Introduction to Business	3	SS 103	Political Science	4
ENG 102	Composition	3	BUS 204	Letter Writing	3
SS 101	Sociology	4	BUS 227	Management Training	3
PE 102	Physical Education	1	HMF *Required Elective 223 or 224		4
		16			17
Spring Term		Credit Hours	*Electives for Management Specialists		Credit Hours
BUS 120	Sales	3	HMF 202	Hotel-Motel Housekeeping	4
HMF 123	Food Production and Practice	5	HMF 214	Law as Related to Innkeeping	3
ENG 103	Composition	3	HMF 223	Front Office Procedure	4
SS 102	Economics	4			
PE 103	Physical Education	1	*Electives for Food Specialists		Credit Hours
		16	HMF 203	Food Science	4
			HMF 215	Advanced Food Production	4
			HMF 224	Catering and Beverage Operation	3
Summer Term		Credit Hours			49
HMF 134	Internship and Seminar	3			
		50			

\*\*PSY 201 and BUS 210 and 211 may be substituted by students anticipating transfer to 4 year college.

**Management and Marketing**



College Cafeteria



**Management and Marketing**

**Law Enforcement**

**Associate in Arts Degree**

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

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

**Basic Program**

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
PSY	101 Orientation	1	BUS	210 Principles of Accounting I (or approved elective)	4
ENG	101 Composition	3	BUS	215 Law and Society I	3
SS	101 Sociology	4	PE	201 Physical Education	1
BUS	*101 Intermediate Typewriting	3	LE	104 First Aid	2
PE	101 Physical Education	1	LE	201 Introduction to Criminal Investigation	4
LE	101 Introduction to Law Enforcement	4	SS	220 Juvenile Delinquency and Youth Behavior	3
		16			17
Winter Term			Winter Term		
ENG	102 Composition	3	BUS	211 Principles of Accounting II (or approved elective)	4
SS	102 Economics	4	BUS	216 Law & Society II	3
SPH	104 Fundamentals of Speech	3	PE	202 Physical Education	1
PE	102 Physical Education (Judo)	1	NS	102 Chemistry-Physics	4
LE	102 Police Organization and Adm.	4	LE	202 Criminal Law & Procedures	4
		15			16
Spring Term			Spring Term		
ENG	103 Composition	3	BUS	212 Principles of Accounting III (or approved elective)	4
SS	103 Political Science	4	PE	203 Physical Education	1
PSY	201 Introduction to Psychology	4	LE	203 Crime Causation & Prevention	3
PE	103 Physical Education	1	LE	204 Traffic Law & Accident Investigation	3
LE	103 Theory of Patrol	3		Approved Elective	3
		15			14

94 \*BUS 001 Beginning Typing unless rate of 25 WPM possessed



**Law Enforcement Course Certification**

**Certificate Program**

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

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

**Management and Marketing**



**Management and Marketing**

**Library Technology**

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

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

**Certificate Program—1 year**

Freshman Year	Fall Term	Credit Hours
LT	101 Intro/Use of Library	3
LT	201 Technical Services	3
ENG	101 Composition I	3
BUS	011 Typewriting I or Business 101	3
SS	101 Sociology	4
		<hr/>
		16

Winter Term		
LT	Reference	3
LT	202 Circ/Maint of Mat	3
ENG	102 Composition II	3
SPH	104 Principles of Speech	3
PSY	150 Psychology of Human Relations or BUS 220 Office Management	3
		<hr/>
		15

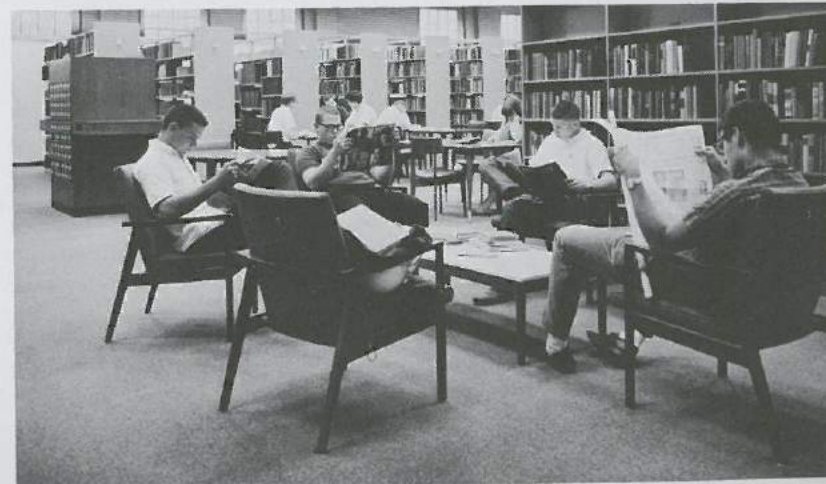
Spring Term		
LT	102 Book Sel/Order Proc.	3
LT	205 Library Problems	3
ENG	103 Composition III	3
BUS	110 Accounting or BUS 204 Business Correspondence	3-4
	Elective	3
		<hr/>
		15-16

**Associate Degree—2 years**

Sophomore Year	Fall Term	Credit Hours
HUM	201 Western Civilization	4
ENG	English Elective	3
NS	Natural Science Elective, Political Science or Foreign Language	4
BUS	204 Business Correspondence or BUS 111 Accounting	3-4
	Elective	3
		<hr/>
		17-18

Winter Term		
HUM	202 Western Civilization	4
ENG	English Elective	3
NS	Natural Science Elective, Foreign Language or Economics	4
PSY	150 Psychology of Human Relations or BUS 220 Office Management	3
	Elective	3
		<hr/>
		17

Spring Term		
HUM	203 Western Civilization	4
ENG	English Elective	3
NS	Natural Science Elective, Foreign Language or Economics	4
	Elective	3
		<hr/>
		14



**Pre-Business Administration**

**Associate Degree Program**

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

Freshman Year	Fall Term	Credit Hours
PSY	101 Orientation	1
ENG	101 Composition	3
SS	101 Sociology	4
MTH	102 Intermediate Algebra	5
BUS	118 Introduction to Business	3
PE	101 Physical Education	1
		<hr/>
		17

Winter Term		
MTH	160 Statistics	5
ENG	102 Composition	3
SS	102 Economics	4
PE	102 Physical Education	1
	Elective	3
		<hr/>
		16

Spring Term		
SPH	104 Fundamentals of Speech	3
ENG	103 Composition	3
SS	103 Political Science	4
PE	103 Physical Education	1
PSY	201 Introduction to Psychology	4
		<hr/>
		15

Recommended Electives		
BUS	120 Sales	3
BUS	121 Retailing	3
BUS	130 Introduction to Marketing	3
BUS	131 Advertising	3
BUS	215 Law and Society I	3
BUS	216 Law and Society II	3

Sophomore Year	Fall Term	Credit Hours
HST	201 Western Civilization I	4
NS	101 Botany-Zoology	4
BUS	210 Principles of Accounting I	4
EC	301 Principles of Economics I	3
		<hr/>
		15

Winter Term		
HST	202 Western Civilization II	4
NS	102 Chemistry-Physics	4
BUS	211 Principles of Accounting II	4
EC	202 Principles of Economics II	3
		<hr/>
		15

Spring Term		
HST	203 Western Civilization III	4
NS	103 Astronomy-Geology	4
BUS	213 Principles of Accounting III	4
EC	203 Principles of Economics III	3
		<hr/>
		15

MTH	164 College Algebra and Trigonometry I	5
MTH	165 College Algebra and Trigonometry II	5
GEO	203 Economic Geography	3

**Evening Courses in Transportation and Traffic Management**

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

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

**Management and Marketing**

**Business COURSE DESCRIPTIONS**

- 020 Smaller Business Management** **Three credits**  
Survey of the functions of planning, organizing, and controlling oriented to the problems of smaller business organizations; a review of the major problems in marketing, finance, taxation, law, personnel relations, and economics applied to the smaller business.
- 011 Beginning Typewriting I** **No credit**  
Introduction to and mastery of the keyboard to build accuracy and speed. Fees on basis of three hours laboratory.
- 101 Intermediate Typewriting II** **Three credits**  
Continuation of Typewriting I. Improves speed, accuracy, and manipulation. Covers typing of business letters, reports, and tabulations.
- 102 Advanced Typewriting III** **Three credits**  
Continuation of Typewriting II. Improves judgment, skill and efficiency. Prerequisite: Business 101 or departmental approval.
- 104 Beginning Shorthand I** **Four credits**  
Designed to teach the basic principles of shorthand and build an elementary vocabulary.
- 104a Beginning Shorthand** **Two credits**  
Designed to teach the basic principles of shorthand and build an elementary vocabulary. (Evening College only.)
- 104b Continuation of 104a** **Two credits**  
(Evening College only.)
- 105 Intermediate Shorthand II** **Four credits**  
Completes theory begun in Business 104. Develops speed and accuracy in reading from plates, and in limited dictation. Prerequisite: Business 104 or departmental approval.
- 105a Intermediate Shorthand** **Two credits**  
Completes theory begun in Business 104b. Develops dictation. Prerequisite: Business 104 or 104a and 104b. (Evening College only.)
- 105b Continuation of 105a** **Two credits**  
(Evening College only.)
- 106 Advanced Shorthand III** **Four credits**  
Continuation of Business 105. Develops high speed in dictation. Prerequisite: Business 105 or 105a and 105b.
- 107 Business Machines I** **Three credits**  
Teaches the basic operations and manipulation of calculating machines. Includes the study of the operation of the ten-key, key-driven, and rotary calculators. One hour lecture, two hours laboratory. Prerequisite: Business 117 or College mathematics substitute.
- 108 Business Machines II** **Three credits**  
Continuation of Business 107. Develops higher speed and problem-solving ability. One hour lecture, two hours laboratory. Prerequisite: Business 107.

- 109 Secretarial Machines** **Two credits**  
Operation and manipulation of the stencil and fluid duplicating processes. Includes study of machine transcription and filing procedure. One hour lecture, one hour laboratory.
- 110 Accounting I** **Four credits**  
Explains and puts into practice rational processes of the accounting field. Balance sheet and income statement used to introduce the system. Followed by topics concerning records for merchandise, adjusting and closing accounts, business documents and procedures, cash controls, payroll procedures. Practice set is included. No prerequisite. Students who have completed one or two years of high school bookkeeping with A or B standing should consult with an accounting instructor for placement.
- 111 Accounting II** **Four credits**  
Continuation of Business 110. Course contents include owners equity accounts, negotiable instruments, accounting practices for purchases and sales, inventory, plant assets, adjusting entry and report procedures. Practice set is included, and an accounts receivable exercise for hotel-motel offices. Accounts payable and payroll exercise for small businesses are performed by using accounting boards and several pieces of related accounting equipment. Prerequisite: Business 110 or Business Division approval.
- 112 Accounting III** **Four credits**  
Continuation of Business 111. Subject matter relates to corporate organization, capital stock, retained earnings, bonds, intangible and wasting assets, voucher system, branch records and statement analysis. A practice set is included. Exercises on bookkeeping machines for accounts receivable, accounts payable, and payroll; also covers recording equipment for data processing service organizations.
- 113 Business Law** **Three credits**  
For students who are interested in completing certain one or two-year business programs and others who may be interested for consumer education purposes. Designed to help students develop vocabulary, a fund of information and understanding of meaning and operation for student training and growth in intelligent reading, understanding of, respect for, and obedience to the law. Course relates specifically to contracts, sales, negotiable instruments and other subject areas related to business.
- 117 Business Mathematics** **Three credits**  
Designed to develop skill and accuracy in mathematics. Includes study of decimals, fractions, aliquot parts, percentages, discounts, inventory, payroll, interest.
- 118 Introduction to Business** **Three credits**  
Survey of business activities, covering principles, problems and practices related to our economic framework. Includes topics such as organization, production, marketing, personnel administration, finance, and economics.
- 119 Office Methods** **Three credits**  
Offered primarily for the one-year office program. Emphasizes clerical office procedures and responsibilities. Includes the study and evaluation of effective personality traits. Prerequisite: Business 103.
- 120 Sales** **Three credits**  
Designed to familiarize the student with fundamentals of sales. Deals with such topics as consumer buying habits, the salesman's job, the sales transaction, retail store and other sales methods, inventory, use of sales media, product demonstration techniques, and customer service problems.

- Business 121 Retailing** Three credits  
A comprehensive consideration of the activities involved by retailers in selling goods to ultimate consumers. Emphasis placed on areas relating to the needs and interests of the class.
- 130 Introduction to Marketing** Three credits  
Study of problems and policies of manufacturers, wholesalers, and retailers in the marketing of goods and services. Channels of marketing, customer relations, functions of sales departments, price policies and communications are included.
- 131 Advertising** Three credits  
Presents methods and techniques in modern advertising, giving information to do the entire advertising job. Copy writing, selection of media and how the advertiser can approach his problems most effectively are included.
- 201 Transcription** Four credits  
Designed to teach how to type mailable transcripts from shorthand notes. Prerequisite: Business 106 and Business 102.
- 202 Shorthand Speed Building** Four credits  
Continuation of Business 201. Attention given to specialized vocabulary and high speed writing. Prerequisite: Business 201.
- 203 Secretarial Training** Three credits  
For the instruction of office procedures and responsibilities. Emphasizes the importance of pleasant, sincere personality and effective secretarial traits. Prerequisites: Business 103 and Business 106.
- 204 Business Correspondence** Three credits  
Most effective techniques for formulating the various types of letters are emphasized.
- 205 Legal Shorthand** Two credits  
Designed to develop skill in writing and transcribing words and phrases commonly recurring in the spoken and written language of the law. Prerequisite: Business 106.
- 207 Medical Shorthand** Two credits  
Develops skill in writing and transcribing words and phrases occurring in the spoken and written language of medicine. Prerequisite: Business 106 or departmental approval.
- 210 Principles of Accounting I** Four credits  
A course designed to explain and apply basic principles of accounting by means of balance sheet and income statement approach. Topics include basic analysis, perpetual and periodic merchandise accounting, alternative adjustments to accounts, business documents and data flow and negotiable documents. Includes the concept for the use of data processing equipment in performing accounting functions. Prerequisite: Sophomore standing or department approval.
- 211 Principles of Accounting II** Four credits  
Continuation of Business 210. Includes payroll and tax accounting, controlling accounts and subsidiary ledgers, cash records and forecasting, the voucher system, partnerships, corporations and bonds. Shows how accounting services contribute to the recognition and solution of management problems. Prerequisite: Business 210.

- 212 Principles of Accounting III** Four credits **Business**  
Continuation of Business 211 involving the study of income and valuation determination, and analysis and comparison of financial statements. Accounting principles related to mercantile businesses, branch accounts, manufacturing companies, cost accounting, budgeting and sources and application of funds. Prerequisite: Business 211.
- 215 Law and Society I** Three credits  
Introduction to the fundamental principles of our law for business and non-business students, to develop understanding of our legal system, federal, state and local, its purposes and importance to society. Course contents include study of the nature and sources of law, study of courts, and court procedure, legal reasoning, crime and torts, and the law of contracts, personal and real property, leases and mortgages, and bailments. Prerequisite: Sophomore standing or departmental approval.
- 216 Law and Society II** Three credits  
The nature and law of sales, commercial paper, security devices, agency, employment, partnerships, corporations—profit and non-profit types—insurance, trusts and estates, and the 1962 Michigan Uniform Commercial Code. Prerequisite: Business 215.
- 220 Office Management I** Three credits  
First of two courses dealing with the principles of office management. Includes study of office organization and layout; work flow, procedures, standards, personnel and supervision procedures, equipment; centralized services; and automation trends.
- 221 Office Management II** Three credits  
Deals with automation and trends in the problem areas of social, economic organization, management, feasibility, and automated service centers.
- 225 Principles of Management** Three credits  
Study of (a) the field of management in terms of the concept of scientific management, and the qualifications of executives; (b) principles of the planning, organizing, and controlling functions, including the relationship of decision making to the work of the organization; (c) relationship of the management of people, communications, morale, and motivation to the leadership concept of management.
- 226 Personnel Management** Three credits  
Survey of the principles, problems, and practices of modern business, government, and other organizations involved in the handling of employees from the recruiting stages through the post-retirement stage. Emphasis on the use of the appropriate practices in keeping with the type and size of organization. Prerequisite: Business 118, or equivalent.
- 227 Management Training** Three credits  
Management principles oriented to the supervisory levels of responsibilities in business, government, and other activities. Emphasis is placed on management functions of planning, organizing, directing, coordinating, and controlling, the relationship of policies and procedures, and the responsibilities of supervisory persons for work performance, employee development and evaluation, leadership of workers, and ethics to be considered in decisions.

**Business 229 Public Relations** **Three credits**  
Techniques of public relations for those holding supervisory or higher positions in management and marketing. Principles of creating and maintaining good public relations, including employee-employer relations. Customer-employee relations receive emphasis, while focus on the programming of the total public relations effort and selecting of appropriate strategy, media, and persuasive devices to accomplish objectives.

**232 Sales Management** **Three credits**  
Study from the viewpoint of management, dealing with the organization and operation of the sales division within the business enterprise. Planning, organizing and controlling of the total sales effort is emphasized. The case method of learning is employed extensively.

**235 Managerial Marketing** **Three credits**  
Study of the total enterprise regarding problems, analytical tools, and approaches to decisions. Concerns allocation of funds to various means of market cultivation, development of promotional strategy, price policy, and management of field selling effort.

**240, 241, 242, and 243 (Arranged) Office Internship—Seminar** **Three credits**  
After successful completion of basic courses, usually following the freshman year, students may elect internship. This course allows the students to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages for hours of work. To participate in this program students must be qualified to receive approval from their department and enroll with the coordinator. Their occupational interests are considered with their background or related classes to determine employment arrangements. The flexibility of developing individual programs for interested students in any related occupational opening is accomplished on the basis of developing a practical training program in agreement with the training station supervisors and the college coordinator. Full course load and departmental approval are prerequisites.

**246, 247, 248 and 249 (Arranged) Management and Marketing Seminar** **Three credits**  
After successful completion of basic courses, students may elect internship. This course allows the student to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages for hours of work. To participate in this program students must be qualified to receive approval from their department and enroll with the coordinator. Their occupational interests are considered with their background or related classes to determine employment arrangements. The flexibility of developing individual programs for interested students in any related occupational opening is accomplished on the basis of developing a practical training program in agreement with the training station supervisors and the college coordinator.

**250 Intermediate Accounting** **Four credits**  
Offers additional education beyond the first year of Accounting. Attention is directed toward deeper understanding of the asset, liability, and stockholders equity sections of the balance sheet accounts. An analytical approach to accounting is used involving problem-solving illustrations. The why of the theory is stressed with logical illustrations of the how of accounting. Specific exercises are included for advanced working sheets and financial statement preparation. Research references to the American Accounting Association, National Association of Accountants, and the American Institute of Certified Public Accountants are used. The effect of errors on financial statements and the correction of them is applied. Prerequisite: Accounting III or Principles of Accounting III.

102

**253 Survey of Cost Accounting** **Four credits**  
Survey course of cost accounting includes job cost, process cost, and standard cost systems, with other cost procedures and factors. A job cost accounting practice set is used. Prerequisite: Intermediate Accounting, or Business Division approval.

**260-265 Traffic and Transportation Management** **Three credits**  
Two-year, six term course resulting in a certificate issued by the College. Theoretical, historical, and academic aspects of traffic management are presented with analysis of practical problems and specific cases.

**266 Accounting Systems and Procedures** **Four credits**  
Provides broad understanding of accounting systems. Includes information and actual application of single entry systems, batch systems, double entry manual systems, accounting board systems, machine bookkeeping systems, punched tape and punched card systems. Skill and development is provided for flow charting, forms design, methods of coding and condensing information, punched card design and application of techniques to the designed system. Prerequisite: Survey of Cost Accounting, or Business Division approval.

**270 Real Estate Essentials** **Three credits**  
Designed for new or inexperienced salespeople and those interested in entering the real estate profession. Covers prospecting, listings, showing property, salesmanship, business practices, offers to purchase, Michigan License Law, ethics, etc.

## Economics

**101 Applied Economics** **Three credits**  
Introductory survey of business economics. Course work focuses attention on the major economic problems and issues within our American economy. Provides an overview and some tools of economic analysis to aid in logical interpretation. Major subject areas relate to overall look at our economic system, prices and their application, money, income and economic growth.

**201 Principles of Economics I** **Three credits**  
First of three courses about the American economy. Provides training for development of objective consideration of economic issues. Concentrates on vital economic problems, business organization, including cooperatives, individual and family income, personal finance, national income and product, economic role of government, labor and industrial relations, saving, consumption and investment, and theory of income determination. Prerequisite: sophomore standing or departmental approval.

**202 Principles of Economics II** **Three credits**  
Continuation of Economics 201. Includes: business cycles, prices and money, banking system, monetary and fiscal policy, supply and demand, demand and utility, cost and supply, equilibrium of the firm, and imperfect competition. Prerequisite: Economics 201.

**203 Principles of Economics III** **Three credits**  
Continuation of Economics 202. Theory of production and marginal products, rent, wages and collective bargaining, interest and capital, profits and incentives, international trade, technology, problems of economic growth and development, and alternative economic systems. Prerequisite: Economics 202.

103

**Business Data Processing**

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

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

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

**109 Fortran (On demand)** **Three credits**  
Introduction to general purpose digital computers. Programming concepts are taught using Fortran language and the IBM 1620 computer. Prerequisite: Mathematics 102 Intermediate Algebra and Mathematics 103 Trigonometry or consent of instructor.

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

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

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

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

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

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

**Hotel-Motel and Food Service Mid-Management Technology****Business**

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

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

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

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

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

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

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

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

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

**214 Law As Related to Innkeeping** **Three credits**  
A course for innkeepers and their personnel as well as students. Presentation of safe, sound rules to assist in avoiding lawsuits and legal pitfalls.

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

**221 Hospitality Management** **Three credits**  
General concepts and management including personnel, guests, and operations present and future.

**222 Food & Labor Cost Control** **Three credits**  
Supervisory procedures in the control of two major items of expense.

**223 Front Office Procedures** **Four credits**  
Organization, control and operation of the front office as applied in the reservation and sale of rooms, service, keeping of accurate accounts, presenting bills of receipts of payment.

**224 Catering & Beverage Operation** **Three credits**  
Food and beverage sales and service.

## DIVISION OF TECHNOLOGY

Department of Engineering Technology  
Transportation Training Program  
Manpower Development Program  
Department of Applied Technology



*William Monroe,  
Dean Thomas MacClure*



**Technology Division** *Division of Technology**Division Chairman: WILLIAM R. MONROE*

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

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



William R. Monroe

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

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

The technicians from each of these programs are concerned with "how to do it" and use their special knowledge to perform operations, make calculations and estimates, and prepare plans in their respective fields of study. They are employed as laboratory technicians, draftsmen, testers, research technicians, engineering technicians, and in a host of other capacities.

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

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

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

And once again in its technical programs, as in its Business program, Lansing Community College gives ample opportunity for cooperative training by allowing time for part-time employment that corresponds to and puts classroom theory into practice.

*Department of Engineering Technology**Department Chairman: EDWIN C. BERGMANN*

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

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

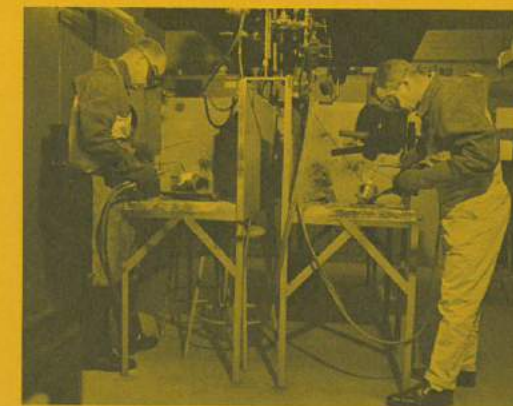
In general, technicians are more intensively trained in fundamentals than craftsmen and in manipulative skills than full professionals. Technicians usually become qualified through formal technical training, on-the-job training, or a combination of both.

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

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

**Engineering Technology Curricula**

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

**Technology Division****Engineering Technology**

Edwin C. Bergmann



LANSING COMMUNITY COLLEGE  
Department of Engineering Technology

Curriculum	Drafting Technology (DT Courses)	Civil Technology (CT Courses)	Electronics Technology (ET Courses)	Mechanical Technology (MT Courses)	Systems Technology (ST Courses)
Cartographic Drafting & Photogrammetry	101 103 106 206 207 208	105 111 212 213 214			
Civil Technology	101 103 106	101 102 103 201 111 202 203 204 205 206 207 212 213 214			
Highway Option	101 103 106	101 102 103 111 201 203 205 212 213			
Highway Option Coop	101 103 106	101 103 104 111 118 201 205 206 210 219	260		
Sanitary Option	101 103 106	101 102 103 201 203 204 206 207		204	
Structural Option	101 103 106 235	131 132 133 231 232 233 236			
Community Development	101 135				
Computer Technology			111 112 113 206 231 232 233 241 242 243	101 102	
Drafting Technology	011 101 102 103 132 135 136 230 231 232 233 234 241 242 243 245 246 247	201 204 207			
Electronics Technology	101				
Fire Science Technology		161 162 163 160 164 165 166 167 261 262 263 264 265 266 267			
Mechanical Technology	101 102 103 104 202		260 261	101 102 103 201 203 204 207 208 209 210 211	
Pre-Engineering	101 102 103				101
Quality Control					101 102
Safety					101
Technical Mgmt.					

Cartographic Drafting and Photogrammetry

Cartographic drawings were among the first methods of transmitting and recording information about land formations, routes, or specific geographic locations.

The art of drawing maps has become an essential vocation in our present society. The technique has been refined and tremendously improved since crude maps were made freehand in the field while exploring. Today the work requires solution of cartographic problems involving the investigation, development, evaluation, selection, or adaptation of plans, standards, equipment, methods, or techniques of map, chart design or construction.

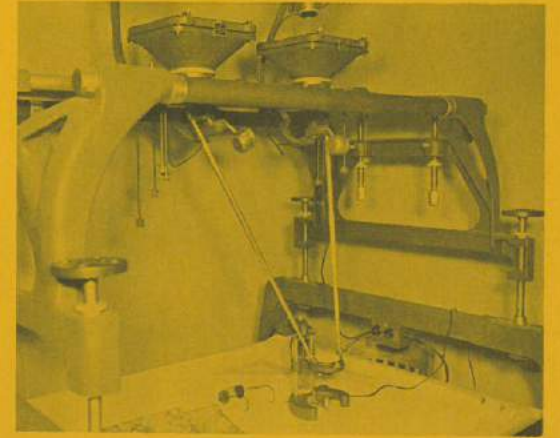
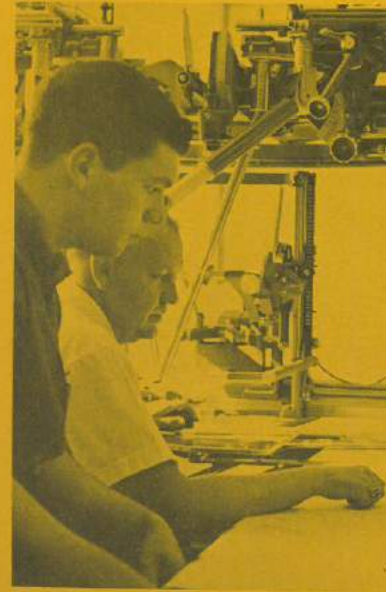
The United States Coast and Geodetic, Geological and Oceanographic Surveys, State and Federal Highway, Agriculture, and Forest agencies, and private industries are a few of the many organizations which employ photogrammetry experts.

Specialists in this field are trained for stereoplotter operation for photogrammetry, as draftsmen, and illustrators.

A certificate is awarded for completion of the one-year program in Cartographic Drafting. The Associate Degree in Technology is awarded after completion of the second year.

Freshman Year	Fall Term	Credit Hours
DT	101 Engineering Drawing	3
CT	105 Aerial Photo Interpretation	3
MTH	151 Math. for Technicians	5
ENG	101 Composition	3
PE	101 Physical Education	1
		15
Winter Term		
DT	106 Engineering Drawing-Civil	3
DT	103 Descriptive Geometry	3
MTH	152 Math. for Technicians	5
ENG	102 Composition	3
PE	102 Physical Education	1
		15
Spring Term		
CT	111 Elementary Plane Surveying	5
CT	212 Route Surveying	4
DT	206 Cartographic Drawing	6
PE	103 Physical Education	1
		16

Sophomore Year	Fall Term	Credit Hours
MTH	153 Math. for Technicians	5
CT	214 Generic Surveying	4
PHY	201 Physics	4
DP	109 Fortran	3
		16
Winter Term		
CT	213 Advanced Surveying	4
PHY	202 Physics	4
CT	238 Photogrammetry and Stereoplotter Operation	4
SS	250 American Government	4
		16
Spring Term		
PHY	203 Physics	4
ENG	103e Technical Composition	3
CT	238 Advanced Photogrammetry and Stereoplotter Operation	6
SPH	104 Fundamentals of Speech	3
		16



Engineering Technology





**Engineering Technology** **Civil Technology**

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

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

**Civil Technology Highway Option**

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	CT	203 Soils Testing & Classification	3
DT	101 Engineering Drawing	3	PHY	201 Physics	4
CT	101 Construction Methods	2	CT	202 Highway Technology	4
CT	102 Construction Materials	4	CT	214 Geodetic Surveying	4
CT	103 Construction Costs	2			15
PSY	101 Orientation	1			
		17			
	<b>Winter Term</b>			<b>Winter Term</b>	
MTH	152 Mathematics for Technicians	5	PHY	202 Physics	4
DT	106 Engineering Drawing-Civil	3	CT	204 Strength of Materials	3
ENG	101 Composition	3	CT	213 Advanced Surveying	4
CT	201 Construction Contracts	3	ENG	102 Composition	3
CT	205 Hydrology	3			14
		17			
	<b>Spring Term</b>			<b>Spring Term</b>	
MTH	153 Mathematics for Technicians	5	PHY	203 Physics	4
DT	103 Descriptive Geometry	3	CT	207 Structural Technology	4
CT	111 Elementary Surveying	5	CT	206 Project Lab	2-3
CT	212 Route Surveying	4	ENG	103e Composition	3
		17	SS	250 American Government	4
					17-18
	<b>Summer Term</b>				
TEC	208 Internship Seminar	3			



**Civil Technology Highway Option Cooperative**

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

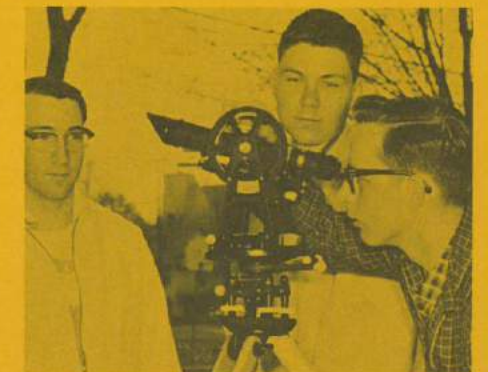
Other Cooperative and Internship programs can be arranged for students not directly connected with the Highway Department.

1st Year	Fall Term	Credit Hours	2nd Year	Fall Term	Credit Hours
	The students will be working on co-op and will not be in school this term.			The students will be working on co-op and will not be in school this term.	
	<b>Winter Term</b>			<b>Winter Term</b>	
MTH	151 Mathematics for Technicians	5	ENG	101 Composition	3
DT	101 Engineering Drawing	3	MTH	153 Mathematics for Technicians	5
CT	101 Construction Methods	2	CT	201 Construction Contracts	3
CT	102 Construction Materials	4	CT	205 Hydrology	3
CT	103 Construction Costs	2	CT	213 Advanced Surveying	4
PSY	101 Orientation	1			18
		17			
	<b>Spring Term</b>			<b>Spring Term</b>	
DT	106 Engineering Drawing-Civil	3	DT	103 Descriptive Geometry	3
MTH	152 Mathematics for Technicians	5	ENG	102 Composition	3
CT	111 Elementary Surveying	5	PHY	201 Physics	4
CT	212 Route Surveying	4	CT	203 Soil Testing & Classification	3
		17		Electives	3-5
					17-18
	<b>3rd Year</b>			<b>Fall Term</b>	
				<b>Credit Hours</b>	
			CT	214 Geodetic Surveying	4
			CT	202 Highway Technology	4
			CT	204 Strength of Materials	3
			PHY	202 Physics II	4
					15
				<b>Winter Term</b>	
			ENG	103e Composition	3
			PHY	203 Physics III	4
			CT	207 Structural Technology	4
			CT	206 Project Laboratory	2-3
			SS	250 American Government	4
					17-18

**Graduation at the End of Winter Term**



**Engineering Technology**



**Engineering Technology** **Civil Technology – Sanitary Option**

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	ENG	101 Composition	3
DT	101 Engineering Drawing	3	PHY	201 Physics	4
CEM	111 General Chemistry	5	CT	101 Construction Methods	2
ET	260 Industrial Electricity or Elective	3-4	CT	104 Construction Materials (without Lab)	2
PSY	101 Orientation	1	CT	103 Construction Costs	2
		17-18	CT	118 Water Supply & Treatment	4
					17
Winter Term					
MTH	152 Mathematics for Technicians	5	Winter Term		
CEM	112 General Chemistry	5	ENG	102 Composition	3
DT	106 Engineering Drawing—Civil	3	CT	219 Sewerage & Sewage Treatment	4
CT	210 Hydraulics	3	CT	201 Construction Contracts	3
		16	CT	205 Hydrology	3
				Elective	3-4
					16-17
Spring Term					
MTH	153 Mathematics for Technicians	5	Spring Term		
CEM	113 Chemistry OR		MIC	103 Microbiology	4
CEM	201 Chemistry	5	SS	250 American Government	4
CT	111 Elementary Surveying	5	DT	103 Descriptive Geometry	3
	Elective	3-4	CT	206 Project Lab	2-3
		18-19	ENG	103e Technical Composition	3
					16-17
Summer Term					
TEC	208 Internship-Seminar	3			

**Civil Technology – Structural Option**

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

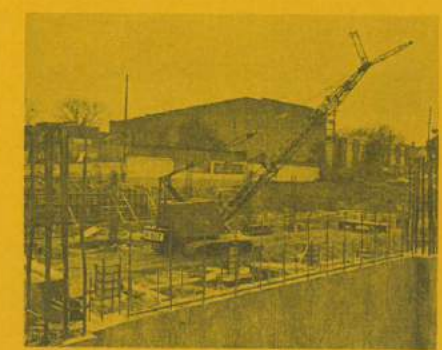
Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	PHY	201 Physics	4
DT	101 Engineering Drawing	3	CT	203 Soil Testing & Classification	3
CT	101 Construction Methods	2	DT	235 Structural Drawing	3
CT	102 Construction Materials	4		Elective	5-6
CT	103 Construction Costs	2			15-16
		16			
Winter Term					
MTH	152 Mathematics for Technicians	5	Winter Term		
DT	106 Engineering Drawing—Civil	3	PE	102 Physical Education	3
ENG	101 Composition	3	CT	204 Strength of Materials	3
CEM	110 Industrial Chemistry	3	PHY	202 Physics	4
CT	201 Construction Contracts	3	SS	250 American Government	4
		17			15
Spring Term					
MTH	153 Mathematics for Technicians	5	Spring Term		
DT	103 Descriptive Geometry	3	PHY	203 Physics	4
ENG	102 Composition	3	CT	207 Structural Technology	4
PE	103 Physical Education	1	ENG	103e Technical Composition	3
MT	204 Metallurgy	3	CT	206 Project Lab	2
		15		Elective	3
					16
Summer Term					
TEC	208 Internship-Seminar	3			

**Community Development Technology**

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
MTH	102 Intermediate Algebra	5	PHY	201 Physics	4
ENG	101 Composition	3	MTH	160 Statistics	5
BUS	107 Business Machines I	3	EC	201 Principles of Economics I	3
PSY	101 Orientation	1	DP	103 Introduction to Data Processing	5
DT	101 Engineering Drawing	3			17
		15			
Winter Term					
MTH	164 College Algebra & Trig. I	5	Winter Term		
ENG	102 Composition	3	EC	201 Principles of Economics II	3
ART	101 Drawing I	2	CT	231 Project Lab	3
CT	131 Community Development I	3	DT	236 Reproduction Methods	2
	Elective	2-3	SPH	104 Fundamentals of Speech	3
		15-16	DP	109 Fortran	3
					14
Spring Term					
MTH	165 College Algebra & Trig. II	5	Spring Term		
DT	135 Pictorial Illustration	3	EC	203 Principles of Economics III	3
CT	132 Community Development II	3	ENG	103e Technical Composition	3
CT	133 Community Development	3	SS	250 American Government	4
	Law	3	CT	232 Project Lab	3
	Elective	2-3	BUS	215 Law and Society I	3
		16-17			16
Summer Term					
Freshman Year					
TEC	208 Internship-Seminar	3			

**Engineering Technology**



**Engineering Technology** **Computer Technology**

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

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
MTH	151 Mathematics for Technicians	5	ET	231 Computer Circuits	3
ENG	101 Composition	3	ET	241 Automation	4
ET	111 Electrical and Electronic Circuits	5	DP	103 Introduction to Data Processing	5
MT	101 Manufacturing Processes	3	PHY	201 Physics	4
PSY	101 Orientation	1			16
17			16		
Winter Term			Winter Term		
MTH	152 Mathematics for Technicians	5	ET	232 Computer Circuits	3
ENG	102 Composition	3	ET	242 Automation	4
ET	112 Electrical and Electronic Circuits	5	MT	102 Manufacturing Processes	3
ED	101 Engineering Drawing	3	PHY	202 Physics	4
16			14		
Spring Term			Spring Term		
MTH	153 Mathematics for Technicians	5	ET	233 Computer Circuits	3
ENG	103e Technical Composition	3	ET	243 Automation	4
ET	113 Electrical and Electronic Circuits	5	MT	103 Manufacturing Processes	2
SS	250 American Government	4	MTH	155 Data Processing Mathematics	5
		17	PHY	203 Physics	4
17			18		

**Drafting Technology**

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

**Architectural Drafting**

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
DT	131 Architectural Drafting	6	DT	231 Architectural Drawing	6
NS	102 Natural Science (Chemistry-Physics)	4	CT	204 Strength of Materials	3
ENG	101 Composition	3	CT	241 Office Practices and Procedures	4
MTH	151 Mathematics for Technicians	5	CT	242 Building Plumbing Systems	1
PE	101 Physical Education	1	ENG	103e Technical Composition	3
19			17		
Winter Term			Winter Term		
DT	136 Architectural Drawing	6	DT	233 Architectural Drafting	4
NS	103 Natural Science (Astronomy-Geology)	4	CT	243 Building Electrical Systems	1
MTH	152 Mathematics for Technicians	5	DT	135 Pictorial Illustration	3
	Elective	2-3	CT	207 Structural Technology	4
		17-18	DT	234 Landscaping	2
17-18				Elective	3
Spring Term			Spring Term		
DT	230 Architectural Drawing	6	DT	232 Architectural Drawing	6
DT	103 Descriptive Geometry	3	CT	245 Urban Planning	2
ART	101 Drawing I	2	CT	246 Heating and Air Conditioning	1
ENG	102 Composition	3	CT	247 Architectural History	2
GEO	200 Elements of Geography	3	CT	201 Construction Contracts	3
17			14		



**Electronics Technology**

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

Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
MTH	151 Math for Technicians	5	ET	231 Computer Circuits	3
ENG	101 Composition	3	ET	241 Automation	4
ET	111 Electrical and Electronic Circuits	5	ET	271 Communications	5
MT	101 Manufacturing Processes	3	PHY	201 Physics	4
PSY	101 Orientation	1			16
17			16		
Winter Term			Winter Term		
MTH	152 Math for Technicians	5	ET	232 Computer Circuits	3
ENG	102 Composition	3	ET	242 Automation	4
ET	112 Electrical and Electronic Circuits	5	ET	272 Communications	5
DT	101 Engineering Drawing	3	PHY	202 Physics	4
16			16		
Spring Term			Spring Term		
MTH	153 Math for Technicians	5	ET	233 Computer Circuits	3
ENG	103e Technical Composition	3	ET	243 Automation	4
ET	113 Electrical and Electronic Circuits	5	ET	273 Communications	5
SS	250 American Government	4	ET	206 Project Laboratory	2
		17	PHY	203 Physics	4
17			17		

**Engineering Technology**

**Engineering Technology** **Fire Science Technology**

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

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

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

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

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

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



Freshman Year			Sophomore Year		
	Fall Term	Credit Hours		Fall Term	Credit Hours
CT	161 Basic Fire Protection	4	ENG	101 Composition	3
CT	162 Basic Fire Suppression	4	CT	261 Hazardous Materials II	4
CT	163 Basic Fire Prevention	4	CT	262 Ordinances and Codes II	3
MTH	151 Mathematics for Technicians	5	BUS	229 Public Relations	3
		17		Elective	3-4
					15-17
Winter Term			Winter Term		
PE	102 Physical Education	1	ENG	102 Composition	3
SPH	104 Fundamentals of Speech	3	CT	263 Bldg, Constr, for Fire Security	5
CEM	110 Industrial Chemistry	4	CT	264 Fire Investigation I	3
CT	160 Fire Strategy and Tactics	5	CT	265 Emergency Rescue Procedures	4
CT	164 Protection Systems Equipment	3			15
		16			
Spring Term			Spring Term		
PE	103 Physical Education	1	ENG	103e Technical Composition	3
CT	165 Hazardous Materials I	4	CT	266 Fire Investigation II	3
CT	166 Ordinances and Codes I	3	CT	267 Organizational Procedure	3
CT	167 Fire Hydraulics	4	SS	250 American Government	4
	Elective	3-4		Elective	3-4
		15-16			16-17

**Mechanical Technology**

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

**DESCRIPTIONS OF TYPICAL POSITIONS**

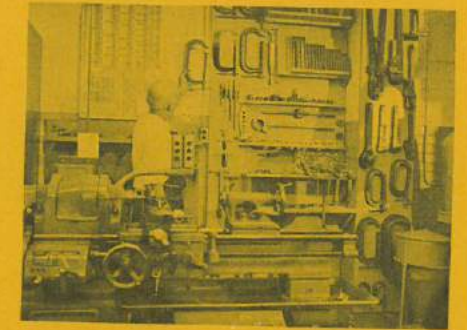
**Draftsmen and Machine Designers**

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

**Cost Estimator**

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

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



**Engineering Technology**

**Engineering Technology**

**Pre-Engineering**

Freshman Year	Fall Term	Credit Hours
MTH 201	College Algebra	5
ENG 101	Composition	3
CEM 111	Gen. Chemistry (Inorganic)	5
PSY 101	Orientation	1
PE 101	Physical Education	1
		<hr/>
		15

Winter Term		
MTH 213	Analytic Geometry and Calculus I	5
ENG 102	Composition	3
CEM 112	Gen. Chemistry (Inorganic)	5
	Elective	3-4
PE 102	Physical Education	1
		<hr/>
		17-18

Spring Term		
MTH 214	Analytic Geometry and Calculus II	5
ENG 103	Composition	3
CEM 113	Qualitative Analysis	5
	Elective	3-4
PE 103	Physical Education	1
		<hr/>
		17-18

Sophomore Year	Fall Term	Credit Hours
MTH 215	Analytic Geometry and Calculus III	5
PHY 211	Physics	4
DT 101	Engineering Drawing	3
SS 101	Sociology	4
		<hr/>
		16

Winter Term		
MTH 216	Analytic Geometry and Calculus IV	5
PHY 212	Physics	4
DT 102	Engineering Drawing	3
SS 102	Economics	4
		<hr/>
		16

Spring Term		
MTH 219	Differential Equations	4
PHY 213	Physics	4
DT 103	Descriptive Geometry	3
SS 103	Political Science	4
		<hr/>
		15

**TECHNICAL INTERNSHIP**

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

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



**Cooperative Education**

at the University of Michigan Dearborn Center

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

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

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

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

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

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

**Transportation Training Program**

Coordinator: LEONARD SNIDER

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

This program includes studies on the following subjects:

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

**Engineering Technology**



Leonard Snider

**Engineering  
Technology**

*Transportation Training Program (continued)*

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

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

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

1. Write or telephone the coordinator, Transportation Training Center, Lansing Community College, 419 North Capitol Avenue, Lansing, Michigan 48914, requesting application forms.
2. Complete the forms you receive and return them to the coordinator along with the application fee (\$5.00) and tuition deposit (\$25.00). The forms you will receive include Interstate Commerce Commission physical examination blank to be completed by a doctor and the American Transportation Association application for employment.
3. After your application is reviewed by the Lansing Community College staff and a screening committee composed of representatives of the trucking industry, you will be notified of your acceptance and the time, date, and location for the first class.
4. The balance of the tuition fee must be paid in full when registering for the class unless special arrangements are made with the coordinator. Tuition fees are \$200 for residents of the Community College district and \$250 for non-residents. A \$25 tuition deposit is required with the application, and will be credited to the tuition on acceptance, refunded only if the applicant does not pass the entrance requirements.
5. The tuition deposit is returned to those applicants not accepted for the program.
6. Students who withdraw for any reason during the course will be charged prorata for the weeks of training received, less \$25 with no refunds after completion of the second full week of training.



Joseph Miller

*Manpower Development Program*

Coordinator: JOSEPH MILLER

Specialized programs are offered under the Federal Manpower Development Training Act (MDTA) which lead to the development of vocational skills acceptable on the entry level in their respective occupational areas.

These programs are primarily intended for the training of workers who cannot obtain full-time employment. School expenses and training allowances are provided for those who qualify.

Representative programs that have been offered recently include the following:

- |                  |                                      |
|------------------|--------------------------------------|
| Machine Operator | Women's Garment Fitter (Alterations) |
| Welder           | Furniture Repairman-Cabinet Maker    |
| Practical Nurse  | Auto Body Repairman                  |

These programs do not necessarily coincide with the regular school terms, as they are regulated by state and federal agencies and are offered at their discretion as funds are available and local needs for specific skills demand.

Any person interested in this type of endeavor should contact the Director of Retraining, Technical Division, to determine the courses to be offered in the immediate future.

COURSE DESCRIPTIONS

Civil Technology

011 Fundamentals of Surveying (Variable Non-Transfer Credit)

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

101 Construction Methods Two credits

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

102 Construction Materials Four credits

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

103 Construction Costs Two credits

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

104 Construction Materials Two credits

Same course content as Civil Technology 102 but without the laboratory.

105 Aerial Photo Interpretation Three credits

Covers identification of terrain features (both geologic and geomorphology), suitability and identification of ground survey control, elementary soil classification, and identification of vegetation.

111 Elementary Plane Surveying Five credits

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

131 Community Development I Three credits  
Formerly CDT 101

Study of land use, population growth, area economics and housing. Land measurements and community functions are also investigated.

132 Community Development II Three credits  
Formerly CDT 102

A continuation of Community Development 131 with emphasis on data gathering and analysis. Reports, including graphic illustrations and tables are reviewed. Two hours lecture, two hours laboratory.

**Engineering  
Technology  
Civil**

**Engineering  
Technology**  
Civil

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

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

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

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

\* Non transfer credit

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- 264 Fire Investigation I** Three credits  
*Formerly FST 211*  
Fire behavior and importance of determining origin. Procedures used in identifying accidental, incendiary or arson type fires. Methods of recognizing and identifying motivation for arson. Laws relative to the intentional setting of fires. Prerequisites: Civil Technology 166 and 262.
- 265 Emergency Rescue Procedures** Four credits  
*Formerly FST 212*  
Study of emergency first-aid and rescue practices. Training with resuscitation and rescue equipment and its application for mutual aid, major disaster and civil defense.
- 266 Fire Investigation II** Three credits  
*Formerly FST 221*  
Continuation of Civil Technology 264. Preservation of evidence and photographic coverage of fire. Methods of interrogation related to fire investigation and conduct for investigators. Study of libel, slander and court procedures relative to evidence and statements. Importance of cooperation between investigative agencies; records, reports and case histories.
- 267 Organizational Procedures** Three credits  
*Formerly FST 222*  
Further study of fire department organization. Considers personnel administration, communications, records and reports, maintenance, training, fire equipment, fire prevention and fire fighting, fire company organization and duties of the company officer. Prerequisite: Civil Technology 161.

**Engineering  
Technology**  
Drafting

- Drafting Technology**
- 011 Beginning Mechanical Drawing** Two credits\*  
For those who have had no previous drafting or are in need of a refresher for understanding of orthographic projection. Lettering and free-hand sketching also stressed. DT 011 is preliminary to entering DT 101 for those who have not had at least one year of high school drawing. Recommended to students interested in reading blueprints as well as to art students.
- 101 Engineering Drawing** Three credits  
*Formerly ED 101*  
A course in drafting which is designed for the purpose of enabling the student to be thoroughly efficient in reading, understanding, and drawing of orthographic views. The points to be stressed will be dimensioning, sectioning, auxiliary views, and cams, gears, and linkage problems. Two hours lecture, three hours laboratory. Prerequisites: Drafting Technology 011 or one year of high school drafting.
- 102 Engineering Drawing** Three credits  
*Formerly ED 102*  
Continuation of Drafting Technology 101 in which further work is given in the principles of dimensioning. Emphasizes practice in perspectives to help students develop skill in technical sketching. Includes development and detailing of assembly drawings. Six hours laboratory. Prerequisite: Drafting Technology 101.
- 103 Descriptive Geometry** Three credits  
*Formerly ED 103*  
A basic course in the science of graphic representation and solution of space problems through the practice of fundamental principles of advanced orthographic

130 \* Non transfer credit

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

- 104 Jig and Fixture Design** Three credits  
*Formerly ED 104*  
Presents the structure of fixtures to hold work being machined or welded. Six hours laboratory. Prerequisites: Drafting Technology 101 and 102; Mechanical Technology 101.
- 106 Engineering Drawing—Civil** Three credits  
*Formerly ED 106*  
Offers practice in techniques of transferring field survey notes to the drawing and includes Traverse Plotting, Topographic Maps, Profiles, Cross Sections, Earthwork Plans, logs of Boring, and Plat Maps.
- 107 Engineering Drawing** Three credits  
*Formerly ED 107*  
This course covers pencil, ink, and stylus drafting on mylar. The newer techniques in drafting and reproduction methods will be covered. The emphasis will be on applications within the student's particular area of interest.
- 131 Residential Planning** Three credits  
*Formerly AD 101*  
For those who desire to learn home design. Topics include construction details as well as architectural style and planning concepts. Some reading of blueprints and training in drawing house plans. Two hours lecture, four hours laboratory.
- 132 Architectural Drafting** Six credits  
*Formerly AD 102*  
Beginning course in architectural drafting fundamentals. Student develops skill in use of drawing instruments and gains understanding of orthographic projection, sketching, and sections. Introduction to principles of dimensioning and techniques of lettering. 12 hours laboratory.
- 135 Pictorial Illustration** Three credits  
*Formerly AD 105*  
A fundamental course for those interested in becoming or who are working as draftsmen or illustrators. Course covers principles of axiometric projection, perspective shading, and shadows, with experience offered in the use of various rendering medias. Six hours laboratory.
- 136 Architectural Drawing** Three credits  
*Formerly AD 110*  
First in series of architectural drawing courses designed to serve the basic needs of individuals presently employed or wishing to find employment as architectural draftsmen, estimators, salesmen, or in other allied fields of employment within the construction industry. Course deals primarily with the graphic representation of construction details, materials, and practices in residential construction. Includes some emphasis on building codes and government specifications. Six hours laboratory. Prerequisites: Drafting Technology 101, 102 and 103. For drafting technology majors; others, approval of department.
- 202 Die Design** Three credits  
*Formerly ED 202*  
Teaches the student to design the many types of sheet metal dies used in industry. Six hours laboratory. Prerequisites: Drafting Technology 101, 102, 103 and Mechanical Technology 101.

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

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- 232 Architectural Drawing** Six credits  
*Formerly AD 212*  
Conclusion of 231 where the student prepares final working drawings and completes a set of specifications covering the project designed in 231. The final result of 231 and 232 should be a well prepared resume of the student's architectural drafting abilities and his general knowledge of the construction industry. Twelve hours laboratory.
- 233 Architectural Drafting** Four credits  
*Formerly AD 213*  
Covers proper selection of building materials and the preparation of architectural details using these materials. Emphasis is placed upon using reference material and developing working drawings from architectural sketches. Eight hours laboratory.
- 234 Landscaping** Two credits  
*Formerly AD 204*  
Site development, earthwork, grading plans, site structures, parking layouts, tree and shrub selection, and planting layouts. Four hours laboratory.
- 235 Structural Drawing** Three credits  
*Formerly AD 214*  
Acquaints the student with the standard graphic representation of various structural designs using concrete, steel, and wood; of structural components, and of structural details. Six hour laboratory.
- 236 Reproduction Methods** Two credits  
*Formerly CDT 203*  
A survey course covering various reprinting aids and their cost, including, but not limited to, photo, offset, hot type, and silk screen composing.

**Electronics Technology**

- 111 Electrical and Electronic Circuits I** Five credits  
An introduction of basic electrical circuits with the emphasis on direct current. Covers electrical units, Ohms law, Kirchhoff's laws, network theorems, inductance and capacitance. Voltage, current, and resistance measurements are emphasized in the lab, through the use of the VOM, VTVM, Ohmmeter, and Wheatstone bridge. Simple meters are constructed and tested. Three hours lecture, four laboratory.
- 112 Electrical and Electronic Circuit II** Five credits  
Continuation of ET 111 with emphasis on sinusoidal voltage and current and vacuum tube theory. Analysis of RC, RL, and RLC circuits, both series and parallel. Resonance, network theorems, and coupled circuits are discussed. The vacuum tube is presented and simple amplifiers are studied. Laboratory work emphasizes AC measurements and vacuum tube characteristics through the use of the oscilloscope, voltmeter, milliammeter, signal generators, AC bridge, curve tracers, and tube testers. Three hours lecture, four laboratory.
- 113 Electrical and Electronic Circuits III** Five credits  
A continuation of ET 112 with major emphasis on the transistor, Semiconductor theory, small signal characteristics, biasing, and practical applications are studied. Laboratory work enforces the lecture through the construction and testing of the various amplifier circuits. The oscilloscope, voltmeter, milliammeter, signal generators, curve tracers, and transistor testers are used. Three hours lecture, four laboratory.

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- 206 Project Laboratory** (Variable credit)  
Student selects a project compatible with his chosen field of work. The student, under the guidance of the instructor and through research, designs, constructs, and tests an electric or electronic device.
- 220, 221, and 222 International Morse Code** One credit\*  
Principles of International Morse Code transmission, reception, and speed building. The course may be continued under the course numbers indicated in successive terms. Three hours laboratory.
- 231 Computer Circuits I** Three credits  
First of series of three courses designed to cover the area of pulse, digital, and switching circuits. Includes basics of number systems, logic, waveforms, and switching characteristics of tubes and transistors. Laboratory work emphasizes pulse measurement through use of pulse generators and oscilloscopes. Two hours lecture, four laboratory.
- 232 Computer Circuits II** Three credits  
Continuation of ET 231. Major emphasis on switching and pulse circuits, including multivibrator, Schmitt trigger, blocking oscillator and time-base generator. Applications drawn from field of instrumentation. Simple circuits drawn from field of instrumentation and constructed and tested in the lab. Two hours lecture, four laboratory.
- 233 Computer Circuits III** Three credits  
Continuation of ET 232. Major emphasis on digital computer units. Laboratory work provides operation and testing of these blocks. Two hours lecture, four laboratory.
- 241 Automation I** Four credits  
First of three courses covering rotating machines and circuits and devices used to control them. Two hours lecture, four laboratory.
- 242 Automation II** Four credits  
Continuation of Electronics Technology 241. Two hours lecture, four laboratory.
- 243 Automation III** Four credits  
Continuation of Electronics Technology 242. Two hours lecture, four laboratory.
- 260 Industrial Electricity** Three credits  
Covers electrical control systems employed on industrial machinery. Includes discussion of basic direct and alternating current theory and application, and study of typical industrial control circuitry and devices. Lecture and laboratory.
- 261 Industrial Electricity** Three credits  
Continuation of ET 260 with emphasis on circuit diagram reading, sequencing, and maintenance of industrial electrical controls. Lecture and laboratory.
- 271 Communications I** Five credits  
First of series of three courses dealing with electronic communication. Includes study of transmission lines, antennae, RF oscillators, class C amplifiers, and coupling circuits. Laboratory work emphasizes the use of RF measuring instruments such as slotted coax, SWR bridge, impedance bridge, heterodyne frequency meter, and RF power meters. Three hours lecture, four laboratory.

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- 272 Communications II** Five credits  
A continuation of ET 271. Includes the theory of modulation circuits, AM and FM demodulation, and the superheterodyne receiver. Laboratory work emphasizes use of RF signal generator, sweep signal generator, and spectrum analyzer. Three hours lecture, four laboratory.
- 273 Communications III** Five credits  
A continuation of ET 272. Includes the television system, UHF, and microwave principles. Laboratory work utilizes television linearity pattern generator, color bar generator, slotted waveguide, reflectometer, and various waveguide components. Three hours lecture, four laboratory.

**Mechanical Technology**

- 101 Manufacturing Processes (Machine Tools and Sheet Metal)** Three credits  
Designed to teach the theory and practice in the operation and set up of machine tools: lathe, milling machine, shaper, drill press, grinder, metal sawing, bench work and measuring instruments, including discussion of sheet metal and plastics forming methods. Two hours lecture, four laboratory.
- 102 Manufacturing Processes (Welding and Foundry)** Three credits  
Continuation of MT 101 designed to teach all types of gas and arc welding on both AC and DC machines. Includes study of patternmaking, sand molding, melting of metals, and pouring castings. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 101.
- 103 Manufacturing Processes** Two credits  
Continuation of 102. Course content varies to suit the individual need of the student. Prerequisite: Mechanical Technology 102.
- 201 Machine Methods and Cost (Applied Time and Motion Study)** Three credits  
Elemental costs in machine work. Demonstrates the effect on cost of various alterations in method. Includes study of time and motion as they are employed in actual shop situations. Investigates methods of eliminating idle machine time in production cycles. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 101.
- 203 Industrial Management (Processing, plant layout, investment program)** Three credits  
Lecture section in management problems. Employs the use of machine laboratory. Includes actual processing and cost analysis of an assembly item of production and develops the results to meet a proposed production schedule from which a determination of manufacturing facilities is made. Includes the designing of a plant for optimum production and investment economy under simulated realistic circumstances. Two hours lecture, four laboratory. Prerequisite: Mechanical Technology 102 and 201.
- 204 Metallurgy** Three credits  
Study of the crystalline state of metals, phase diagram theory of alloys, process of iron and steel manufacture, iron-carbon diagram, lever principle, the heat treatment of steel, hardness tests and microscopic study of grain structure under the metallograph. Lecture and laboratory. Prerequisites: Mechanical Technology 101 and Chemistry 110.

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*Mechanical*

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**Engineering Technology**  
*Mechanical*

**207 Automation Mechanics I (Fluid Mechanics, Servo Principles)** Three credits

The elements of hydraulics, fluid power, the pitot tube, Bernoulli's theorem, viscosity, Reynold's number. Includes study of the servo-mechanical principles available for exploitation in hydraulic systems; combination of air, electric, and hydraulic controls. Lecture and laboratory. Prerequisite: Physics 200.

**208 Automation Mechanics II (Labor Saving and Feed Back Devices)** Three credits

Economic implications and ultimate use of labor-saving machinery; mathematical and structural study of dies, power processes, production turning, boring, transfer machines. Investigates solution of cost problems in production by the use of fixtures, dials, and devices auxiliary to machines that enable unit operations to be combined into continuous automatic production. Examines some mechanical structures and applications of the feed-back principle used in machinery to replace manual operation. Prerequisites: Mathematics 153, Drafting Technology 102, Mechanical Technology 102 and 207.

**209 Machine Design I (Kinematics, Linkages and Machine Elements)** Four credits

Study of movement direction, velocity and acceleration in linkages, cams and gears. Requires students to complete a set of drawing plates. Employs machine laboratory to help construct models and study existing mechanisms. Develops ability to analyze and comprehend the interaction of parts in ingenious mechanisms. Three hours lecture, three laboratory. Prerequisite: MT 102, Mathematics 103.

**210 Machine Design II (Strength of Materials)** Four credits

Principles of stress and strain, equilibrium of forces, center of gravity, moment of inertia, section modulus; tension, compression, shear bending, torsion, combined stress, and Mohr's circle. Includes the drawing of diagrams of shear bending, and deflection in beams. Considers factors of safety, column formulas and fatigue stresses. Prerequisites: Mathematics 153, Physics 200.

**211 Machine Design III (Design Origination, Strength, Rigidity, Functional Worth)** Four credits

Analyzes, by the use of principles involved in statics, dynamics, kinematics, and strength of materials, the shafts, gear, bearings, and structural parts of a machine unit, e.g. overhead traveling crane or a hydraulic lift truck. Emphasizes practice on selection of parts of proper size to meet safety factors. Three hours lecture, three laboratory. Prerequisites: Mechanical Technology 209 and 210.

**Systems Technology**

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

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

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

**102 Statistical Quality Control** Two credits  
*Formerly VT 325*

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

**Department of Applied Technology**

*Department Chairman: HAROLD J. WALPER*

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

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

Industrial trades careers include:

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

Service trades careers include those of:

- Automotive Servicing
- Truck Mechanics
- Diesel Mechanics

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

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

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

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

**Applied Technology**



*Harold J. Walper*

**Applied Technology**

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

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

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

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

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

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

**Service Trades**

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

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

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

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

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

**Applied Technology Department**

**Certificate Programs**

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

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

A minimum of 45 credit hours is required with a minimum Grade Point Average of 2.00 in order to complete the certificate program.

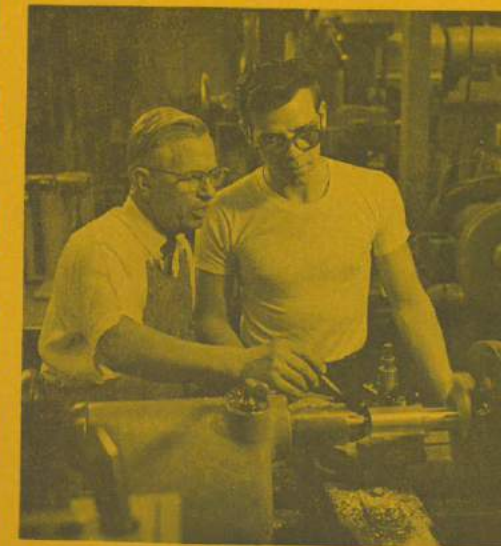
The following programs are offered under the above plan:

Pre-Apprenticeship (see General Studies)  
 Draftsman—Architectural  
 Draftsman—Electrical & Electronics  
 Draftsman—Mechanical  
 Electrician—Industrial

Metal Trades—Die Maker, Machine Repairman, Machinist, Toolmaker, Tool and Die Maker, Millwright  
 Pipefitter  
 Sheet Metal

**Die Maker or Tool and Die Maker**

Fall Term		Credit Hours	Spring Term		Credit Hours
101	Manufacturing Processes	3	103	Manufacturing Processes	2
101	Technical Engineering Drawing	3	114	Die Construction II	3
151	Applied Algebra	5	153	Applied Plane Trigonometry	4
111	Die Blueprint Reading	3	141	Machinery Handbook II	3
112	Template Making & Model Checking	3	Elective		2-3
		17			14-15
Winter Term		Credit Hours	Recommended Electives		Credit Hours
102	Manufacturing Processes	3	130	Employer-Employee Relations	2
152	Applied Plane Geometry	4	135	Safe Practices & First Aid	2
113	Die Construction I	3	170	General Welding I	4
140	Machinery Handbook I	3	171	General Welding II	4
	Elective	2-3	201	Physics	4
		15-16	110	Industrial Chemistry	4



**Applied Technology**



**Applied Technology**

**Draftsman (Mechanical)**

	Fall Term	Credit Hours
101 Manufacturing Processes	3	3
151 Applied Algebra	5	5
101 Engineering Drawing	3	3
Elective	3-4	3-4
		14-15
Winter Term		
102 Manufacturing Processes	3	3
140 Machinery Handbook	3	3
152 Applied Plane Geometry	4	4
102 Technical Engineering Drawing	3	3
110 Industrial Chemistry	4	4
		17

**Electrician (Industrial)**

	Fall Term	Credit Hours
151 Mathematics for Technicians I	5	5
112 Electrical & Electronics Circuits I	5	5
125 National Electric Code I	3	3
Elective	2-3	2-3
		15-16
Winter Term		
152 Mathematics for Technicians II	5	5
112 Electrical & Electronics Circuits II	5	5
126 National Electric Code II	3	3
261 Industrial Electricity	3	3
		16

**Machinist, Machine Repairman, Toolmaker**

	Fall Term	Credit Hours
101 Manufacturing Processes	3	3
151 Applied Algebra	5	5
101 Technical Engineering Drawing	3	3
Elective	3-4	3-4
		14-15
Winter Term		
102 Manufacturing Processes	3	3
152 Applied Plane Geometry	4	4
102 Technical Engineering Drawing	3	3
140 Machinery Handbook I	3	3
Elective	3-4	3-4
		16-17

	Spring Term	Credit Hours
103 Manufacturing Processes	2	2
141 Machinery Handbook	3	3
153 Applied Plane Trigonometry	4	4
103 Descriptive Geometry	3	3
204 Metallurgy	3	3
		15
Recommended Electives		
130 Employer-Employee Relations	2	2
135 Safe Practices and First Aid	2	2
104 Jig and Fixture Design	3	3
201 Physics	3	3
207 Automation Mechanics I	3	3
210 Machine Design II	4	4

	Spring Term	Credit Hours
153 Mathematics for Technicians III	5	5
113 Electrical & Electronics Circuits III	5	5
127 National Electric Code III	3	3
205 Electrical & Electronics Drawing	3	3
		16
Recommended Electives		
130 Employer-Employee Relations	2	2
135 Safe Practices & First Aid	2	2
201 Physics	4	4
202 Physics	4	4

	Spring Term	Credit Hours
103 Manufacturing Processes	3	3
153 Applied Plane Trigonometry	4	4
103 Technical Engineering Drawing	3	3
141 Machinery Handbook II	3	3
Elective	2-3	2-3
		15-16
Recommended Electives		
101 Blueprint Reading II	3	3
130 Employer-Employee Relations	2	2
135 Safe Practices & First Aid	2	2
170 General Welding I	4	4
171 General Welding II	4	4
171 General Welding II	3	3
104 Jig & Fixture Design	3	3
201 Physics	4	4

**CERTIFICATE PROGRAMS (continued)**

**Pipefitter**

	Fall Term	Credit Hours
165 Welding for Pipefitters I	4	4
151 Applied Algebra	5	5
011 Beginning Mechanical Drawing	2	2
Elective	3-4	3-4
		14-15
Winter Term		
166 Welding for Pipefitters II	4	4
152 Applied Plane Geometry	4	4
155 Blueprint Reading for Plumbers	3	3
101 Technical Engineering Drawing	3	3
110 Industrial Chemistry	4	4
		18

**Sheet Metal**

	Fall Term	Credit Hours
101 Manufacturing Processes	3	3
151 Applied Algebra	5	5
101 Technical Engineering Drawing	3	3
175 Sheet Metal I	3	3
170 General Welding I	4	4
		18
Winter Term		
152 Applied Plane Geometry	4	4
102 Technical Engineering Drawing	3	3
176 Sheet Metal II	3	3
171 General Welding II	4	4
		14

**COURSE DESCRIPTIONS**

**Building Trades**

**100 Apprentice Bricklaying** No credit  
Formerly VT 400

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

**110 Apprentice-Carpentry** No credit  
Formerly VT 401

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

**120 Apprentice-Electrical** No credit  
Formerly VT 402

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

**125 National Electric Code I (Fall only)** Three credits\*  
Formerly ET 250

First in a series of three courses covering the National Electric Code. The first course is a study of the code from the beginning to Article 430. General wiring provisions are studied. Students with appropriate experience should be able to pass the licensing examination upon completion of the three classes.

\* Non-transfer credits

**Applied Technology**

	Spring Term	Credit Hours
167 Welding for Pipefitters III	4	4
153 Applied Plane Trigonometry	4	4
156 Blueprint Reading for Plumbers	3	3
Elective	3-4	3-4
		14-15
Recommended Electives		
130 Employer-Employee Relations	2	2
135 Safe Practices & First Aid	2	2
201 Physics	4	4

	Spring Term	Credit Hours
153 Applied Plane Trigonometry	4	4
103 Descriptive Geometry	3	3
172 General Welding III	4	4
177 Sheet Metal III	3	3
		14
Recommended Electives		
130 Employer-Employee Relations	2	2
135 Safe Practices & First Aid	2	2

**Building Trades**

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*Building Trades*

- 126 **National Electric Code II (Winter only)** **Three credits\***  
*Formerly ET 251*  
Continuation of Building Trades 125. Second in series of three courses covering the National Electric Code. Study of the Code from Article 430 to the end of the Code.
- 127 **National Electric Code III (Spring only)** **Three credits\***  
*Formerly ET 252*  
Continuation of Building Trades 126. Third in a series of courses covering the 1962 Code, amendments to the Code as they are accepted by the State.
- 128 **Journeyman Electricians Welding I (on demand)** **Four credits\***  
*Formerly VT 108*  
Open to electrical journeymen and apprentices. Includes some fundamentals of oxyacetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. \$5.00 laboratory fee. Six laboratory hours.
- 129 **Journeyman Electricians Welding II (on demand)** **Four credits\***  
*Formerly VT 109*  
Open to electrical journeymen and apprentices. More advanced coverage of fundamentals of Building Trades 128. Prerequisite: Building Trades 128 or permission of instructor. \$5.00 laboratory fee. Six laboratory hours.
- 130 **Journeyman Electricians Power Controls (on demand)** **Two credits\***  
*Formerly VT 500*  
Power control wiring and associated power control theory for electrical journeymen. One hour lecture, two laboratory.
- 131 **Journeyman Electricians Transformer Connections and Circuit Characteristics (on demand)** **Two credits\***  
*Formerly VT 501*  
Theoretical analysis and basic hook-up of transformers. Currents, voltages and unbalances involved in the following sequence: 220-110, 3 wire single phase, Delta-Delta, open Delta, Y, six phase Y and Scott connections. One hour lecture, two laboratory.
- 132 **Journeyman Electricians Theory (on demand)** **Two credits\***  
*Formerly VT 502*  
Alternating current theory and application for electrical journeymen. Lecture, laboratory. Three class hours per week.
- 135 **Safe Practices and First Aid** **Two credits\***  
This course is designed to acquaint individuals with First Aid and treatment through lectures, demonstrations, and practice as outlined in the course of study issued by the American Red Cross or equivalent. Safe working practices in performing work with hand tools and around machines are stressed. Information about the safety devices of machines and how to identify and use them is covered. Upon successful completion of the course, a certificate may be granted. Two hours per week.
- 140 **Apprentice Painting and Decorating** **Three credits\***  
*Formerly VT 403*  
Open to apprentice painting and decorating apprentices on registered programs with the Lansing Painting and Decorating Joint Apprenticeship Committee. Includes trade techniques, color mixing and matching, mathematics related to the trade, estimating and paperhanging. Lecture, laboratory. Four class hours per week.

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

- Applied Technology Building Trades**
- 166 Welding for Pipefitters II** Four credits\*  
A continuation of 165. Prerequisite 165. \$10.00 laboratory fee. Lecture, lab. Two three-hour periods per week.
- 167 Welding for Pipefitters III** Four credits\*  
A continuation of 166. Prerequisite 166. \$10.00 laboratory fee. Lecture, lab. Two three-hour periods per week.
- 170 Apprentice Sheet Metal** Three credits\*  
*Formerly VT 405*  
Open to apprentices indentured to the Lansing Sheet Metal Joint Apprenticeship Committee. Covers manipulative practices, layout, mathematics and drafting. Lecture, laboratory. Four class hours per week.
- 175 Sheet Metal I (Fall only)** Three credits\*  
*Formerly VT 099*  
Course includes mathematics and pattern drafting related to sheet metal. Covers straight line, parallel line, radial line and triangulation pattern development. Shop work includes layout of fittings with hand and machine tools. Current techniques of fabrication emphasized. Lecture, laboratory. Four class hours per week.
- 176 Sheet Metal II (Winter only)** Three credits\*  
*Formerly VT 100*  
Continuation of Sheet Metal I with more advanced problems. Prerequisite: Building Trades 175 or permission of instructor. Lecture, laboratory. Four class hours per week.
- 177 Sheet Metal III (Spring only)** Three credits\*  
*Formerly VT 121*  
Continuation of Sheet Metal II with specialty work. Prerequisite: Building Trades 176. Lecture, laboratory. Four class hours per week.
- 180 Sheet Metal Welding I (On demand)** Four credits\*  
*Formerly VT 126*  
Arc welding as applied to sheet metal. Introduction to heliarc. \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- 181 Sheet Metal Welding II (On demand)** Four credits\*  
*Formerly VT 127*  
Continuation of Building Trades 180 with additional emphasis on heliarc. Prerequisite: Building Trades 180 or approval of instructor. \$10.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- Industrial Trades**
- 100 Blueprint Reading I** Three credits\*  
*Formerly VT 115*  
Covers orthographic projection, linear and angular measurement and reading of prints with three views given in the three principal planes of projection. Deals mainly with part prints. Two two-hour periods per week.
- 101 Blueprint Reading II (Winter, Spring)** Three credits\*  
*Formerly VT 116*  
Covers application of orthographic projection principles in more detailed blueprints than Industrial Trades 101. Deals with part prints and assembly drawings. Prerequisite: Industrial Trades 101 or permission of instructor. Two two-hour periods per week.

- 111 Die Blueprint Reading (Fall)** Three credits\*  
*Formerly VT 118*  
Course acquaints student with specialized techniques used by die designers in making die drawings. Includes interpretation of actual drawings from which dies have been produced. Prerequisite: Industrial Trades 101, Drafting Technology 101 or permission of instructors. Two two-hour periods per week.
- 112 Template Making and Model Checking (Fall)** Three credits\*  
*Formerly VT 122*  
Functions of models and how to check models using sine bar and height gauge. Functions of templates and how they are made and used. Types of aids made from models and how these aids are used. Interpretation and sectioning of drawings used for template making and model checking. Prerequisite: Industrial Trades 154, Drafting Technology 101. Two two-hour periods per week.
- 113 Die Construction I (Winter)** Three credits\*  
*Formerly VT 123*  
Layout and processing related to die construction. Types of aids used in die construction and how to use these aids. How to select steels used in die construction. Limitations on accuracy and finish of parts used in die construction explored, such as grinding and lapping. Covers various types of die construction used in industry; discusses types of presses used by industry related to die construction. Prerequisite: Industrial Trades 111 or equivalent. Two two-hour periods per week.
- 114 Die Construction II (Spring)** Three credits\*  
*Formerly VT 124*  
Continuation of layout and processing from Industrial Trades 113. Covers theory of heat treat, welding, types of steels and types of aids used in die construction. Auxiliary equipment to dies such as lifters, loaders, kickers, stackers, hoppers, dial feeds covered. Repair and maintenance of dies considered as well as how dies should be built to make maintenance possible and provide long die life. Prerequisite: Industrial Trades 113. Two two-hour periods per week.
- 115 Die Construction and Design I (Fall)** Three credits\*  
*Formerly VT 224*  
Designed to cover the effective utilization of information contained in die design handbooks. Will design die around part given students in class or work from part print. Covers the importance of good die design. Prerequisite: Industrial Trades 112, 114. Two two-hour periods per week.
- 116 Die Construction and Design II (Winter)** Three credits\*  
*Formerly VT 225*  
Emphasizes actual die design, working from actual piece parts produced by industry and also part drawings. Includes cost, ordering and handling of raw material used for die construction and depreciation of equipment and tools used. Prerequisite: Industrial Trades 115. Two two-hour periods per week.
- 117 Die Construction and Design III (Spring)** Three credits\*  
*Formerly VT 226*  
Working with actual die drawings from industry, using these drawings for discussion, processing and sketching. Covers composite die sections, templates, heat treat, cutters. Includes how press data affects the design and construction of dies. Prerequisite: Industrial Trades 116. Two two-hour periods per week.



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- 130 **Employer-Employee Relations** (Fall, Spring) **Two credits\***  
*Formerly VT 130b*  
Emphasizes the interdependence of capital, labor and management. Includes personal and physical qualities essential to success. Two class hours per week.
- 140 **Machinery Handbook I** (Winter) **Three credits\***  
*Formerly VT 220*  
Designed to familiarize the student with the effective utilization of information contained in the handbook. Two two-hour periods per week.
- 141 **Machinery Handbook II** (Spring) **Three credits\***  
*Formerly VT 221*  
Continuation of Industrial Trades 140. Two two-hour periods per week.
- 150 **Basic Mathematics** (Summer, Fall) **Three credits\***  
*Formerly VT 201*  
Review of basic arithmetic operations: whole numbers, common fractions and decimals, percentage, ratio and proportion. Introduction to basic algebraic operations and formulae in plane geometry. Two one-and-one-half hour periods per week.
- 151 **Applied Algebra** (Fall) **Five credits\***  
*Formerly VT 202*  
Applications of algebraic equations to shop work. Two two-and-one-half hour periods per week.
- 152 **Applied Plane Geometry** (Winter) **Four credits\***  
*Formerly VT 203*  
Application of geometric functions to the solution of practical shop problems. Introduction to trigonometry. Prerequisite: Industrial Trades 151. Two two-hour periods per week.
- 153 **Applied Plane Trigonometry** (Spring) **Four credits\***  
*Formerly VT 204*  
Emphasis on analysis of industrial problems utilizing trigonometric solutions by logarithms. Prerequisite: Industrial Trades 152. Two two-hour periods per week.
- 154 **Advanced Trigonometry Applications** (Fall) **Four credits\***  
*Formerly VT 205*  
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.
- 155 **Compound Angles I** (Winter) **Four credits\***  
*Formerly VT 206*  
Combination of solid geometry and advanced (solid) trigonometry enabling student to solve setup problems involving angles and tilted work. Prerequisite: Industrial Trades 154. Two two-hour periods per week.
- 156 **Compound Angles II** (Spring) **Four credits\***  
*Formerly VT 107*  
Continuation of Industrial Trades 155. Emphasis on application of actual tooling setups for complex machining operation. Prerequisite: Industrial Trades 155. Two two-hour periods per week.

146 \* Non-transfer credits

- 160 **Precision Inspection I** (Fall on demand) **Three credits\***  
*Formerly VT 160*  
Advanced techniques of tool and gauge inspection: micrometers, verniers, gauge blocks, fixed dial and thread gauges, test indicators, gear and comparator measurement, hardness testing. Prerequisite: Mechanical Technology 101, Industrial Trades 101, Industrial Trades 153, or equivalent. Two two-hour periods per week.
- 161 **Precision Inspection II** (Winter on demand) **Three credits\***  
*Formerly VT 161*  
Precision layout work related to gauges and inspection problems. Prerequisite: Industrial Trades 160. Two two-hour periods per week.
- 170 **General Welding I** (Fall) **Four credits\***  
*Formerly VT 105*  
Fundamentals of arc welding. Safety precautions essential in welding. Basic skills in use of welding equipment. Flat and Vee-bead downhand welding. \$5.00 laboratory fee. Lecture, laboratory. Two three-hour periods per week.
- 171 **General Welding II** (Winter) **Four credits\***  
*Formerly VT 106*  
Fundamentals of oxyacetylene welding and cutting. Safety precautions in use of equipment. Flat and Vee-bead downhand welding. Use of cutting torch and introduction to brazing. \$5.00 laboratory fee. Prerequisite: Industrial Trades 170. Lecture, laboratory. Two three-hour periods per week.
- 172 **General Welding III** (Spring) **Four credits\***  
*Formerly VT 107*  
Meaning of welding symbols, vertical and overhead welding on various kinds of steel and shapes. Use of carbon arc. \$5.00 laboratory fee. Prerequisite: Industrial Trades 171. Lecture, laboratory. Two three-hour periods per week.
- 175 **Advanced Welding I** (Fall) **Four credits\***  
*Formerly VT 110*  
Specialized instruction on various types of welding, including structural steel, sheet metal, steel pipe, tool steel welding. Introduction to heliarc. Welds made in all positions. \$10.00 laboratory fee. Prerequisite: Industrial Trades 172. Lecture, laboratory. Two three-hour periods per week.
- 176 **Advanced Welding II** (Winter) **Four credits\***  
*Formerly VT 111*  
Specialized welding by use of oxyacetylene on steel pipe, aluminum, sheet metal, cast iron, brazing, silver soldering, free hand and machine flame cutting welds in all positions. \$10.00 laboratory fee. Prerequisite: Industrial Trades 175. Lecture, laboratory. Two three-hour periods per week.
- 177 **Advanced Welding III** (Spring) **Four credits\***  
*Formerly VT 112*  
Techniques of welding by the inert gas shielded arc process on a variety of work shapes in all positions. Instruction on mild steel, stainless steel, aluminum and certain alloys. \$10.00 laboratory fee. Prerequisite: Industrial Trades 176. Lecture, laboratory. Two three-hour periods per week.
- 200 **Metallurgical Testing of Welds I** **Four credits\***  
*Formerly VT 234*  
Welding of low carbon steel in various ways and testing of all welds to determine the quality and characteristics of the weld metal. Study of internal strains, crack-

\* Non-transfer credits

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Industrial Trades

ing, shrinkage and warping, and the reasons therefore. \$15.00 laboratory fee. Prerequisite: Mechanical Technology 204, Industrial Trades 177. Lecture, laboratory. Two three-hour periods per week.

**201 Metallurgical Testing of Welds II** Four credits\*  
*Formerly VT 235*

Welding of various metals and brazing by oxyacetylene gas and testing of all welds for quality. Sections of welds polished and examined under the metallograph. Reasons for defective welds explored. \$15.00 laboratory fee. Prerequisite: Mechanical Technology 204, Industrial Trades 200. Lecture, laboratory. Two three-hour periods per week.

**202 Metallurgical Testing of Welds III** Four credits\*  
*Formerly VT 236*

Shielded arc welds made and tested for quality and defects. Welds examined under the metallograph. Problem of intergranular corrosion explored. \$15.00 laboratory fee. Prerequisite: Industrial Trades 201. Lecture, laboratory. Two three-hour periods per week.

**205 Welding for Certification I** Four credits\*  
*Formerly VT 240*

Designed to give student intensified practice in all types of welding for those who wish to pass certification tests according to the A.S.M.E. codes for welding. Students desiring only to attain an equivalent level of competence may also take this course. Course I covers General Arc Welding. \$15.00 laboratory fee. Prerequisite: Industrial Trades 202. Lecture, laboratory. Two three-hour periods per week.

**206 Welding for Certification II** Four credits\*  
*Formerly VT 241*

Continuation of Industrial Trades 205. Covers acetylene welds. \$15.00 laboratory fee. Prerequisite: Industrial Trades 205. Lecture, laboratory. Two three-hour periods per week.

**207 Welding for Certification III** Four credits\*  
*Formerly VT 242*

Continuation of Industrial Trades 206 and covers heliarc welds. \$15.00 laboratory fee. Prerequisite: Industrial Trades 206. Lecture, laboratory. Two three-hour periods per week.

**250 Body Design (Fall)** Three credits\*  
*Formerly VT 119*

Reviews basic descriptive geometry as applied to actual automotive true view problems. Includes basic study of simple and compound surface development, surface development and true view practice applied to actual automotive design problems. Prerequisite: Drafting Technology 103. Lecture, laboratory. Two three-hour periods per week.

\* Non-transfer credits



## ADMINISTRATION

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*Lee A. Trumble  
Chairman*



*David D. Diehl  
Secretary*



*Albert C. Boyd  
Treasurer*



*John H. Dart  
Trustee*



*David L. Froh  
Trustee*



*Cecil E. MacDonald  
Trustee*

## Lansing Community College Board of Trustees

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

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



*Bruce Newman  
Controller*



*Kenneth Sproull  
Dean of Student  
Personnel  
Services*



*Thomas MacClure  
Dean of Special  
Projects and  
College Services*



*R. Stephen Nicholson  
Academic Dean*



*Frank Benedict  
Director of  
Informational Services  
and Personnel*

**PRESIDENT'S  
CABINET**



*Philip J. Gannon  
President*



**Faculty Directory**



## Faculty Directory Faculty Directory

**ANDERSON, RAYMOND O.** Registrar  
B.S., University of Michigan; M.A., University of Michigan; D.A.G.S., Michigan State University; Doctoral Candidate, Michigan State University.

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

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

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

**ASSIFF, JUANITA** Instructor, Science  
B.S., Michigan State University; Teacher's Certificate, Michigan State University.

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

**BALMER, HAROLD J.** Associate Professor, Engineering Technology  
B.S., Western Michigan University; M.A., Michigan State University.

**BANKS, JAMES** Instructor, Science  
A.B., University of Louisville; M.A.T., Michigan State University.

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

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

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

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

**BISANZ, JEANETTE** Educational Specialist, Health Sciences  
R.N., Borgess School of Nursing.

**BLAIR, RODGER** Instructor, Management and Marketing  
B.S., Alma College; Graduate Study, University of North Carolina.

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

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

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

**BOUTERSE, GLORIA** Chairman, Health Sciences Department  
R.N., Edward W. Sparrow Hospital; B.A., Michigan State University; M.A., Michigan State University.

**BOX, RICHARD C.** Instructor, Engineering Technology  
B.S., Central Michigan University; M.A., Michigan State University; Doctoral Candidate, Michigan State University.

**BROUSE, DAVID** Instructor, Science  
B.S., Brockport State; M.A.T., Michigan State University; Graduate Study, Michigan State University.

**BUCKLIN, WILLIAM** Assistant Professor, Social Science  
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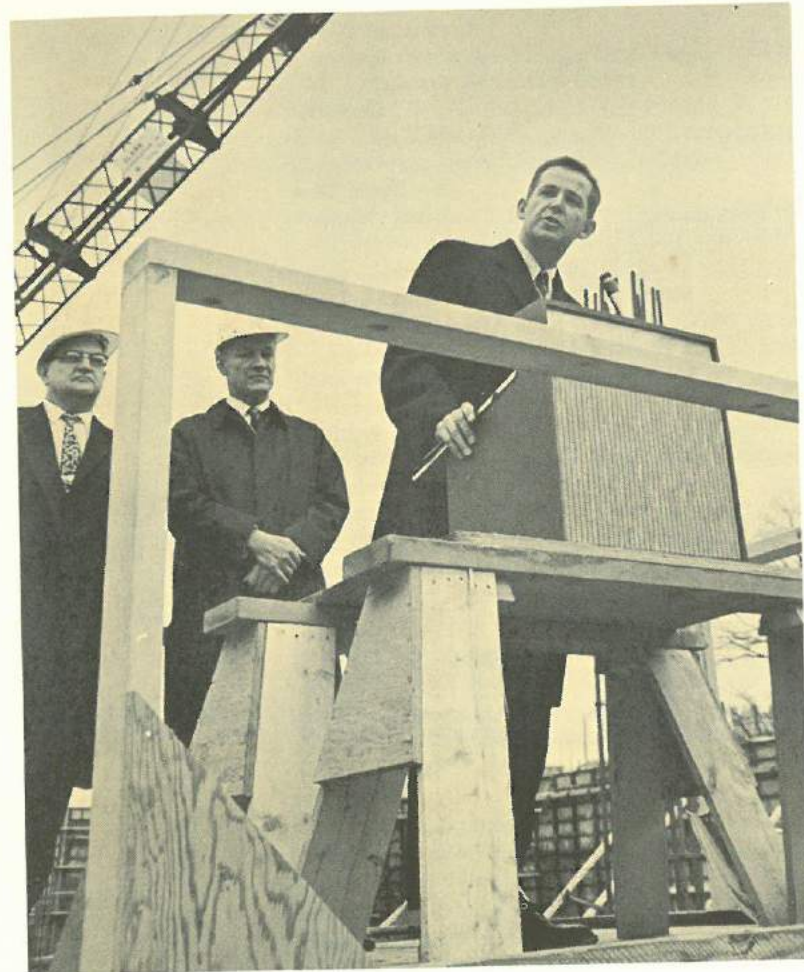
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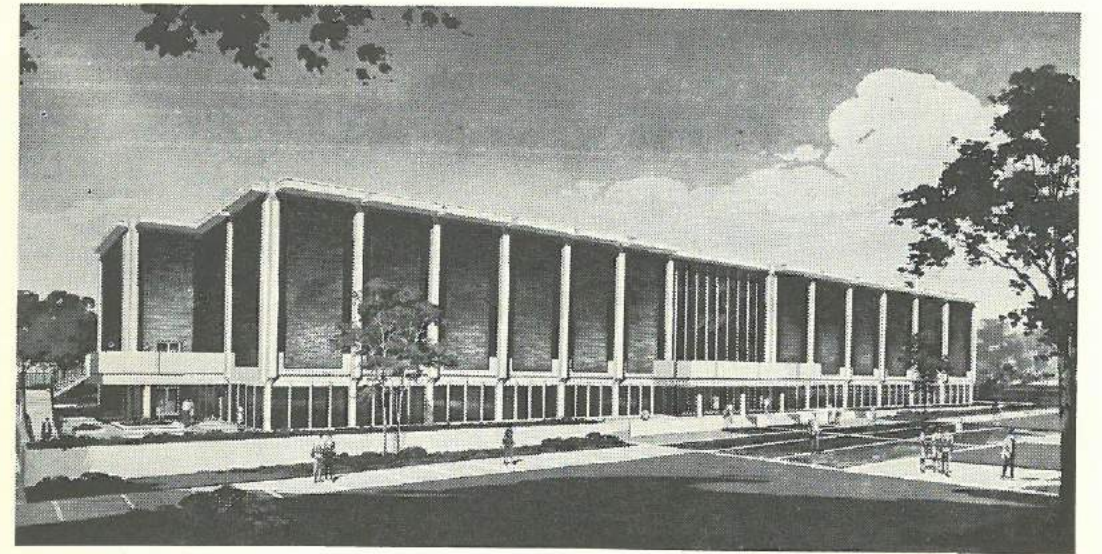
## Faculty Directory



Donald Oates



Lt. Gov. William Milliken



Artist's Rendition of Health Sciences-Liberal Arts and Sciences Building

Ground Breaking Ceremony  
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